

PATHWAYS IN LOCAL ECONOMIC DEVELOPMENT
IN TANZANIA

Institutionalisation of Collective Action:
The Case of Mbulu and Karatu Districts

Teun van Dijk



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**Pathways in Local Economic Development
in Tanzania**

**Institutionalisation of Collective Action:
The Case of Mbulu and Karatu Districts**

**Lokale economische ontwikkeling in Tanzania:
institutionalisering van collectieve actie
in de districten Mbulu en Karatu**

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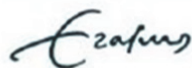
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*To all people in Mbulu and Karatu districts who work collectively
for the development of all and to my children and grandchildren.*



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Abbreviations

AWF	African Wildlife Foundation
ATM	Automated Teller Machine (cash dispenser)
BEST	Business Environment Strengthening of Tanzania
CAP	Community Action Plan
cCBG	Capacity Building Grant
CBO	Community based organisation
CCM	Chama cha Mapinduzi
CDG	Capacity Development Grant
Chadema	Chama cha Demokrasia na Maendeleo
CHF	Community Health Funds
CPAR	Canadian Physicians for Aid and Relief
CPI	Consumer Price Index
CP/M	Community participation and management
CPR	Common pool resources
CSO	Civil Society Organisation
DC	District Commissioner
DCC	District Consultative Committee (2006–)
DDC	District Development Council (1972–82)
DDC	District Development Committee (1982–2005)
DDD	District Development Director (1972–88)
DED	District Executive Director (1988–)
DP	Domestic Point
EPICOR	Enterprise Resource Planning software system
FBO	Faith based organisation
HE	Higher Education

HLG	Higher Local Government (District, Municipality, City, Town)
ICA	International Cooperative Alliance
IDBO	Internal Drainage Basin Office
IOB	Inspection Development Cooperation Ministry of Foreign Affairs, NL
IRA	Institute of Resource Assessment
KDC	Karatu District Council (1985–)
KKKT	Lutheran Church
LED	Local economic development
LG	Local Government
LGMD	Local Government Monitoring Database
LGRP	Local Government Reform Programme
LGSC	Local Government Service Commission
LGTI	Local Government Training Institute
LLG	Lower Local Government (Village)
MAF	Mission Aviation Fellowship
MAMIS	Marketing Management Information System
MC	Minimum Conditions
MDC	Mbulu District Council (MDC 1985–)
MDRDP	Mbulu District Rural Development Programme (1987–2001)
MHSW	Ministry of Health and Social Welfare
MP	Member of Parliament
MVIWATA	Mtandao wa Vikundi vya Wakulima Tanzania (Network of small-scale farmers' groups in Tanzania)
NEC	National Executive Committee (of CCM)
NGO	Non-governmental organisation
NSGRP	National Strategy for Growth and Reduction of Poverty (Mkukuta)
O&OD	Opportunities and Obstacles to Development
PMIS	Procurement Management Information System
PMO	Prime Minister's Office
PO	President's Office
PPRA	Public Procurement Regulatory Authority
PRSP	Poverty Reduction Strategy Paper

PS	Private sector
PSO	Private sector organisation
PTA	Parent Teacher Association
RALG	Regional Administration & Local Government
RC	Catholic Church
RDC	Regional Development Council (1972–85)
RDD	Regional Development Director (1972–88)
RAS	Regional Administrative Secretary (1988–)
SACCOS	Savings & Credit Cooperative Society
SCCULT	Savings & Credit Cooperative Union League Tanzania
SIGA	SILC Group Association
SILC	Savings & Internal Lending Communities
SME	Small & Medium Enterprise
TANGO	Tanzania Association of NGOs
TANU	Tanganyika African National Union
TBA	Traditional Birth Attendant
TBL	Tanzania Breweries Limited
TCCIA	Tanzania Chamber of Commerce, Industry & Agriculture
TFA	Tanzania Farmer's Association
TPSF	Tanzania Private Sector Foundation
TRA	Tanzania Revenue Authority
Tsh.	Tanzania Shilling
UPE	Universal Primary Education
URT	United Republic of Tanzania
VA	Village Assembly
VEO	Village Executive Officer
VETA	Vocational Education and Training Authority
VG	Village Government
ViCoBa	Village Community Bank
WDC	Ward Development Committee
WEC	Ward Executive Committee
WEO	Ward Executive Officer



Swahili Words

aya

refers to both the land and the community of people that lives on the land
(environmental management group)

balogzi

ten-cell local leader

banda

barn

bwana mfereji

irrigation system supervisor

fundi

technician

godown

agricultural storage facility

hayoda

alarm cry

hisa

weekly contribution from members of savings and credit cooperative
societies

kaya

household

kitongoji

neighbourhood or hamlet (in rural areas)

kwaslema

traditional meeting composed of the elders of each household in the *aya*,
thus representing the whole population in the area

maendeleo

development

mbegu mbora

programme to introduce improved agricultural practices and inputs

mikeke

artisan mats

mnaada

local markets, initially cattle markets

mwenyekiti ya kitongoji

chairperson of neighbourhood

mtaa

neighbourhood (in urban areas)

Mwiraqwa

of the Iraqw people (possessive noun)

ngoma

dance groups

nguvu kazi

compulsory contributions to establish infrastructure

pombe

fermented drink (linked to the remuneration for collective cultivation)

posho

stipend for community service

ujamaa shamba

collectively worked agricultural field

sungusungu

local organisations for policing and justice tasks (or *mgambo*)

ujamaa

the villagisation process, a form of nationally mandated collective action

Ujenzi

Department of Road Works and Construction

utamaduni

artisan trinkets for tourists

Wairaqwa

Iraqw people

wazazi

parents



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Abstract

In the sustainable livelihoods framework, the interaction between livelihood assets and transforming structures and processes determines the effectiveness of policies and strategies. These form the basis upon which rural people address their vulnerability context, formed by seasonality, trends and shocks. A limitation of the framework is that it is household centred and bypasses collective action. Making use of the sustainable livelihoods framework I investigate what institutional developments occurred in the sphere of local collective action addressing a given vulnerability context. How did endogenous forces create an enabling institutional environment for collective action towards socio-economic development? How did collective action operate in an array of institutional settings? This part of the sustainable livelihoods framework, which is still under-investigated, is the focus of this research.

Over a period of more than 20 years household level development in eight villages in different agro-ecological zones in rural Tanzania were surveyed. Local reports were consulted and focus group discussions were conducted with actors in various types of collective action. Key changes among households were identified with reference to their level of education, agricultural production, use of natural resources, livestock ownership, ownership of agricultural and household implements, their sources of income and their household expenditure. These were in retrospect classified in terms of the livelihood framework. People organised themselves in various forms of collective action to enhance socio-economic development. This research examined the correlation between the average household's level of education, number of collective actions in the community, institutionalisation of collective action and the village's socio-economic development. A link was found between increased levels of education, increased collective action and higher household incomes. That last represents increased local economic development.

Village level collective action emerged to safeguard and/or exploit natural resources and/or to construct socio-economic and physical infrastructure. Feeder roads were constructed. Irrigation schemes dug and maintained. Schools and dispensaries were constructed and managed. Kilometres of pipes were laid down and domestic water supply was managed and maintained. Interests were advocated and lobbied for. Inputs were purchased jointly. Information was shared. Households saved money in small groups and gave each other credit under collective management. Sports were organised together. At the village level, the current study identified on average 30 to more than 60 instances of ongoing collective action. Some were linked with lower local government, though they operated largely independently. Collective action to establish socio-economic infrastructure or input supply was observed to be rather effective. However, collective action to manage such infrastructure to enhance socio-economic service delivery was identified as rather ineffective. Factors limiting the functioning of socio-economic service delivery related to its institutionalisation in conjunction with local capacity. Factors limiting the success of collective production, processing and marketing related to local capacity as well. In conjunction with local level capacity development, bottom-up institutionalisation of collective action helps communities to grasp top-down induced opportunities to enhance socio-economic development. The observed ineffective management of socio-economic service delivery was partly explained by the inability of local leaders and their constituencies to grasp the opportunities available. This is explained in part by the poor functioning of the 'decentralisation by devolution' government policy.

One general conclusion is that the institutionalisation of collective action was inadequately preceded or accompanied by the necessary capacity building of local leaders to make it a success.

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in de districten Mbulu en Karatu*



Samenvatting

In 1988 heb ik als coördinator van een plattelandsprogramma in Mbulu, Tanzania door het in Dar es Salaam gevestigde 'Institute of Resource Assessment' onderzoek laten doen naar de levensomstandigheden van de plaatselijke bevolking in het district. Voor dit onderzoek is een steekproef genomen van ongeveer 440 huishoudens uit een achttal verschillende agro-ecologische gebieden. De dominante manier van leven in deze gebieden varieert van 'jagen en verzamelen' bij de Hadzabe tot vormen van zelfvoorzienende landbouw, regenafhankelijke- en irrigatielandbouw, van gemend bedrijf tot aan gemechaniseerde landbouw in vlakke en in heuvelachtige erosiegevoelige gebieden die voornamelijk door de Wairaqw bevolking worden bewoond en bewerkt.

Het onderzoek heeft zich met name gericht op de directe levensomstandigheden in termen van o.a. onderwijsniveau, watervoorziening, sociaal-economische dienstverlening, energievoorziening, vormen van levensonderhoud, inkomsten- en uitgavenpatroon en gezamenlijke (of collectieve) actie om sociaaleconomische voorzieningen tot stand te brengen. Het welzijn van de bevolking werd in de Mwiraqw cultuur toentertijd voornamelijk uitgelegd in termen van aanwezigheid van materiële voorzieningen, op basis waarvan vanaf 2010 een vergelijkend onderzoek werd gedaan met medewerking van staf en studenten van het 'Institute of Rural Development Planning' in Dodoma. Op deze wijze is over een periode van meer dan 20 jaar de ontwikkeling op huishoudniveau in verschillende agro-ecologische zones in ruuraal Tanzania onderzocht. Daarnaast zijn lokale rapporten geraadpleegd en focus-groep-discussies gevoerd met – in totaal een tachtigtal – diverse vormen van collectieve actie.

De veranderingen op huishoudniveau zijn geïdentificeerd aan de hand van o.a. het onderwijsniveau, de agrarische productie, gebruik van natuurlijke hulpbronnen, aanwezige veestapel, eigendom van landbouw- en huis-

houdelijke werktuigen, en bronnen van inkomsten en uitgaven. Achteraf zijn deze indicatoren gerelateerd aan het begrippenkader van het Sustainable Livelihoods Framework van Robert Chambers (1999). Volgens Chambers bepaalt de interactie tussen huishoudens' middelen van bestaan en de institutionele context de doeltreffendheid van huishoudens' overlevingsstrategieën. Deze strategieën richten zich op de kwetsbare context van seizoensgebonden trends en schokken waar huishoudens op het platteland mee worden geconfronteerd. Een beperking van dit kader (framework) is dat het huishouden-gecentreerd is en dat er geen aandacht aan collectieve actie gegeven wordt. Het is dit deel van het Sustainable Livelihoods Framework – dat nog onvoldoende is onderzocht – waar ik me in mijn onderzoek op gericht heb. Gebruik makend van dit framework heb ik onderzocht welke institutionele ontwikkelingen zich voorgedaan hebben op het gebied van lokale collectieve actie ten aanzien van een bepaalde kwetsbare context. Hoe endogene krachten een institutioneel stimulerende omgeving voor collectieve actie – gericht op sociaaleconomische ontwikkeling – tot stand brengen. En hoe collectieve actie in verschillende institutionele omgevingen effectief is.

De doelstelling van dit onderzoek is erop gericht de structuren en processen te identificeren, die huishoudens – gezien hun kwetsbare situatie gezamenlijk in staat stellen in hun onderhoud te voorzien, dan wel hun levensomstandigheden te verbeteren. Daarbij is met name gezocht naar de grondslag van de collectieve actie en een eventuele correlatie tussen de onderzochte indicatoren en gezamenlijke actie. De geïdentificeerde vormen van gezamenlijkheid variëren van het gezamenlijk verwerken (verorberen) van het resultaat van de jacht tot aan het gezamenlijk beschermen en/of exploiteren van natuurlijke rijkdommen en/of het gezamenlijk opbouwen en onderhouden van sociaaleconomische en fysieke infrastructuur: toegangswegen zijn gebouwd; irrigatie kanalen zijn gegraven en onderhouden; scholen en gezondheidsklinieken zijn gebouwd en worden onderhouden; kilometers waterleiding zijn neergelegd en lokale watervoorziening wordt beheerd en onderhouden; belangen zijn verdedigd en gelobbyd voor; zaden, mest en/of landbouwbestrijdingsmiddelen worden gezamenlijk ingekocht; informatie wordt gedeeld; huishoudens sparen geld in kleine groepen en geven krediet aan elkaar onder collectief beheer; men sport samen; en men danst en zingt samen. Op dorpsniveau heeft de huidige studie per dorp gemiddeld 30 tot meer dan 60 voorbeelden van collectieve actie geïdentificeerd. Buiten de koppeling van een aantal van hen met lagere overheden werken ze voornamelijk onafhankelijk van elkaar.

In mijn onderzoek heb ik me laten leiden door Ackerman en Anderson (2002), die onderzocht hebben in welk verband organisatieverandering tot stand komt. Daarnaast heeft Agrawal (2001) samen met een aantal collega's een 23-tal voorwaarden geformuleerd, waar collectieve actie aan dient te voldoen om kans van slagen te hebben. In aanvulling daarop heeft Campbell (2007) een aantal redenen geformuleerd waarom betrokkenen collectieve actie institutionaliseren. Ostrom (2010) heeft daarbij een zevental soorten van noodzakelijke regelgeving geformuleerd om gezamenlijke sociaaleconomische dienstverlening en/of productie mogelijk te maken. In dit alles zijn *'wederzijds vertrouwen'* (Tyler, 2011) en *'leren vanuit het doen'* (Helmsing, 2013) condities die mede geïnstitutionaliseerd dienen te worden.

Ik heb kunnen constateren dat collectieve actie om sociaaleconomische infrastructuur te bouwen of om specifieke landbouwinput geleverd te krijgen bijna overal – behalve waar het onderwijsniveau vrij laag is – effectief is geweest. Daarentegen is collectieve actie om dergelijke infrastructuur te beheren ter verbetering van de sociaaleconomische dienstverlening geïdentificeerd als onvoldoende effectief. Beperkende factoren om sociaaleconomische dienstverlening effectief te laten functioneren hebben betrekking op betrokken institutionalisering in combinatie met aanwezige beheerscapaciteit. Beperkende factoren ten aanzien van collectieve productie, verwerking en afzet van landbouw- en veeteeltproducten hebben ook betrekking op de capaciteit van de betrokken producenten. In alle vormen van collectieve actie – waar financiën een rol spelen – is gebleken dat enerzijds wederzijds begrip van controlemechanismen bij alle betrokkenen aanwezig dient te zijn en anderzijds dat men in staat is om te leren van het doen. Kwaliteit van uitvoering leidt tot resultaat en vertrouwen.

In combinatie met de interne capaciteitsontwikkeling dient institutionalisering van collectieve actie van onderop de van boven opgelegde mogelijkheden ter verbetering van de sociaaleconomische ontwikkeling te vatten. Onvoldoende kwaliteit van sociaaleconomische dienstverlening wordt deels verklaard door de ontoereikende capaciteit van lokale leiders de beschikbare mogelijkheden uit te baten. Het wordt gedeeltelijk ook verklaard door het slechte functioneren van 'decentralisatie door devolutie' binnen de Tanzaniaanse context.

Gebleken is dat er behalve met betrekking tot het onderwijsniveau geen eenduidige relatie is gevonden tussen onderzochte indicatoren, eventuele gezamenlijke actie en gemeenschapsontwikkeling. Gemeenschappelijke ervaring dan wel voorlichtings- en/of onderwijsniveau zijn bepalend gebleken voor allerlei vormen van collectieve actie op het gebied van kwaliteit van

onderwijs, kwaliteit van productie, coöperatief management, en/of de collectieve bouw, beheer en onderhoud van sociaaleconomische voorzieningen en dienstverlening. Er is een relatie geïdentificeerd tussen het gemiddelde huishoudenniveau van onderwijs, het aantal collectieve acties, de nodige institutionalisering en de sociaaleconomische ontwikkeling van het dorp. We vonden een koppeling tussen een verhoogd niveau van onderwijs, een toename van de collectieve actie en een hoger inkomen van het huishouden. De laatste vertegenwoordigt lokaal een groeiende economische ontwikkeling.

Eén algemene conclusie is dat de institutionalisering van de collectieve actie voorafgegaan of voldoende vergezeld dient te worden van de nodige capaciteitsopbouw van de lokale betrokkenen om de actie tot een succes te maken.

1

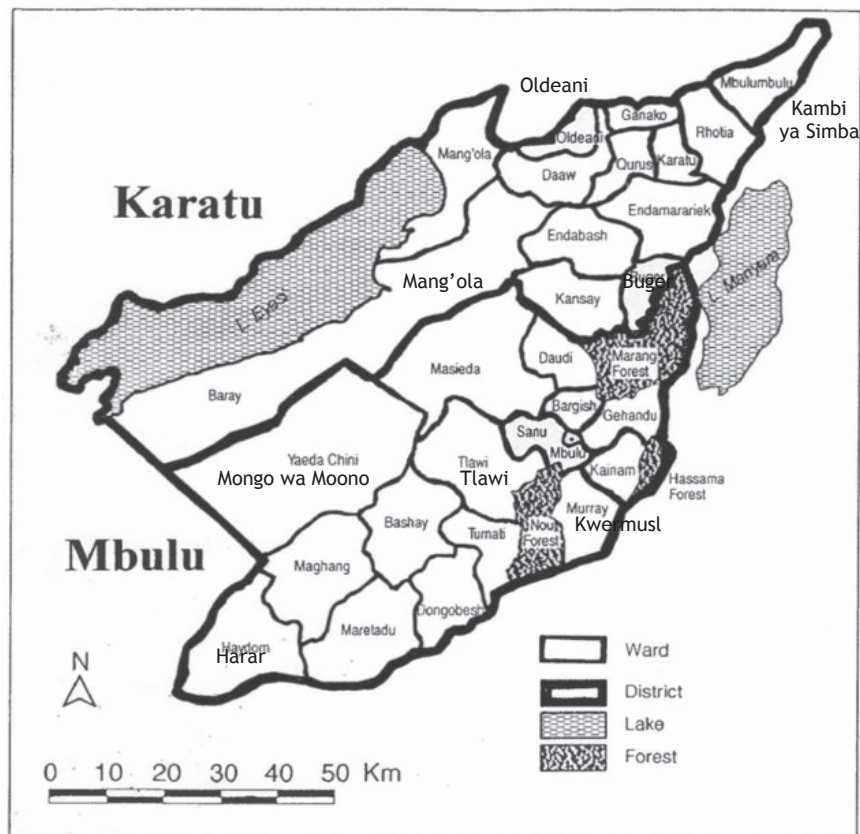
Introduction

In 1988 the Tanzanian Mbulu District Rural Development Programme (MDRDP)¹ commissioned a household survey in Mbulu District to determine the level of household development in various parts of the district (IRA, 1989). A household (*kaya*) was defined as a group of persons living together and sharing living expenses (NBS, 1983). Usually this concerned a husband, wife and children, but other relatives or even guests that stayed long-term were also included as household members. Interviews were conducted and data collected in eight villages; four in the current Mbulu District (Harar, Kwermusl, Tlawi and Mongo wa Moono²) and four in the current Karatu District (Buger, Kambi ya Simba, Mang'ola Barazani and Oldeani) (Figure 1.1). These villages represent different agro-ecological zones, as indicated in Annex B. The survey households were chosen at random, and the sample included female-headed households.

The sample villages were inhabited primarily by the Iraqw people, varying from hunters and gatherers in one part of the research area to in other parts of the district subsistence farmers, pastoralists, agricultural labourers and farmers using mechanised equipment such as combine harvesters. Some areas were fully dependent on rainfed agriculture, while others had access to irrigation. At the time the survey was designed, in 1987, livelihood approaches³ were just emerging, and had not yet drawn the attention of the survey designers. Thus, the 1988 survey described these eight villages in terms of their physical, demographic, ethnic, agro-ecological, socio-economic infrastructural and cultural characteristics. This aligned well with the prevailing Iraqw definition of development, which emphasised material ownership more than cultural tradition. Indeed, development (*maendeleo*) within the Iraqw culture was considered to refer primarily to ownership of assets, such as radios, manufactured pots and pans, clothes purchased at stores, bicycles, corrugated iron roofing

and burned brick houses. Local people also associated development with changes in agricultural practices and links with markets at the wider regional, national and, in the case of coffee and pyrethrum, international level. Land and the natural resources related to it were considered the principal means to achieve development (Snyder, 2005).

Figure 1.1
Mbulu District before 1995, split into Mbulu and Karatu districts after 1995



Source: Adapted from Meindertsma and Kesselaar (1997)

The 1988 survey defined the level of household development in terms of the standard of living of a smallholder, including resource availability, land size, cropping pattern and agricultural production, eating pattern, educational level, wealth, material asset ownership, income and expenditure pattern and access to socio-economic services (IRA, 1989). These were translated in retrospect into the terminology of the sustainable livelihoods framework, including human, social, natural, financial and physical capital. 'Livelihoods' was defined following the UK's Department for International Development (DFID, 1999, 1) as 'comprising the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base' (Chambers & Conway, 1991: 5). According to the sustainable livelihoods framework, interactions between livelihood assets and transforming structures and processes determine the effectiveness of policies and strategies to address the vulnerability context imposed by seasonality, trends and shocks confronting rural households (Chambers & Conway, 1991; Carney, 1999; DFID, 1999; De Haan, 2000; Scoones & Wolmer, 2003; De Haan, 2006; Scoones, 2009).

In the 1988 survey, the village development level was conceptualised in terms of the availability of socio-economic infrastructure, the presence of government staff, livestock ownership and the types of development problems mentioned by survey respondents (IRA, 1989). These were later linked to transforming structures and policies at the community and village level, in line with the sustainable livelihoods framework.

Apart from the 1988 survey, other surveys were conducted over the years between 1988 and 2010 (KIT, 1997; IOB, 2004; SNV, 2005). These surveys showed a trend but did not identify clearly *why* changes occurred. Were changes the result of local initiatives by individuals, civil society organisations or the private sector? Did they occur because of or despite Tanzanian local or national government policy, decision-making and policy implementation? Were they due to or despite donor development support; or because of or despite international action, changing trade relations or global change?

In 2010, I conducted a new household survey in Mbulu and Karatu districts to identify changes since the initial survey in 1988 (Van Dijk,

2010).⁴ The question I addressed was, ‘What actually contributed to the development identified at the household and community level?’

In terms of aid effectiveness many studies have been conducted to assess whether given aid has had the expected effect (e.g., Bol, 1982; Hoe-bink, 1988; IOB, 2008). These describe aid effectiveness in simple cause-and-effect relationships, through complicated processes or as part of a complex environment (see, e.g., Fowler, 2008). Nearly all of these studies have taken the perspective of the initiator of the aid, aiming to figure out in how far the initiator’s intentions were achieved. The question ‘did we get value for money?’ is the one most often raised by initiators of aid – or their constituencies – and is a relevant question anyway. However, it is a ‘top-down’ question. When a donor organisation raises such a question, most of the time it is to assess the effectiveness of its own policy implementation (e.g., IOB, 2008). If the question is raised by critical outsiders, the effectiveness – or ineffectiveness – of ‘donor money (not) reaching the target country or target group’ is often nonetheless quite similar (see, e.g., Moyo, 2009).

The starting point of the current study was the identified change in development level, in terms of livelihood assets, of the population of the former Mbulu District (since 1995 split up in Mbulu and Karatu districts). By assessing the transformation of structures and policies over time, along with the endogenous and exogenous livelihood strategies, I aimed to answer the question, ‘What actually contributed to that development?’ This question resonates with an observation by Pronk (2001: 615): ‘An in-depth qualitative study of a long-term development process of all relevant factors and their mutual relationship playing a role in that process, would provide much better insight than any attempt to find a measurable effect of an isolated factor such as aid.’ Being aware of traditional relationships, ongoing reforms, Tanzanian socio-economic development overall and specific development support from, inter-alia, the Dutch government, the current research was undertaken not as an assessment of the extent to which interventions financed by outsiders, such as the Netherlands government, had addressed the basic causes of poverty in the districts concerned. Such an evaluation was conducted earlier, in 2004, by the Policy and Operations Evaluation Department (IOB) of the Dutch Ministry of Foreign Affairs (IOB, 2004). This research rather sought to analyse all relevant factors and the mutual relationships playing a role in the development processes that took place

within the study area, of which Dutch support was only one. Political capital, which was hardly mentioned in early theorising on the sustainable livelihoods framework (Scoones, 1998; DFID, 1999) and not mentioned during the baseline investigations for this research (IRA, 1988), currently has a prominent place in the literature (Scoones, 2009) and in discussions on local development at the village and district level. This latest incarnation of the sustainable livelihoods framework may help us to better understand what contributed to the livelihood outcomes measured in the study area.

Starting from livelihood assets, in terms of human capital and the context wherein one operates, people may design social structures to facilitate more effective and efficient development and implementation of livelihood strategies. Following Dia's (1996) description of institutional capacity and economic performance, I theorised that the development path of rural Mbulu and Karatu districts had been determined, in the first instance, by inhabitants' human, natural and financial resources and their ability to exploit the available resources as effectively and efficiently as possible within the prevailing context, including the development policies implemented in specific areas over time. The development path therefore was understood to be determined by inhabitants' competence to organise themselves to develop the available resources. In other words, in the terms of the sustainable livelihoods framework (DFID, 1999; Scoones, 2009), the development path was expected to be determined by the way inhabitants used their human, social, natural, financial, physical and political capital within their cultural context to cope with seasonality, trends and shocks within their environment, by developing or adapting livelihood strategies individually, collectively or in some structured way. People did so in pursuit of outcomes such as more income, increased well-being, reduced vulnerability, improved food security and more sustainable use of natural resources. I assumed that development in Mbulu and Karatu, being rural districts, relied on agricultural and livestock production. However, Karatu town and some other places along the main road to the Ngorongoro Crater and the Serengeti have benefited from tourism as well. Despite the rather uniform Iraqw cultural background in the study area, with the exception of the village of Yaeda Chini/Mongo wa Moono, the rural communities studied were quite different from each other in terms of resource availability, ecological characteristics, accessibility, socio-economic infrastructure, organisa-

tional structures and management capacity. Other differences found regarded farming systems, public service delivery, micro-finance arrangements and external linkages. The development path of each village can be understood by identifying their various resources and the way inhabitants understood and organised themselves to develop these resources, thanks to or despite external influences.

At the household level, agricultural production is determined by the available natural resources, mainly, land size, soil fertility and rainfall or irrigation water availability, together with human competencies in the form of knowledge, skills and attitudes, and the available financial resources, for example, to hire additional labour, to purchase necessary implements to cultivate in a specific way and to access markets. Joint organisation or economies of scale achieved by other means helps to determine the adequacy of the available agricultural inputs and market access, with in both cases the private sector also playing a role. A key question asked was thus, 'What competencies do people need or have to develop their institutional environment?'

People's experiences, in combination with their level of education, and consequently their understanding of agricultural and other extension messages, are key determinants of the quality of their human resource capacity, particularly in terms of their ability to digest information on the most effective and efficient farming systems. People's nutrition and health, alongside their access to time-saving water and energy sources, help to determine the quantity of human resource capacity, in terms of the available work force.

An individual's human resource capacity, or more generally, a community's joint capacity, plays a substantial role in development of economic infrastructure like irrigation systems and hillside terracing for efficient exploitation of natural resources. In addition, communal organisation encourages economic infrastructure such as construction and operation of cattle markets or feeder roads, which enable farmers to bargain for better produce or livestock prices and reduced transport costs. In both cases such infrastructure gives farmers a competitive edge in the market. Agricultural processing may be done within a household. Or communities may organise to add value to local produce together. Both individual and communal action are guided by central and local development policies and their implementation. Collective action is guided first by the capability of the local communal organisation to operate effective-

ly, efficiently and sustainably. In this research I assumed that such communal skill was learned either by doing, that is, through participation in some social structure, whether cultural, social or economic, or through any of the more formal education trajectories that people participated in.

More production enables households to feed themselves better and to raise more income. With more income, households can pay for more comfortable living arrangements, education, health, agricultural inputs and transport and invest in or contribute to joint socio-economic infrastructure. These activities, consequently, could lead to more income. External actors may facilitate such a process, but local competencies determine the development path.

Placing people's competencies and their collective action central in the development process, the current dissertation addresses the question, 'Why is there development?' *First*, it analyses endogenous development paths. *Second*, it investigates whether education and sensitisation offered really did encourage collective action and enable people to grasp opportunities jointly. *Third*, it assesses the extent to which local communities internalised a variety of external factors, or so-called exogenous transforming structures and policies. Included among these are central government interventions, international and local donor contributions, non-governmental service delivery and private-sector interests, each focusing on a particular part of the development process described above.

Central government, for example, may enable or hinder the functioning of local government, of non-governmental, faith-based or community-based organisations and of the private sector. Furthermore, government may or may not support establishment of socio-economic infrastructure and delivery of socio-economic services; or it might otherwise set standards and guarantee the quality of such services performed by others. National and international donors may facilitate or hinder the public service delivery operations of government and non-governmental organisations, particularly related to the construction or functioning of socio-economic infrastructure. Similarly, donors may facilitate or hinder communities in building their capacity. Sometimes they may intervene directly at the community level without going through a local organisation. Non-governmental organisations (NGOs), in particular, faith-based organisations, focus mainly on social service delivery when and where government is perceived as lacking capacity or as electing to not (yet) operate in a specific location. The private sector, for its part, is primarily

interested in developing businesses where individuals have income to spend, not only on agricultural or other economic inputs, but also regarding all kinds of consumer goods to facilitate livelihoods. Banks and micro-finance organisations may be active in a community, or residents may organise themselves into, for example, savings and credit cooperatives, village community banks or savings and internal lending communities, to provide access to financial resources for specific investments. Better-off relatives may remit funds or assist in financing education for younger household members.

The fact that there is no shortcut to progress has long been known (Hyden, 1983). However, the actual route to progress needs to be better explored. This study seeks to do just that.

Notes

¹ The researcher worked from 1987 to 1992 in Mbulu as coordinator of the Mbulu District Rural Development Programme.

² In 1988, Mongo wa Moono had not been registered as village and was just part of Yaeda Chini.

³ Solesbury (2003) defined the start of the discussion on the sustainable livelihoods approach as 1987, with the Brundtland Commission report, after which Scoones (1998) designed his sustainable livelihoods framework. DFID consolidated the discussion with its sustainable livelihoods guidance sheets published from 1999 to 2005.

⁴ Dijk, Teun van (mimeo, 2010): Survey conducted in the same eight villages Harar, Kwermusl, Tlawi and Mongo wa Moono in the current Mbulu District and Buger, Kambi ya Simba, Mang'ola Barazani and Oldeani in the current Karatu District.

2

Research objective

At the time our baseline survey was designed, in 1988, development concepts were defined in slightly different terms than at present. As such, the level of household development was defined in terms of the standard of living of the smallholder, including the smallholder household's resource availability, land size, cropping pattern and agricultural production, eating pattern, educational level, wealth, income and expenditure pattern and access to socio-economic services. Community or village development was defined in terms of availability of socio-economic infrastructure (IRA, 1989). Where feasible, these terms were translated in retrospect into terminology consistent with the sustainable livelihoods framework (DFID, 1999-2005). Key terms in the sustainable livelihoods framework are 'livelihood assets', 'vulnerability context', 'transforming structures and processes', 'livelihood strategies' and 'livelihood outcomes'. Whereas the sustainable livelihoods framework refers to the 'institutional context' and takes institutions as a given, I posit that households through collective action can modify the institutional context in which they design their livelihood strategies. Such collective action may operate either within a given institutional context or independent of an existing institutional context. In the latter case, own institutions may be designed through collective action.

The objective of the current research was to identify the structures and processes required by households to enable their livelihood strategies and address their vulnerability context, to achieve the desired livelihood outcomes. In other words, this research sought to identify how households adapted to the structures and processes defining the context for their livelihood strategies to work and to modify these through community collective action. I investigated the capacities that were required to act collectively in various constellations in development processes, aiming also to identify the role of collective action in local economic de-

velopment. Furthermore, I examined the distribution of roles and responsibilities across the whole institutional set-up, including the combined initiatives of government, community and private sector in the development process. In other words, I was concerned with the way agency structured society to enhance development. Where changes could be identified, I analysed the development process, to better understand the interaction between agency and structure. A major question asked was what factor, what actor and what action was crucial in the local development process.

The sustainable livelihoods framework considers the interaction between endogenous and exogenous forces at the community and village level to be key in local economic development processes, though these processes are also dependent on the development of local human capital with which households organise themselves collectively to establish local institutions to enhance local economic development.

3

Theoretical framework

How do changes at the household level influence development at the local institutional and village level? To answer this question, we must first define what is understood by change at the household level, by development at the local institutional level and by development at the village or local government level. As noted in Chapter 1, our definition of a household was taken from the Tanzanian National Bureau of Statistics (1983-2012) and encompasses a group of people who reside together and share living expenses. I identified indicators of development at various levels, to enable identification of changes over the study period, which spanned more than 20 years. In particular, I sought links between changing household development levels and village-level development trajectories in which the past influenced the future. To explain the interaction between agency¹ and structure, I applied the sustainable livelihoods framework, as developed by Chambers and Conway (1991), Carney (1999), DFID (1999), De Haan (2000, 2006), Scoones and Wolmer (2003) and Scoones (2009). My focus was on how households used their capacity to act collectively to change the institutional structures shaping their livelihood strategies. The sustainable livelihoods framework places the emphasis of analysis on local perspectives on development, identifying links from the micro-level particularities of people's livelihoods to higher-level institutional policy framings at the local, district, regional, national and even international levels.

The strength of the livelihoods approach lies in its recognition that local values, knowledge, power and politics are key elements of complex institutional and governance arrangements (Scoones, 2009: 22). Yet, as observed by Scoones (*ibid.*), the role played by knowledge, scale and politics in the transforming structures and processes indicated in the sustainable livelihoods framework has hardly been addressed. Particularly challenging is the role of collective action. Therefore, within transform-

ing structures and processes, this research focuses particularly on collective action. I examined how education and training in required competencies, and the associated knowledge, skills and attitudes, generated collective action as a livelihood strategy. In addition, I sought to identify which supporting structures enabled collective action to take place in order to generate development.

3.1 What development are we talking about?

As the current research was initiated more than 25 years ago, the development paradigms at the heart of the study go back more than 25 years as well. According to Schultz (1964: 205), in order to develop, the subsistence farmer needs to be confronted with ‘shocks’. At the community or village level, such shocks are interpreted as education, capacity building and access to information that enable people to use what science teaches, for example, about soils, plants, animals and machines. I consider other elements to be necessary as well, among them, knowledge concerning the role of the governing party; awareness and implementation of legislation, particularly regarding planning responsibilities; decision-making, fundraising and resource mobilisation; operation and maintenance of socio-economic infrastructure; and availability of technical support. It is not the availability of infrastructure as such that indicates the development level. Rather, a community’s development level is indicated by the way it takes up its responsibility to further develop and maintain socio-economic infrastructure and related services.

In the 1970s, rural development was cast mainly in terms of promoting economic activities and building economic and social infrastructure. Its ultimate aim was a fuller utilisation of the available physical and human resources. Development sought to achieve higher incomes and better living conditions for the rural population as a whole – particularly the rural poor – and their effective participation in the development process (Anker, 1973: 462). Development was defined as ‘improving the living standards of the mass of the low-income population residing in rural areas and making the process of their development self-sustaining’ (Lele, 1975: 20). Rural development indicators were formulated in terms of improved living standards for the subsistence population, involving mobilisation and allocation of resources. Mass participation was another indicator, requiring resources to be allocated to the lowest-income regions and

classes in such a way that productive and social services actually reached them. Rural development was also acknowledged as requiring acquisition of appropriate skills and implementation capacity and the presence of institutions at the local, regional and national levels to ensure the effective use of available resources. Self-sustaining was then taken as involving, as opposed to simply reaching, the subsistence population through development programmes (*ibid.*). Cohen and Uphoff (1976) emphasised involvement of the 'rural poor', to guarantee the sustainability of the development process. By this time less emphasis was being placed on the need for local economic development to pay for development and maintenance of the required social infrastructure.

In the late 1980s and 1990s, sustainable development was defined as a development strategy; that is, management of all assets, natural resources and human resources, as well as financial and physical capital, in such a way as to increase wealth and well-being in the long term. Sustainable development, then became the goal. This conceptualisation of development rejected policies and practices that support existing living standards by depleting the productive base, including natural resources, leaving future generations with poorer prospects and greater risks than our own (Repetto, 1986; Brundtland 1987). According to Pearce et al. (1990: 2-3), 'all development, which implies change that is desirable, should be sustainable'. Elements he considered key for sustainable development were constancy of the natural capital stock, institutions capable of implementing sustainable development policy and systematic changes in social values.

In 'Development from Above or Below', Stöhr and Taylor (1981) asserted that territorial development rests primarily on the full mobilisation of a region's human, natural and institutional resources. These authors further identified nine components as essential for development: (i) provision of broad access to land; (ii) territorially organised structures for communal decision-making on the allocation of natural and human resources; (iii) a high degree of self-determination; (iv) choice of regionally appropriate technology; (v) priority setting towards satisfaction of basic needs such as food, shelter and basic services; (vi) national pricing policies that offer favourable terms of trade to agricultural and other peripheral products; (vii) export-based activities promoted only to the extent that they lead to higher living standards for the local population; (viii) emphasis on intra-regional and rural-to-rural transport and communica-

tion (rather than on rural-urban exploitative links); and (ix) egalitarian social structures and collective consciousness with representatives who are answerable to their constituency (rather than to their hierarchical superiors).

Blakely (1989) defined local economic development as a function of multiple factors, among them, labour, natural resources, entrepreneurship, capital investment, transport, communication, industrial composition, technology, size, export market, the national and international economic situation, local government capacity, socio-economic infrastructure, national government spending and general development support. He emphasised the role of political leadership as well, noting the major impact of local leadership on jobs creation, sales, incomes, public revenues and expenditures, economic productivity, job quality and local quality of life. According to Blakely (*ibid.*), to engage in economic development a community must have the capacity to perform the following functions through its local institutions: (i) economic planning; (ii) social and community resource development; (iii) physical and land use planning; (iv) commercial and industrial targeting and marketing; and (v) running its own financial affairs. Adequate central government expenditure in the area has been proposed as an additional element needed for local economic development (Hilhorst, 1990).

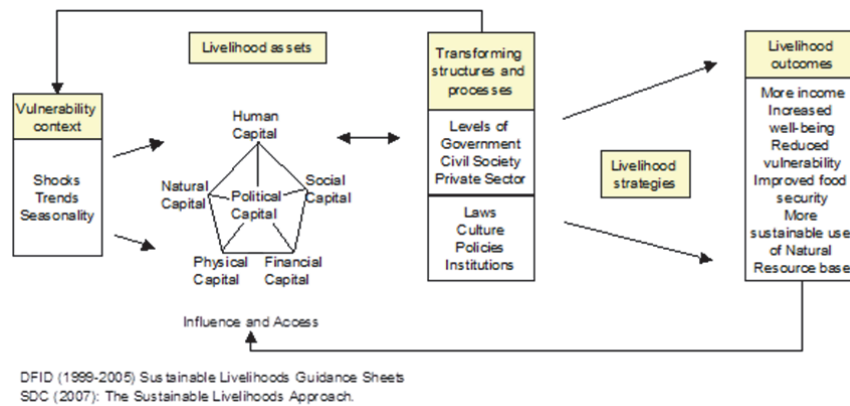
Human, natural and financial resources are essential building blocks for local economic development to take place. Dia (1996) saw local economic development as a function of a combination of these resources, together with the institutional capacity to transform these resources into marketable products at the lowest possible transformation and transaction costs. According to Dia (*ibid.*), *human resources* are the most crucial in qualitative terms, as people must organise themselves to add value to the available natural resources. Human resources are understood to encompass all human activity that goes with life itself. This is much more than labour alone; it includes social relationships based on centricity or reciprocity (Polanyi, 1944). The institutional pattern of centricity provides a path for collection, storage and redistribution of goods and services. The institutional pattern of reciprocity refers to give-and-take of goods and services in the absence of permanent records. Polanyi (*ibid.*) observed that people act to safeguard their social standing, social claims and social assets. *Natural resources* entail land and all that is given by nature, which is not produced by humankind. *Financial resources* or actual money is merely

a token of the purchasing power that comes into being through the mechanism of banking or state finance. Although human, natural and financial resources are exchanged on the market and markets are organised based on demand and supply, in traditional societies such exchanges do not follow market mechanisms, but rather safeguard individuals' interest in the possession of material goods.

Since 1999, these three sets of resources, that is, human, natural and financial, have been taken together with social and physical resources to be the basis for development within the context of the sustainable livelihoods framework (Chambers, 1999). In the current research, I made ample use of this livelihoods framework, presented in Figure 3.1, to investigate the interaction between agency and structure and the roles these elements play in achieving livelihood outcomes. I sought, particularly, to describe empirically what livelihood assets influenced collective action for addressing households' vulnerability context in the research area. Based on that, I identified strategies that residents pursued to achieve livelihood outcomes that could be called development.

As indicated 'development', according to the sustainable livelihoods framework, refers to rising income, increased well-being, reduced vulnerability, improved food security and more sustainable use of the natural resource base. 'Income' is defined in the current research as entailing a household's expenditures during a four-week period in July and August. 'Increased well-being' was measured mainly in terms of physical capital, following Snyder (2005), who studied local perspectives on household development among the Iraqw people of Mbulu and Karatu districts. Increased well-being, in line with local perceptions, was thus indicated by greater ownership of material assets such as radios, manufactured pots and pans, clothes purchased at stores, bicycles, corrugated iron roofing and burned brick houses. 'Reduced vulnerability' was measured mainly in terms of educational level, landownership and a perception of land scarcity. 'Improved food security' was measured as agricultural production and nutrition. Finally, 'more sustainable use of the natural resource base' was measured mainly in terms of agricultural production, livestock production and energy use.

Figure 3.1
Sustainable livelihoods framework



The current research takes household involvement in collective action as its entry point for analysis. As it is generally assumed that knowledge provides a pathway out of poverty and a route towards development (Chambers & Conway, 1991: 22; Beinhocker, 2006: 317), I linked livelihood assets to collective strategy development and consequently to the livelihood outcomes that we call development. My aim was to identify such development paths empirically.

3.1.1 Livelihood assets

Chambers (1999) expressed livelihood assets in several resources or ‘capitals’. *Human capital* represents skills, knowledge, ability to work and good health, which combined enable people to pursue different livelihood strategies to achieve their livelihood objectives. At the household level, human capital represents available competencies household members might have gained through experience and education. In this research, the initial household survey (IRA, 1989) expressed human capital in terms of household size, educational level, occupation of the head of household and data on nutrition.

Social capital represents the social resources through which people seek to achieve their livelihood objectives in terms of collective action, networks and connectedness, either vertical links (patron–client) or horizontal links (those between individuals with shared interests). Social capital

increases people's trust and ability to work together and expands their access to wider institutions, such as political or civic bodies. It includes membership in formalised groups, which often entails adherence to mutually agreed or commonly accepted rules, norms and sanctions. It also extends to relationships of trust, reciprocity and exchanges, which facilitate cooperation and reduce transaction costs and may provide informal safety nets among the poor. 'The poor' here are seen as those people who 'for one reason or another almost systematically end up at the losing end of the multiple bargains that are struck around the available resources and opportunities' (Bastiaansen et al., 2005: 981). Social capital represents cultural values and relationships and mutual help among neighbours and within religious organisations and resource user groups (De Haan, 2000). In Mbulu District, mutual help among neighbours was traditionally demonstrated in, for instance, the joint anchoring of steep slopes to prevent erosion (Thornton, 1980). Among the Iraqw people, decision-making by consensus has traditionally been the predominant way community members relate to each other.

Natural capital represents the natural resource stocks from which services and resources are derived (e.g., nutrient cycling and erosion protection). There is wide variation in the resources that make up natural capital, from intangible public goods, such as the atmosphere and biodiversity, to divisible assets used directly for production (e.g., trees, land and water). The household surveys that formed the basis for this research (1988 and 2010) defined natural capital in terms of landownership, a perception of land scarcity and energy use.

Physical capital comprises basic socio-economic infrastructure associated with public goods, like roads and bridges, alongside producer inputs that are normally purchased. Examples of physical capital are affordable transport; secure shelter and buildings; adequate water supply and sanitation; clean, affordable energy; and access to information (communication). As noted above, the Iraqw people of Mbulu District described development (*maendeleo*) mainly in terms of ownership of material assets such as brick and cement houses, corrugated iron roofing, radio-cassette players, manufactured pots and pans, clothes purchased at stores and bicycles (Snyder, 2005).

Financial capital can be held in cash, bank deposits or liquid assets such as livestock. Besides these forms of financial capital, income may be earned from labour or from the sale of crops or other products, or it

may be received in the form of pensions, remittances and transfers from the state. Financial resources enable people to invest, and can also be obtained through socially instituted savings and credit facilities or other credit-providing institutions.

Chambers (2005) defined *political capital* as the ability to use power in support of political or economic positions and so to enhance livelihoods. Power and influence may be applied in combination with financial capital.

Human, social and political capital must be viewed in the context of the prevailing *cultural capital*, here defined in terms of traditional norms and values and how people interact with each other, as inherited from within the family and clan. More recently cultural capital has been defined as the rules for engaging human and social capital (Chobi, 2010).

3.1.2 Collective action

People do many things collectively, either by 'instinct' or for reasons of common interest. Thus, they may act collectively to obtain economic benefits that cannot be gained by any one individual without involvement of others, despite the fact that everybody does not always join (Olson, 1965). Collective action arises when people become aware of a specific situation in their environment and join to address the situation together. In a synthesis of the work of Wade (1988), Ostrom (1990-1999) and Balland and Platteau (1999), Agrawal (2001: 1654) defined 23 critical enabling conditions for 'sustainability of the commons'. The enabling conditions for collective action were grouped into four types: characteristics of the resource systems, characteristics of the group, characteristics of the institutional arrangements and characteristics of the external environment. Agrawal's (ibid.) resource system characteristics are (i) small size (Wade); (ii) well-defined boundaries (Wade and Ostrom); (iii) low levels of mobility; (iv) possibilities of storage of benefits from the resource; and (v) predictability of the flow of benefits. Enabling characteristics of the group were summarised as (i) small size (Wade, Balland and Platteau); (ii) clearly defined boundaries (Wade and Ostrom); (iii) shared norms (Balland and Platteau); (iv) past successful experiences and social capital (Wade, Balland and Platteau); (v) appropriate leadership, young ages, familiarity with changing external environments and links to the local traditional elite (Balland and Platteau); (vi)

interdependence among group members (Wade, Balland and Platteau); (vii) heterogeneity of endowments with homogeneity of identities and interests (Balland and Platteau); and (viii) low levels of poverty. Enabling institutional arrangements were defined as (i) simple and easy to understand rules (Balland and Platteau); (ii) locally-devised access and management rules (Wade, Ostrom, Balland and Platteau); (iii) ease of rule enforcement (Wade, Ostrom, Balland and Platteau); (iv) graduated sanctions (Wade, Ostrom); (v) availability of low-cost adjudication; and (vi) accountability to users of monitors and other officials. Lastly, the enabling characteristics of the external environment were defined as (i) low-cost exclusion technology, such as fencing (Wade) and time available for adaption to new technologies related to the commons; (ii) low levels of articulation with external markets; (iii) gradual change in articulation with external markets; and (iv) state interference such that central government does not undermine local authority (Wade, Ostrom), availability of supportive external sanctioning institutions (Balland and Platteau), provision of appropriate levels of external aid to compensate local users for conservation activities (Balland and Platteau) and nested levels of appropriation, provision, enforcement and governance (Ostrom).

Collective action takes place after common goals have been set and agreed upon. Such agreement can be reached informally, in unwritten format, or through formal mission or vision statements and registered constitutions. These goals and agreements are the starting point of what the sustainable livelihoods framework calls 'transforming structures and processes'. Belongingness could be by default, as one belongs to a tribe, to the group of parents with school-age children or residents of a specific neighbourhood. Or one might belong subsequent to payment of membership fees or joining in some specific action. Depending on the own resources of a collective action, and what other actors contribute or are involved in, an implementation strategy is worked out to achieve the common goals. Tasks and responsibilities are agreed upon. Steering mechanisms are defined to take decisions; to implement, monitor and learn; and to innovate. These then generate the institutionalisation of collective action. The actual capacity of collective action is determined by the resources available, including the ability to access resources of others. Collective action takes place within an institutional context, which is given or derives from the experiences of the stakeholders. According to Agrawal and Ostrom (2001: 508), for people to undertake collective ac-

tion, they need to have property rights to the resources concerned. Thus, effective collective action is said to be possible if local users are entitled to operational rights to access and use local resources; are in control of them, even to exclude others from using the resources; are entitled to enforce their decisions to manage and maintain the resources; and have the ability to appeal to higher authority in case of conflicts. Cleaver (2003: 16), however, saw collective management of resources as dependent on people's knowledge, power and agency in respect to their social relations through informal or socially embedded institutions, or through bureaucratic institutions, defined as 'formalised arrangements based on explicit organisational structures, contracts and legal rights as introduced by government agencies'. The institutionalisation of collective action is said to reduce the transaction costs of negotiation (Meinzen-Dick, 2004: 10).

External factors and the specific vision held by the 'owners' of an existing or potential collective action guide the 'owners' of the collective action in determining its goals and mission. Consequently, they determine what output they require in order to achieve the intended outcome, depending on the roles that other actors play. External factors include exogenously generated or imposed structures and processes as given by traditional culture, various levels of governance, specific laws and institutions. The planned output depends on the available inputs in terms of human, material, financial and information resources and the process by which these are transformed into the planned output. In respect to shared values, the process determines the way the mission is translated into operational strategies; the way tasks and responsibilities are structured, coordinated and streamlined; and the way members and staff are capacitated to perform effectively and efficiently. The quality of the available livelihood assets determines how things are organised, what output is produced and ultimately how outputs are used. The human resources available at the community level determine the capacity of that community, for example, to burn bricks; to build or organise construction of houses, classrooms, agricultural storage facilities (*godowns*) and health dispensaries; to manufacture furniture or school desks; to raise tree seedlings or manipulate certain plant species; to construct and maintain bridges and roads; and to erect and maintain erosion control structures. In the districts under study in the current research, human resources affected communities' abilities in multiple areas: to organise joint

action for input supply and marketing of agricultural produce; to operate local markets (*mnaada*); to dig wells or lay and maintain a piped water supply; to maintain socio-economic infrastructure; to chair meetings; to take decisions; and to monitor collective action implementation. Human resource capacity within communities was also at work in demanding, overseeing and managing the quality of public services.

Elaborating on the sustainable livelihoods framework, Scoones (2009: 183) identified knowledge, scale, politics and dynamics as elements necessary to address. Scoones (*ibid.*) observed that the micro-macro link had not yet been investigated in regard to the structuring and processing of collective action, and that we consequently know little about 'the impingement of the wider, global processes on livelihood concerns at local level'. I would add the need to address both the institutionalisation of bottom-up collective action and collective action within a given institutional context. The sustainable livelihoods framework emphasises the household level, but collective action that helps households achieve livelihood outcomes has not been considered. This I identify as a gap. My research, therefore, focuses on the collective action that people applied to achieve desired livelihood outcomes. In my research, I sought to answer questions like why, how, in what context and for what reasons did households act collectively (or refrain from collective action). From a household capital perspective, I investigated in what institutional contexts people did and did not operate collectively. Collective action may take place at people's own initiative, or it may arise from a given institutional setting. These latter forms of collective action may derive their authority from, for example, culture's role in determining how people co-operate or central government's decentralisation of authority to local levels. Table 3.1 presents an overview of forms of collective action within specific organisations at the community and village level from the household capital perspective. Coordination in reference to the various household capitals at the community level takes place through collective decision-making, including processes of planning, implementation, monitoring and evaluation.

Livelihood assets fulfil different roles and functions simultaneously and interdependently (Dorward et al., 2009). I propose that within a given cultural context, human capital, in combination with social and political capital, enhances natural capital, and in combination with financial capital, furthers the availability of physical capital. Thus, the current re-

search investigates traditional and current decision-making in regard to natural resource use, construction of socio-economic infrastructure and delivery of the related services. The role played by collective action in service accessibility, input supply, production, processing, marketing and financing is addressed as well. For this, the initial question, ‘how do changes at the household level influence development at the local *institutional* and village level’, was further specified as ‘how do changes in human capital at the household level influence development at the local institutional and village level to address the vulnerability context and to cope with seasonality and shocks’. As described above, collective action influences the development of human capital, which consequently influences collective action and institutional development related to collective action, leading to a circular reinforcement. Or as described by Nelson and Winter (1982: 404), ‘the process of institutional development is an incremental process in which the conditions of each day arise from the actual circumstances of the preceding day’. Undertaking collective action produces learning, which helps to make future collective action more successful. This means that agency becomes more specific. In other words, agency determines structures, while structures enable agency to develop (Giddens, 1984) and make agency’s operations more virtuous.

Table 3.1
Collective action from a sustainable livelihoods perspective

Household livelihood assets	Collective action rules	Examples of organisations enacting these rules
Cultural capital	<ul style="list-style-type: none"> • Decision-making (including planning, monitoring and evaluation, PME) • Social security • Dancing • Praying 	<ul style="list-style-type: none"> • Council of elders (men or women) • Aya* • Ngoma • Rain dancing groups
Human capital	<ul style="list-style-type: none"> • Decision-making (including PME) • Joint learning 	<ul style="list-style-type: none"> • Education, extension • Health, HIV/AIDS committee • Traditional birth attendants group • Prevention of circumcision group

Household livelihood assets	Collective action rules	Examples of organisations enacting these rules
Social capital	<ul style="list-style-type: none"> • Decision-making (including PME) • Joint learning • Risk sharing and joint responsibility • Praying • Playing 	<ul style="list-style-type: none"> • Parent teacher association • Rural health centre or dispensary committee • Bima (collective insurance) • Church or mosque (choir, religious committees) • Sports association
Natural capital	<ul style="list-style-type: none"> • Decision-making (including PME) • Joint management • Terracing • Joint procurement, transport and sales • Joint processing 	<ul style="list-style-type: none"> • Erosion control group (<i>aya</i>)* • Communal afforestation group (<i>aya</i>) • Beekeeping committee • Fishing (governing the commons, see Ostrom, 1990) • Pastoralism (governing the commons)
Physical capital	<ul style="list-style-type: none"> • Decision-making (inclusive PME) • Construction (road, classroom, water supply, irrigation, etc.) • Joint management of infrastructure 	<ul style="list-style-type: none"> • Neighbourhood (<i>kitongoji</i>) construction of roads and classrooms • Village water committee • Cattle dip committee • Irrigation committee
Financial capital	<ul style="list-style-type: none"> • Decision-making (including PME) • Savings and credit • Joint procurement, transport and sales • Joint processing • Interest group 	<ul style="list-style-type: none"> • Village community bank (ViCoBa) and savings and internal lending community (SILC) • Savings and credit cooperative society (SACCO) • Primary society • Processing agricultural produce • Market (<i>mnaada</i>) committee • Trade union
Political capital	<ul style="list-style-type: none"> • Decision-making (including PME) • Security 	<ul style="list-style-type: none"> • Political party • Village assembly • Village government and its standing committees • Local watch groups (<i>sungusungu</i> or <i>mgambo</i>)

Note: * According to Snyder (2005), the *aya* refers to both the land and the community of people that lives on the land. In pre-colonial times each *aya* was politically autonomous.

Source: Author

Shocks like flooding and drought represent high-level environmental stressors, while seasonality, including annual rainfall patterns, represents a low-level environmental stress (De Haan, 2006). People play active roles by organising themselves to overcome such environmental stressors or to address general trends and craft strategies towards improved livelihoods. What pathways, what regularities and what livelihood processes did actors in the sample villages pursue to coordinate their activities? In this research, I adhered to De Haan's (2007: 16) description of such pathways as 'pattern[s] of livelihood activities which emerge from a co-ordination process among actors, arising from individual strategic behaviour embedded both in a historical repertoire and in social differentiation, including power relations and institutional processes, which both pre-structure subsequent decision-making'. 'Pathway' as used here describes 'observed regularities or patterns in livelihood among particular social groups', while trajectory refers to 'individual actor[s]' life paths'. In this sense, livelihood trajectories incorporate a deep layer of beliefs, needs, aspirations and limitations and must be contextualised in relation to power and institutions. As the current research on livelihood decision-making includes a comparative element, spanning different agro-ecological zones, I could recognise individual trajectory patterns among the pathways of development identified in the communities concerned. De Haan (*ibid.*) concluded that 'livelihood trajectories focus on matters of access to opportunities in reference to local decision-making'. Analysis of local decision-making concerns power in the community to decide, alone or together with others from the outside, for example, what investments, such as socio-economic infrastructure, would yield the greatest benefit from local resources. In addition to the development of livelihood assets over time, the current study investigated how households structured and processed their cooperation at the community and village level over time and under endogenous and exogenous influences. I aimed to understand organising practices towards socio-economic service delivery at the local level; to understand what obstructed and what enhanced local-level structuring and processing; and to understand pathways to village development.

In her discussion of Olson's 'logic of collective action', Ostrom (2003: 254) emphasised from an economic point of view five attributes that Netting (1981) considered conducive to the development of communal property rights:

1) low value of production per unit of area; 2) high variance in the availability of resource units on any one parcel; 3) low returns from intensification of investment; 4) substantial economies of scale by utilising a large area; and 5) substantial economies of scale in building infrastructure to utilise the large area.

To enhance the performance of communal property rights systems, Ostrom (2003: 257) identified seven additional attributes:

1) accurate information about condition of resources and expected flow of benefits; 2) common understanding about potential benefits and risks associated with the continuance to the status quo as contrasted with changes on norms and rules that they could feasibly adopt; 3) sharing of generalised norms of reciprocity and trust that can be used as initial social capital; 4) existence of a stable group; 5) living and working in the same area; 6) using collective choice rules avoiding high transaction costs; and 7) developing relatively accurate and low cost monitoring and sanctioning arrangements.

The factors most frequently mentioned as affecting collective action are trust, social capital, common preferences, shared knowledge, collaborative experiences, focusing events and expectations of future interactions (Heinmiller, 2009). The individual-level variables at the core of co-operation are typically defined in terms of *reputation*, *trust* and *reciprocity* (Ostrom, 2010). Trust relates to individuals' ability to enter or exit voluntarily, to reflect upon collective action problems and to communicate face to face. Trust furthermore hinges on reputation, in that it is influenced by information about past actions and by whether or not benefits are subtractive. Trust in reference to reciprocity concerns networks of mutual relationships. Poteete and Ostrom (2004) and Ostrom (2009) identified two other structural variables meriting attention in collective action analysis. These are the size of the group involved and the heterogeneity of its participants. These variables play a role in any specific action. For instance, a group size of 30 is considered manageable for village community banks. For joint input supply or marketing, however, the group needs to be larger to enable members to effectively reduce costs and benefit from economies of scale. Homogeneity among farmers, for example, if they all need the same type of input, helps towards collective action, for instance, in input supply and in marketing. However, a heterogeneous group can be advantageous in some cases, for example, if a

variety of different skills are needed. Poteete and Ostrom (2004) emphasised the diversity of institutional arrangements that can be used to generate collective action and the fundamental role of local knowledge in designing institutions that participants perceive as legitimate and fair. Regional and local culture determine how decision-making towards collective action takes place (Cooke & Rehfeld, 2001).

Collective action in terms of transforming structures and processes, as understood in the sustainable livelihoods framework, takes place through a variety of local organisations. The most basic or traditional one is not formally described but entails tribal, clan or household practices. Every person in a neighbourhood or clan is by default a member of this traditional organisation. The *aya* (environmental management group) and *ngoma* (rain dancing group) are examples of organisations in which traditional leaders take the lead in addressing social or environmental issues in harmony and based on consensus. Starting from such traditional organisations, Uphoff's (1986) continuum of local-level organisations by sector can be expanded, differentiating organisations further by also considering their specific function. The continuum includes bottom-up membership organisations and membership organisations called into being by central government policy. These include local administration and networks of all kinds of local-level organisations. The continuum of local organisations would then include the following:

- traditional organisations of which one is member by default;
- membership organisations related to religion or culture;
- membership organisations for joint entertainment, such as sports, dancing and choirs;
- membership organisations for joint or cooperative action in input supply, savings and credit, equipment procurement, processing and marketing, with such activities organised by civic or government organisations or by the private sector;
- membership organisations to safeguard political interests or power;
- service organisations in education, health, water supply or product sales, which may be community-based, faith-based or related to other NGOs or local government;
- private-sector organisations delivering any kind of service for income generation with the aim being profit for the owner;

- private-sector organisations that operate to economise on production, processing or marketing;
- local government and village assemblies which as political institutions decide on local policies and resource allocation to departments implementing government policies and to local governance organisations that supervise implementation of local government policy, like school committees or parent teacher associations (PTAs), classroom construction teams, road maintenance teams, village water committees, irrigation committees and cattle dip committees;
- local administration as the lowest bureaucratic level of central government tasked to communicate central government policy to the neighbourhood level;
- network organisations, entailing any combination of the above.

The current research refers back to these categories of membership organisation where applicable. These organisations may serve or represent the interests of members only or the general public, for example, in the fields of education, health care or water supply. In the sample villages, I investigated how such organisations cooperated amongst themselves and with others and how such cooperation was institutionalised in the process.

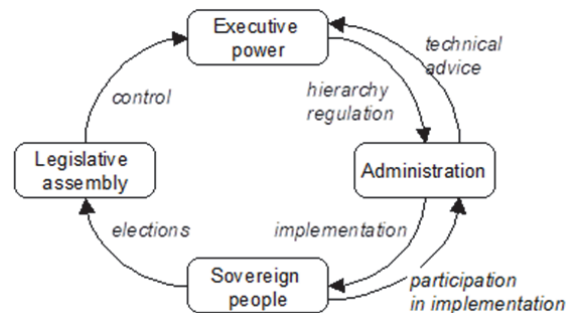
3.1.3 Local structures and processes

Esman and Uphoff (1984: 29) pointed out that local organisation is a necessary if not sufficient condition for governing accelerated rural development, especially for development emphasising improvements in the productivity and welfare of most of a population. People's capacity and knowledge enhance structuring in organisations, while simultaneously organisations may enhance people's capacity to perform better (Giddens, 1984). Because interests and needs vary, a variety of organisations is required to address them. Organisations operating at the local level conduct activities in multiple areas of socio-economic development: construction and maintenance of rural infrastructure, management of natural resources, development of agriculture and livestock systems, establishment of savings and credit unions and facilitation of non-agricultural production and service delivery. As previously indicated, local organisa-

tions can be categorised on a governance continuum, from non-collective governance to traditional and civil society governance, to the public sector (local administration and government). Local organisations thus range from civil society membership organisations and cooperatives to the private sector (including service organisations and private businesses) (Uphoff, 1986; Ostrom, 2007).

‘Governance’ is broader than government. It concerns the manner of steering and ‘rules of the game’ (Kjaer, 2004: 20). Kjaer (ibid.) defined the governance chain as sovereign people (i.e., autonomously operating) meeting together or sitting together as elected representatives and taking decisions (Figure 3.2). However, decisions are generally primed and prepared outside formal settings.

Figure 3.2
Governance chain



Source: Adapted from Olsen (1978: 24) as discussed in Kjaer 2004

A legislative assembly defines the common interests within its constituency and oversees or monitors implementation of its decisions. Decisions are carried out under supervision of an executive power, through a professional administrative implementation apparatus. There is a clear distinction between representatives (e.g., elected politicians) and the administration. Governance refers to the process of managing the rules by which public policy-making is conducted, applied, managed and enforced, affecting government, civil society and the private sector.

Kjaer (ibid.) conceived of community governance as the multifaceted and interdependent management of problems affecting citizens' well-

being. This is in contrast to local government, which provides for service delivery in relation to social problems through what this author regards as separate and discrete, though mainly unilateral, interventions of single agencies. These agencies are dependent on a hierarchical bureaucracy, while community governance relies mainly on the flexible deployment of market and network mechanisms.

In practice, particular types of organisation typically take responsibility for particular kinds of tasks. For instance, government may take primary responsibility for providing basic education to the population; but civil society or private-sector organisations may run educational institutions as well. The private sector generally conducts commercial activities, but government, too, may supply certain inputs or marketing services, say, for agricultural products. Over time responsibilities may change, with such changes initiated by shifting views and ideals. For example, when Tanzania implemented a 'deconcentration' of central government functions, it shifted power to the local level. Changes may also be stimulated by a rising awareness among the general public or specific interest groups. The newfound awareness may prompt the public or interest groups to take up responsibilities that were not previously their concern. Responsibilities may shift from the public to the private sector or to civil society; or the other way round. Finally, functions that were initially concentrated locally may be shifted to central government.

People form their belief systems into institutions that in turn provide incentives that encourage economic growth. Institutions exist to structure human interactions (North, 1994). They are durable systems of established and embedded social rules which structure social interactions. Such interactions may be defined formally in law or regulation or be informally guided by social norms and values, group routines and individual habits (Amin, 1999). Institutions are thus social rule systems. They constrain and enable behaviour (Hodgson, 2006: 2). According to Campbell (2004: i), 'institutions are the foundations of social life; they consist of formal and informal rules, monitoring and enforcement mechanisms, and systems of meaning that define the context in which individuals, corporations, labour unions, nation-states and other organisations operate and interact with each other'. Systems of language, money, law, weights and measures, traffic conventions, table manners, firms and all other organisations are institutions. Institutions are the prescription by which people organise all forms of repetitive and structured interac-

tions, including those within households, families, neighbourhoods, markets, firms, sport leagues, churches, private associations and governments at all scales (Ostrom, 2005: 3). Institutions may be public, obligatory and imposed from above or have a voluntary character entailing processes of construction from below. Institutions are among the structures that regulate interactions between social actors (Fonseca & Helmsing, 2009).

Although the literature differentiates between formal and informal institutions, the human interaction matters more than whether things work more by social control or by legal action (Rodriguez-Pose, 2009). Organisations are defined as a special kind of institution: they have criteria establishing boundaries and distinguishing members from non-members; they operate on principles of sovereignty concerning who is in charge; and they have chains of command delineating responsibilities (Hodgson, 2006: 8). Organisations are made up of groups of individuals bound together by some common purpose to achieve certain objectives.

Hodgson (*ibid.*) presented the relationship between individuals and structures as a reciprocal process over time, rather than as a static association. Individuals do change in the course of their interactions with structures, and interactions between individuals give rise to structural changes. In these relationships emphasis should be on explaining individual capacity, individual rationality and individual aims in conjunction with social structures. According to Ostrom (2007: 5), the patterns of interaction and outcomes of a socio-ecological system are jointly affected by the attributes of a resource system (e.g., a fishery, a lake, a grazing area or a bush), the resource units produced by that system (e.g., fish, water, fodder, berries, roots or wildlife), the users of the system (fishers, people needing drinking water, irrigated farmers, livestock keepers, pastoralists and hunters and gatherers) and the governance system. Each of these variables can be further unpacked, as described in Ostrom's (2007) framework of second-tier variables for analysing a socio-ecological system. Ostrom (*ibid.*) stressed that such a framework helps researchers answer the question, 'What is the likely endogenous development of different governance arrangements, use patterns and outcomes with or without external financial inducements or imposed rules?' Applying this framework, she analysed issues like pastoralism and fisheries, in some cases as examples of resource management without collective governance. In her translation of Hardin's (1968) pastoralist metaphor of gov-

erning ‘pasture open to all’, which Hardin called the ‘tragedy of the commons’, she observed that such a pastoralist system is based on a number of assumptions: (i) that no governance system is present related to the resource system (the pasture); (ii) that no human investments are made to improve the productivity of the resource system (the pasture); (iii) that the mobile individual resource unit (the animals grazing) are the private property of each pastoralist; (iv) that a sufficient number of users, given the size of the pasture, are using the pasture to adversely affect its long-term productivity; and (v) that the resource users make decisions totally independently, without any local leadership or shared norms. Hardin (*ibid.*) concluded that such pastoralists would pursue short-term benefits for themselves and ignore immediate consequences for others and long-term results for all. Similar examples may be taken from fishing, water and fuelwood use. The gradual evolution from managing resources without collective governance towards managing resources under collective regulations, for example, in a village government, is key in the community or village development process.

3.1.4 Conclusion

In their sustainable livelihoods framework, Chambers (1999–2005) and SDC (2007) linked livelihood assets to transformative structures and processes for addressing the vulnerability context and achieving livelihood outcomes. However, these authors did not analyse the genesis of the prevailing institutionalisation. Nor did they consider prevailing collective action and its institutionalisation to optimise local economic development in a particular vulnerability context. The question ‘what development do we mean?’ may be answered logically by looking at the development path of increased competencies related to the various livelihood assets and associated institutional development leading to collective action and enhanced organisation, furthering livelihood outcomes. Though such a route may be logical, it remains to be investigated whether human resource development, derived through traditional, primary and secondary education and through sector-specific extension services, really facilitates collective action and its institutionalisation, or whether other factors play a greater part in getting there.

Collective action can be assessed by its basis on a vision, mission or constitution; its membership’s inputs or contributions; its perceived outcomes and consequently its structuring of tasks and responsibilities, in-

cluding collective decision-making processes and enforcement. Agrawal (2001) identified 23 requirements for collective action to endure. Depending on the type of collective action and members' perceived access to its outputs, I would also add members' institutionalising their feelings of trust and assurances of fair distribution of intended benefits. In regard to collective action, my research posits capacity development as an endogenous process which – besides enhancing the knowledge and skills of individuals – depends on the quality of the organisations in which individuals work. Organisations, in turn, are influenced by their environment.

Over the years, educational and organisational development took place in Mbulu and Karatu districts. The issue yet to be determined is whether and how such practices worked to produce outcomes that could be called developmental success. What competencies are required to act collectively and to operate successfully in a decentralised world? The key in any development process is the quality of the human resources involved and the way people organise themselves and take decisions. Frediani et al. (2014: 7) referred to this 'capability approach' as being the ideal of community members sitting together to decide on their priorities. From this perspective, I see human, social and political capital as a cornerstone of collective action towards organisation and institutional development. Depending on a community's interests, experience and knowledge, whether operating on its own initiative or in the context of a given opportunity or invitation, community members know where, when and how to act (Gaventa, 2005). In reference to the sustainable livelihoods framework, my research differentiates between structures and processes of collective action to directly address the vulnerability context, and structures and processes of collective action to implement livelihood strategies for enhancing socio-economic development in more general terms.

In this research, I thus empirically assessed institutional effectiveness in the sample villages and linked it to the local socio-economic development level. I also investigated whether a particular communal organising activity led to communal or individual development. The following section describes types of collective action, categorised according to what they intend to achieve.

3.2 How do people cooperate?

People cooperate for reasons of self-interest or because they are socially motivated or are forced to do so. Considering the self-interest motivation, Mueller (1989, 2003–2009) proposed a theory of collective choice behaviour based on two models: (i) the ‘prisoner's dilemma’, which depicts how purely selfishly acting individuals can mutually benefit from exchange, and (ii) the ‘chicken game’, depicting the benefits of collective action in a conflict situation. Mueller (2009: 11) referred in his theory to the ‘Pareto criterion’, which he, in conjunction with many others, defined as ‘[a principle by] which one situation is judged better than another one, if and only if, nobody is made worse off and at least one person is made better off by the move from the latter one to the first one’. The problem with Mueller's general definition of choice behaviour, being the economic study of non-market decision-making, is that it provides no analytical tools to analyse non-market decision-making, like deciding by consensus. Indeed, local-level decision-making in rural development does not always follow the laws of economic profit maximisation.

In small or homogeneous societies, decision-making is based mainly on consensus. Consensus, broadly, can be defined as a condition of agreement within a political community in relation to any or all of the following: the goals of the community; the procedures to be used to arrive at authoritative decisions in and for the community; and policies adopted by the community. In a narrower sense, I use consensus here as a mode indicative of a basis for political debate and decision-making, where the outcomes are produced in collective agreement, in contrast to those that are produced by means of a conflict model. Within traditional societies the consensus mode of decision-making is the prevailing one. Therefore McLean (1987) added a model to Mueller's two above: (iii) the ‘assurance game’, in which, although still from the perspective of self-interest, collective action is stimulated such that each player prefers to cooperate if the other cooperates and each player defects if the other defects. Coordination among the players is sufficient to achieve a cooperative outcome. Consensus in the African context is understood to be a mode of decision-making in which none of the discussion partners opposes the proposed decision. As long as one person is against, the discussion (i.e., the exchange of information and adding of arguments) goes on until a decision is reached that everybody can live with. Nobody defects. The consequence of decision-making through consensus is that decisions

may require a lengthy process, because convincing one another takes time. Development may thus be slow. But as decisions are taken in agreement, developmental changes may be more readily sustained.

Following Tyler (2011: 21), cooperation is here defined as a decision as to how actively one involves himself or herself in a group, organisation or community to help that group, organisation or community be effective. Tyler (*ibid.*) emphasised the social links that connect people. As distinct from concerns about personal material gains and losses, he pointed to a number of group factors: joint behaviour, emotional connections, shared identities, common values, trust in the character and motivation of others and a joint commitment towards fair procedures to exercise authority and decision-making. To ensure adherence to these, he suggested, referencing Agrawal's (2001) conditions, that effective group design would ensure that cooperating people have information acknowledging their rights and giving them an authority to turn to if they feel mistreated. Cooperating people in an effective group design know the decision-making process and how leaders are kept accountable for decisions. Effective group design would, furthermore, ensure that opposing views are adequately raised and given attention in decision-making processes. Finally, effective group design would ensure that the decisions taken are in line with prevailing rules and procedures and are not based on personal prejudice or bias. In this sense, collective action should be effective, efficient and satisfactory to its members. If the design is not consistent with the realities of human motivation, Tyler (*ibid.*) pointed out that the collective would have difficulty achieving its objectives. He concluded that people act upon social motivation, which stimulates voluntary cooperation.

Instrumental motivations under control of 'authorities' have generally been proven ineffective. These include negative incentives like punishment, though authorities continue to introduce these to keep control. Organisations gain when they create a structure in which social motivations are the primary motivational framework, because instrumental motivations undermine social motivations over time. In such a framework those who are unwilling or unable to cope with policies and practices and seek to 'free ride' are treated in more instrumental ways.

In Tanzania and within the context of the research area, a variety of collective action was identified, structured mainly on the basis of social motivation and consensus within a context of national facilitation. The

sections below describe and discuss these. Additionally, discussed are the outcomes of collective action that, although initially established voluntarily, was later imposed on a large segment of the population.

3.2.1 Traditional cooperation

Councils of clan elders are seen as one of the earliest forms of governance. Such traditional or cultural governance mechanisms safeguard norms, values and maintenance of the subsistence economy. Councils of elders may be divided into women's and men's councils, with the former operating mainly to safeguard women's rights. When such councils deem it necessary, they may dance together, for example, to pray for rain. Decision-making in such councils is usually based on consensus. Communal management of natural resources, like pasture land, agricultural land, wooded lots and water resources, may be considered collective action in which one is a member by default. An example in the study area is maintenance of the ridges communally managed by the Iraqw people to control erosion (Thornton, 1980). Initially, the ridges were occupied and controlled by the members of one clan. In disputes, clan elders would discuss the matter, by consensus reaching a conclusion, which then had to be adhered to by the disputants. If disputants failed to follow the outcome indicated, ostracism could result, which is a powerful method of social control in rather closed communities (Snyder, 2005). This local governance of ridges is different from 'governing the commons', as for example, the areas could be closed to livestock to prevent erosion. Traditional cooperation was also seen among households in the study area in mutual support for agricultural activities. That is, household members sometimes enjoyed unpaid help from neighbours (clan members) in agricultural and other productive endeavours. If someone fell sick and needed to be taken for treatment, neighbours and clan members might also step in to provide support.

The Hadzabe are a more individualistic, mobile population, living in temporary camps averaging 30 people each. Traditional cooperation among the Hadzabe is expressed mainly in food sharing (Marlow, 2009). Women collect food such as berries together, while the men hunt, individually or sometimes in pairs. If game is wounded or if game meat is too much, the hunter may return to camp to ask for assistance. If disagreements arise in collective decision-making, the one with the dispute just moves to another camp.

3.2.2 Civil society cooperation

Tostensen et al. (2000: 18) defined civil society as ‘the public realm of organised social activity located between the state and the private household (or family)’. Mushi (2001: 22-23) identified a number of objectives that drive the formation of civic groups, including the following: (i) preserving traditional cultures, (ii) preventing further environmental degradation, (iii) finding alternative ways of funding basic social services, (iv) empowering artisans through joint action, (v) influencing government policy on various issues, (vi) taking advantage of the free market, (vii) improving recreational facilities, (viii) attracting donor and government grants, (ix) finding alternative ways of getting credit and safer places to store money and (x) mobilising funds (internally and externally) to help disabled and marginalised people in the community. Such objectives could be driven endogenously by people’s own interests, or exogenously by donors (Agrawal & Ostrom, 2001). The latter case may lead to a dependency relationship with donors.

Tanzania’s National Strategy for Growth and Reduction of Poverty (Republic of Tanzania, 2005: 57) gives civil society organisations (CSOs) the role of building local capacity and empowering communities. CSOs are also to participate in monitoring and evaluation at the national and community level, in mobilising and enhancing community participation and in mobilising community resources for poverty reduction. CSOs include NGOs, community-based organisations, cooperatives, professional associations, trade unions, faith-based organisations, the media, political parties and human rights groups, alongside the umbrella and network entities in which they are organised and interact. According to the World Bank (2003), community-based organisations are distinct from other NGOs in nature and purpose. Non-governmental cooperation constellations, often formalised by a legal act, may be involved in service delivery or enable local cooperation, lobbying or advocacy.

Under the heading ‘civil society cooperation’, this research differentiates four categories of membership organisations in addition to the traditional ones that streamline religious or cultural sentiment: those that organise sports, dancing (*ngoma*) or choir activities; those that organise input supply, processing or marketing; those that organise savings and credit facilities; and those that safeguard political interests. Some of these may be registered, and others not. Membership organisations for economic development, like cooperatives, are discussed in the section be-

low. Membership organisations or community-based organisations are often referred to as ‘grassroots organisations’.

3.2.3 Private-sector cooperation

This research focuses on three forms of private-sector cooperation: (i) cooperation made operational through the market, that is, on the basis of ‘arm’s length relationships’; (ii) cooperation within and through a cooperative movement or in a network; and (iii) cooperation among cooperative initiatives to represent joint interests or for joint capacity building, essentially creating another form of collective action.

Cooperation through the market seems to operate best in cases where buyers and sellers have the same perfect information (Hayek, 1988, cited in Birner & Ege, 1999: 760). The marketplace is distinct from the market. Marketplaces are visible public areas, usually centrally located (see the central place theory of Christaller, 1933), and hosting events at regular times, in combination with buildings, structures, rules and governing institutions. They are not simply meeting places of sellers and buyers. All kinds of other business are transacted on market days. For example, meetings are organised, contracts are signed and local communication blossoms (e.g., in the form of gossip). Indeed, Polanyi (1957) observed that economic action is enmeshed in non-economic networks, institutions and relations. He saw market relations as embedded in wider social structures, networks and meanings. Slater and Tonkiss (2001: 110) posited the market as operating in a complex field of relations, coordination and exchange through socio-economic networks and institutions. They emphasised that relations between firms and between firms and consumers involve trust, loyalty, custom and personal connections. This view contradicts the impersonality of pure market mechanisms. Citing Durkheim (1984), Slater and Tonkiss (ibid.) argued that contracts rest on social relations, as not everything can be regulated; some aspects remain dependent on social interaction and interdependency. The ‘market’, as currently observed globally, includes networks of worldwide trade, finance, information, wholesaling and vertically integrated links. The introduction of trade via the Internet has facilitated, for example, global exchanges of goods. Gradually then such exchange evolves from local, public marketplaces to the types of markets now observed (Slater & Tonkiss, 2001).

The *cooperative movement* among farmers, described by Chayanov (1919),² is a broad social movement that links individual households with the national and international economy and is in constant development, moving from one phase into another. Cooperatives exist in different legal and economic contexts, with their organisational forms established accordingly. The cooperative movement would seek, for example, to replace the cattle dealer by a local cooperative, the local trader by a cooperative intermediary alliance, and the export bureau by an all-union centre. According to Chayanov (ibid.: 228), the cooperative credit system operates naturally through three kinds of organisations. First are the organisations that verify the solvency of peasant homesteads, grant loans, supervise the way loans are spent, recover lent funds and conduct the business of persuading the peasant population to deposit money with cooperatives. These operations require an apparatus in close proximity to the peasant in order to monitor the peasant's economic activity and adapt sensitively to it. This typically means a small-scale local district cooperative. Such small-scale local cooperatives may not be as successful in financial management as banks normally are. Or, they may lack capacity to judge investments to process raw materials for the market. This constitutes the basis for the second type of organisation, that is, cooperative associations, which deliver specialised services. Such associations are often provincial and need a central apparatus to link with international markets, including finance markets. These linking organisations are the third type of organisation.

According to the International Cooperative Alliance (ICA, 1995: 262), a cooperative can be defined as 'an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise'. Cooperatives exist in many forms. The *consumer cooperative* typically buys, for example, agricultural inputs or other products in bulk, selling them at below-market prices to members. Benefits from such sales are shared among members. A *producer or marketing cooperative* sells, for example, the agricultural produce of its members. Storage, processing and packaging costs may be shared and transport and marketing activities pooled. Separate cooperative entities may coordinate each of the phases in a value chain, starting from input supply to production, processing, transport, marketing and exporting (Helmsing & Vellema, 2011). Vertical cooperation also exists among the various entities in the

value chain (Bijman et al., 2011). Labourers may be organised separately, in a *worker's cooperative*. Business owners may be members of a cooperative through which they operate their businesses together and decide jointly on, for example, investments, production processes and wages. *Financial cooperatives* provide financial services to members. These often take the form of savings and credit organisations as well as insurance providers. *Social cooperatives* provide essential community services or jointly procure social services.

Despite the differences, based on ICA (1995: 262), all cooperatives operate 'according to the following principles that are linked to each other: voluntary and open membership; democratic member control; member economic participation; autonomy and independence; education, training and information; co-operation among co-operatives; and concern for community'.

The private sector primarily operates individually, with the exception of organisations that *safeguard the interests* of local businesspeople *jointly*, for example, local branches of chambers of commerce, industry and agriculture. Where necessary, such branches convey local interests to regional-level organisations, to be pursued further at the national level. The trade union, as a counterpart of employer organisations, may have local representatives who bargain with individual business owners when necessary. In the research area, this pertained mainly to the coffee estates.

3.2.4 Community-level cooperation under the umbrella of local government

Local government derives its authority from decentralisation of central government authority. In reference to various forms of decentralisation, Agrawal and Ostrom (2001: 489) identified four property rights subject to decision-making concerning common-pool resources: the right to enter and to obtain resource units (withdrawal); the right to regulate (management); the right to determine who will have access (exclusion); and the right to sell or lease management and exclusion rights (alienation). Within such an institutional context, local government itself can transfer elements of its authority to other actors. Since 1982, Tanzania has had two levels of local government, district and village, as set out in the Local Government Act. Elections were thus held at the district level (rural or urban) and at the village level (or township). At the village level some

decision-making power was delegated to local committees. The *village* operated through its village assembly and village government (URT, 1982).³

In the study area, residents were by default members of the village assembly and *kitongoji* (neighbourhood). Committees were either independent or operated under the umbrella of the village government. Subtle differences were found in the way the various committees were governed. Typically, the village government had three standing committees: the committee for finance and planning of economic affairs, the social committee and the security committee. These committees, as part of the public apparatus, were formally instituted. In addition, committees oversaw delivery of specific services, like primary and secondary education, rural health care and drinking water. While the committees overseeing delivery of such services were independent, reporting on their functioning made up part of the local government reporting structure. Further, there were committees that carried out specific economic functions. These included those operating the *mnaada* (monthly market), cattle dipping, the irrigation system and tree nursery. Committees sometimes organised joint input supply as well, like *mbegu mbora* (a programme to introduce improved agricultural practices and inputs), and joint production, for example, in beekeeping and honey production.

The management of these committees changed over time in the study area. For example, at the end of the research period members elected their own management in most cases, rather than management being appointed by local government. The *mnaada* (market), cattle dipping and irrigation committees had a slightly more public function than, for example, the committees for dairy farming, the tree nursery and beekeeping. These latter groups served members only. The central government, furthermore, stipulated specific local government structures to enable implementation of legislation, standardisation, supervision and quality assurance. However, the success of these depended on the available local agency. Local resources were needed to operate, manage and decide within the given structures on matters of public service delivery and to steer the local economy. Local agency was also crucial in playing the local political power game. On matters of socio-economic infrastructure, such as roads, agricultural storage facilities (*godowns*), irrigation canals, cattle dipping, schools, health dispensaries and water supply, quality depended largely on leaders' vocational and technical capacities and insight, for ex-

ample, in veterinary service supply, agricultural extension and raising tree seedlings. Capacity was also required in governance of social services, for example, in parent-teacher associations (PTAs), village water committees or water boards and rural health centre boards. Finally, local capacity was a key factor in the quality of supervision of the functioning of local justice organisations (*sungusungu*). Infrastructure construction was a communal activity at the village and community level. This included, for example, construction and maintenance of schools, health centres, feeder roads, agricultural storage facilities, tree nurseries and water points. Though local government decision-making processes were defined, levels of participation in communal activities varied.

Cohen and Uphoff (1976: 6) distinguished questions concerning ‘participation in what’, as in decision-making, implementation, benefitting and evaluation, and ‘participation by whom’, such as residents, local leaders, local or national government and expatriate personnel. Opportunities for people to manage their own affairs, to influence public decisions and to otherwise participate in activities affecting economic productivity, social affairs and quality of life are deemed essential for development (Esman & Uphoff, 1984). Besides participation in village infrastructure development, community management of the infrastructure is important to ensure its sustainability (Helmsing, 2005). Owning a process, by actually managing it or being involved in it, derives from different forms of community participation. Each form brings its own responsibilities for the population concerned. Management for Development Foundation (MDF) et al. (2004) reflected on the various levels of participation and related stakeholder responsibilities, with the ultimate level of participation being self-mobilisation or taking the initiative as a community and a community itself managing the intervention. The following participation types build on the participation ladders first presented by Arnstein (1969):

- *Passive participation.* The concerned population is informed of what is going to happen or what has occurred.
- *Participation by making use of services.* The population concerned makes use of socio-economic services offered by government, non-government or private-sector entities.

- *Participation by execution of government decisions.* The population concerned executes what has been decided by a lower or higher level of government.
- *Participation through supply of information.* The population concerned provides information in response to questions, but has no influence over the process, since survey results are not shared and their accuracy is not verified.
- *Participation by consultation.* The population concerned is asked to provide its perspective on a given subject, but it has no decision-making power, and there is no guarantee that its views will be considered.
- *Participation through material incentives.* The population concerned supplies some of the materials and labour needed to operationalise an intervention, in exchange for a payment in cash or in kind from the support organisation.
- *Participation through the supply of materials, cash or labour.* The population concerned supplies some of the materials, cash and labour needed to operationalise an intervention. This includes cost-recovery mechanisms.
- *Interactive participation.* The population concerned participates in an analysis of needs and in programme conception and has decision-making power.
- *Local initiatives.* The population concerned takes the initiative, acting independently of external organisations or institutions. Although it may call on external bodies for support, the project is conceived and run by the community. A support organisation may participate in a population's projects.

Taking initiative, owning the local development process and managing service delivery require local capacity. Also required is local capacity of supporting institutions, which may be exogenous or endogenous. Capacity among community leaders is needed as well, to develop the available resources and mobilise supporting institutions.

3.2.5 Conclusion

Birner and Ege (1999) discussed collective action in regard to traditional and modern societies. In traditional societies, collective action is based mainly on social cohesion and consequently defined as *cooperation*. Tyler (2011: 21) defined cooperation as a decision about how one actively involves himself or herself in a group, organisation or community to help that group, organisation or community be effective. Birner and Ege (ibid.) identified collective action in a modern society as the necessary consequence of division of labour, defining it as *coordination*. Coordination is said to incorporate collective action among individuals and organisations that are related both directly and in network organisations. Irrespective of whether collective action takes place in a traditional context or in a more modern civil society, private sector or local government, in principle it is voluntary in nature and in principle it is as good as its leaders. The degree to which 'followers' accept the rules and see their leaders' actions as legitimate is key to collective action's success. In her theory on the organisation of institutions, Gomez (2008) concluded that none of the actors in a complementary currency system had the power to force others to comply. Rather, it is 'the intrinsic action motive that guides agents and the coordination motive that organises power relations' (ibid.: 224).

Each form of collective action has its own membership rules. Joint awareness of external factors leads those involved to form opinions about what is happening and what needs to happen to safeguard and develop the environment. Based on their vision, participants identify what needs to be achieved and what capacity is required for the necessary action to accomplish the identified output and attain the outcome. 'Outcome' is here defined as the use of the output by the intended user or target group. The producer, individually or collectively, is assumed to know what the demand of the user is. However, this is not always the case. Leaders' knowledge, skills and attitudes influence actions. Collective action seeks to achieve the objectives of the organisation concerned, for example, safeguarding norms and values, protecting the environment or achieving physical, cultural, religious, social, economic or political development.

Collective action at the local level derives from social motivation. It builds character and creates productive attitudes and values. It moves beyond regulation to place the focus on active efforts. Society benefits

more from social motivation than from instrumental motivation (Tyler, 2011: 13). The latter is a product of command and control, while the former produces a consistency of behaviour over time. Social motivation builds joint identity and emotional ties. With it, enacted procedures are judged as fair and trustworthy within the group or organisation concerned (ibid.). Organisations gain when they can create a structure in which social motivations are the primary motivational framework. Instrumental motivations, in contrast, undermine social motivations over time. Those who are unable or unwilling to respond to policies and practices associated with social motivations may be treated in more instrumental ways, which in collective government action occurs through legal recourse or fines, while in collective civil society or private-sector action it is done through ostracism as well. Despite the fact that social motivation for collective action is stronger and more effective, Tyler (ibid.) recognised that in reality command and control strategies persevere. There are multiple reasons for this. People at the top may be biased and overconfident of their ability to use their resources to effectively manage others to solve a problem. Leaders may find it difficult to trust others, or not want to invest time in consulting others and building consensus. Such biases may be difficult to remedy, as examples may always be found where social motivation did not work. In this tug of war between social and instrumental motivation, collective action operates within the command and control structures of government, non-governmental and donor organisations – nowadays called development partners. Fonseca and Helmsing (2009: 22) underlined the importance of the developmental vision of local actors and their capacity to organise themselves and respond to the catalytic role played by external development partners. Indeed, community governance depends on its institutional environment.

3.3 Path-dependent development

As observed earlier, changing insights at the household level on how best to cope with the environment determine people's development path. People do learn, and particularly, they learn by doing. In this research, I posit that changing insights are largely a product of people's experiences and their putting into practice their educational, extension and communication experiences with the 'external' world. Changing insights at the household level influence development at the local institutional and village level and consequently at the level of the local economy. Simultane-

ously, external actors, like government, non-governmental and development partners, enable local organisations to operate. Gradually people become better able to address their vulnerability context and to grasp opportunities to communicate their demands to others. They become better able to coordinate with others, for example, to develop socio-economic infrastructure and thus minimise the cost of transportation; to act to deliver services collectively within civil society, the private sector and government; and to cope with external influences to improve their livelihoods. While development takes time and there is no shortcut to progress (Hyden, 1983), I argue that competence-based education, training and extension are key in speeding up people's understanding of and ability to cope with their environment. This stimulates 'the great transformation' from a society that operates according to traditional barter mechanisms towards a market economy (Polanyi, 1944). I argue too that such development depends on the institutional environment in which capacity building takes place.

Path dependence is more than just 'history that matters' (Mahoney, 2000: 507) and needs to be assessed at the level of the household, the organisation and the local economy. Therefore, this research examines human capital development at the household level. It considers organisational-level functioning in conjunction with human capital development. Subsequently, it assesses local economic development in conjunction with organisational and institutional effectiveness. In addition to the co-ordination of human capital development, it investigates coordination of the development of other livelihood assets at the village level, as these together determine livelihood strategies towards development.

The path dependence concept enables us to understand the development process in terms of diffusion of technologies and institutions and to explain continuity and change in organisational and inter-organisational arrangements. Although there is no unified theory of path dependence (Martin & Sunley, 2006: 41; Strambach & Halkier, 2013: 1), the concept has been used to describe the causalities and dynamics of a specific open-ended evolutionary process, whose early sequences in time have major effects on the future development trajectory.

In his initial discussion of the development path concept in technical and industrial matters, David (1985) listed three features of path dependence: (i) the technical interrelatedness of system components, which refers to the reinforcing effects of complementarity and compatibility be-

tween different components and their use, meaning that if one component is used the related ones need to be used as well; (ii) increasing returns to scale in employment of a common technique, which often implies a decline in user costs as one technique gains acceptance relative to others; and (iii) irreversibility of investment, related for example, to the durability of capital equipment or of the human capital that has been developed. Past choices guide or even dictate future choices. Although David (2000) referred to technical matters in market processes, all three features of path dependence are relevant to education and to capacity building of the rural smallholder. This can be considered as key in evolutionary non-reversible dynamic development processes. At the same time, 'there is no silver bullet which if fired will give us quality' (Mushi, 2003). The current research, in concurrence with David (2007), follows the evolution of such a process. Among rural smallholders, learning contributes to such evolutionary processes where capacity building leads to achievement of the competencies necessary for people to improve their standard of living. Vehicles for such capacity building may be, for instance, experience gained, traditional education, primary education, extension and communication with others.

Organisational path dependence is here defined as a process that (i) is triggered by a crucial event leading to a critical juncture; (ii) is governed by a regime of positive self-reinforcing feedback, constituting a specific pattern of social practices that gains more predominance than its alternatives; and (iii) leads, potentially, to organisational lock-in (Sydow, Schreyogg & Kock, 2005). 'Self-reinforcement' means that the action concerned puts in place a set of forces across complementary institutions that encourages a choice to be sustained (Page, 2005). 'Positive feedback' means that the concerned action creates positive externalities, leading to that same choice being made by other people. Positive feedback creates something like increasing returns. 'Lock-in' means, in this regard, that one choice or action becomes better than others simply because others have made the choice before (ibid.).

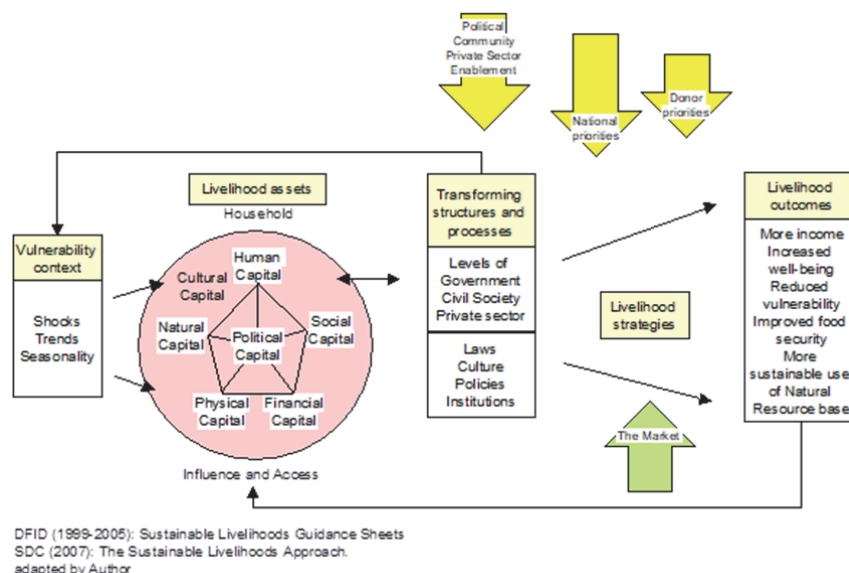
Martin and Sunley (2006: 402) referred to four types of increasing returns as sources of path dependence: (i) initial set-up costs; (ii) learning by doing and interacting; (iii) coordination effects providing advantages over 'going alone'; and (iv) self-reinforcing expectations, as one believes in what one is doing. Together with structural preconditions and contextual influences, human agency is incorporated as a contributing element

in the process (ibid.: 430). Therefore, it is worth investigating what competencies would be needed in a decentralised governance system to reach an optimum position (Birner & Ege, 1999). What has been the effect of capacity building at various levels on organisational development at the village level and consequently on local economic development? Also meriting investigation is what community-level livelihood strategies and organising practices have been most relevant in achieving local economic development: those focused on endogenous or local interests; those focused on market demand; those considering national priorities; or those responding to local politics related to exogenous or donor-funded projects (Kamanzi, 2007: 32). Boettke et al. (2008: 2) expanded on North's notion of 'institutional path dependence', explaining 'how history matters' by linking informal institutions to formal ones. The former were said to allow the latter 'to function in their desired manner'. Boettke et al. (ibid.: 4) recognised the importance of indigenously-introduced endogenous institutions in sustainable development. They suggested that even where originally indigenously-introduced institutions had become exogenously governed over time, they proved sustainable, which was not the case for foreign-introduced exogenous institutions. Where foreign-introduced exogenous institutions were traceable to indigenously-introduced endogenous institutions, their chances of success were significantly increased. These authors concluded that 'any path to progress with a reasonable probability of success must ultimately be rooted in indigenous institutional order' (ibid.: 354). In my view, this depends on the indigenous or local capacity available and its ability to grasp the potential of enabling exogenous institutions in order to capitalise on a market demand, as depicted in the sustainable livelihoods framework (Figure 3.3). Therefore, the transforming structures and processes referenced in the framework need to be considered in light of the prevailing cultural, cognitive and political capital, alongside the changing demands of the market, as well as in the context of government facilitation and national and international priorities.

Another element investigated in the current research is the way community involvement, through local planning processes, contributes towards local economic development. How did collective action in the study area address market demands? Another area of investigation is the historical-institutional context of collective action and the constraining effects of path dependence (Heinmiller, 2009). Various instances of col-

lective action can be mentioned here: a church or village community organising primary education; organisation of erosion control on the slopes by the *aya*; involvement of neighbourhood men in constructing or maintaining a feeder road; households joining together to organise a village water supply; or a farmers' group organising distribution of irrigation water.⁴ Table 3.1 presents an overview of some of the ways household capital was found to be coordinated at the village level in the study area.

Figure 3.3
Sustainable livelihoods framework in an enabling environment



Garud and Karnoe (2000: 9) argued that a shift from *path dependence* to *path creation* occurs as one endogenises objects and relevant structures over time. There is a shift then from path dependence as 'a way to describe the past' to path creation as 'a way of shaping our current state'. Indeed, Pham (2007: 5) concluded that a focus merely on path dependence neglects the role of human agents. To explain phenomena in the making, this author explored Garud and Karnoe's (2000) path creation, in terms of cumulative causation, history as an endogenous variable and increasing returns in combination with human agents' mindful deviations

and real-time influences. According to Pham (2007), path creation builds upon the acquirement of dynamic capabilities, the creation of new products and the exploration and establishment of new markets. The path creation concept enables us to understand the development process in real time (Garud et al., 2010: 770). Path creation is an analytical tool for explaining how events occur over time. Pham (2007) attributed five principles to the path creation process. First is the principle of *technological determination*. This means that the ability to create a new path is based on the prior existence of technical capability within a community (e.g., a tractor or ox-drawn plough, dairy farming, and a mobile or solar technology). For instance, the availability of mobile telephones, laptops and solar energy enables farmers to gain knowledge and to access information on technology use, agricultural practices, weather and market prices. The second principle is *mindful deviation*. This means that even where a community has the technical capability to create a new path, agents (individuals or farmers/entrepreneurs) must actively carry out tasks towards that end. The question then arises as to who creates the path: the inventor of the technology or the farmer/entrepreneur using it. As deviations may threaten existing orders, farmers/entrepreneurs need to be convinced of the 'benefit' of a new technology. In addition, mindful deviation entails purposeful deviation in small steps that are perceived favourably by those in the environment. The third principle, *real-time influence*, states that all actions have real-time consequences for the path in the making, and therefore things take time. For instance, to educate a new generation takes a generation, as the whole educational system must be fitted for the task. Building local councillors' or practitioners' capacity to understand and perform may be possible only after basic education or training has been provided and digested, in which case provision of such training needs to be ensured after every election. The fourth principle, *recognised interdependence*, acknowledges that people, even those who are unused to or uninterested in change, cannot work alone but require assistance from others. Community organisation may be dependent on national or local government regulation, which itself may not be adequately established until other levels have acquainted themselves with identified needs and consequences. The fifth principle is that of *minimal dislocation*. This refers to the role of a selective 'shared space' for those involved in which agents can share ideas with others who can understand and on which basis constructive advice may be given.

The development process is path dependent with regard to the existing institutional environment; that is, its further direction is influenced by the central government's enabling of local government, civil society and the private sector to operate. Examples of policies which have steered a particular development path in Tanzania are *ujamaa*, or the villagisation process (a particularly strong collective action movement) (Rudengren, 1981: 82), and the government policy mandating compulsory membership in 'primary societies' for the marketing of agricultural produce (Von Freyhold, 1979: 82). Donor or national priorities may easily encourage or 'force' households or communities to behave in a certain way which is not theirs but may be pragmatically followed as long as it is accompanied by a sufficient financial, legal or administrative contribution (Kamanzi, 2007). A development process could be created in this way. In terms of path creation, development of human capital enables households to make use of existing technologies to add value to their natural resources. Human capital enables cooperation to take advantage of the capacities of others (e.g., in labour, equipment or finance) or for a network to function more effectively and efficiently to address its vulnerability context or to develop strategies for improving livelihoods. Competence-based education seeks to enable people to function in all different constellations within a community in order to set out own development paths in an environment regulated by local and higher-level government. Within a decentralised governance framework, community and village government may be assumed to have the capacity to operate and maintain socio-economic infrastructure. Within such a framework some may expect the community and village government to have been enabled to play a role in local economic development. Local government in rural areas may be expected to focus on policy domains related to smallholder farmers' problems, like land scarcity and insecure tenure and obstacles in marketing and supply arrangements, credit, agricultural pricing and economic and social infrastructure (De Valk & Wekwete, 1990: 266). Most local government decision-making power regards aspects of physical, social and economic infrastructure and projects arising out of existing policies or other initiatives (like those of NGOs). Local and lower levels of government, like the village government, typically have limited own financial resources to implement their own decisions and initiatives. Depending on the level of decentralisation, it is central government that enables village government, civil society and the private sector to

operate. Simultaneously, central government encourages local communities to adhere to national and even internationally formulated priorities. Transforming local-level structures and processes is crucial for local development processes and entails an interaction between what (groups of) households are interested in organising and the regulatory framework established by higher government levels. Local-level decision-making relies on facilitation by higher levels of government. However, local resource availability in association with local decision-making is crucial for localities to determine their own development path. Thus, within the given institutional environment each community depends on its own resources to create its development path.

Political enablement is defined here, following Helmsing (2002: 322), as 'a transformation in the structure and functions of central and local government, the relations between them and their relations with the market and the community'. Agrawal and Ostrom (2001) pointed out that local users and institutions must possess property rights to resources in order to achieve effective decentralisation; otherwise the impact of decentralisation is limited. Active participation, which most decentralisation initiatives pursue and may be the outcome of awareness and education, is needed to generate self-organisation of local groups, which allows users to act collectively. It is achieved through 'political/administrative decentralisation, democratisation, managerial and institutional reform, the widespread use of NGOs and community-based organisations and through adopting enabling strategies towards the market and the community in the allocation of material and financial public goods and services' (Burgess et al., 1994: 55). Political enablement involves (i) legislation or institutionalisation; (ii) capacity building among local and central institutions and among individuals to adjust to change; (iii) implementation of administrative practices such as allocation and disbursement of adequate funds; (iv) planning and use of criteria and participatory processes; (v) implementation of planning decisions in accordance with agreed principles; and (vi) adequate accountability and evaluation processes (Van Dijk, 2002). In Tanzania, political enablement of local government has gone through several changes, both before and after independence (Kilembe, 1989), finally leading to 'decentralisation by devolution' under the Local Government Reform Programme (LGRP I and II) (PMO-RALG 2008).⁵ This is discussed in Chapter 6.

Community enablement is defined as a ‘strategy adopted by central and local government to coordinate and facilitate the efforts of community and neighbourhood organisations to initiate, plan and implement their own activities according to the principles of self-determination, self-organisation and self-management’ (Helmsing, 2002: 322). Like political enablement, community enablement involves (i) legislation or institutionalisation, (ii) administrative practices and (iii) planning. Helmsing (ibid.) formulated a list of criteria to measure Tanzanian district councils’ capacity for community enablement in these three areas. That list includes the following:

legal recognition, legal status of jurisdiction in which community participation and management is upheld, local government budget provisions, (co-) management of public funds, degree to which CSOs have [a] formal position within local public administration, existence of formal administrative coordination mechanisms, stimulation of community participation and management, community action plan (CAP) and place of CAPs in local government planning.

Enablement of markets and enablement of communities co-exist. For example, in some circumstances community enablement ceases to be viable and market provisioning becomes more desirable, via market pricing or public service delivery funded by taxation or cost recovery. Helmsing (ibid.) emphasised regulatory aspects: tendering and procurement procedures and institutions; tariffs and standards of quality and access; monitoring and evaluation; compliance and sanctions; public–private, public–community and private–community partnerships; and regulatory mechanisms for private developers. At the end of the period addressed in the current research, coordination and regulation of community activities in Tanzania were governed by the 2002 NGO Act. That act defines an NGO as follows:

a voluntary grouping of individuals or organisation, which is autonomous, non-partisan, non-profit making, which is organised locally at the grass-roots, national or international levels for the purpose of enhancing or promoting economic, environmental, social or cultural development or protecting environment, lobbying or advocating on issues of public interest of individuals or organisation, and includes an NGO, established under the auspices of any religious organisation or faith propagating organisation, trade union, sports club, political party or community based organisation;

but does not include a trade union, sports club, religious organisation, political party or community-based organisation (p. 4).

More generally, Tanzania's National Strategy for Growth and Reduction of Poverty (URT, 2005) gives *civil society organisations*, or CSOs, the role of 'key actor in poverty reduction'. CSOs are understood to include NGOs, community-based organisations, cooperatives, professional associations, trade unions, faith-based organisations, media, political parties and human rights organisations. Their given responsibilities include building local capacity and empowering communities; participating in monitoring and evaluation at the national and community level; mobilising and enhancing community participation; and mobilising community resources for poverty reduction. CSOs advocate for *accountability*. They are to work closely with government ministries and local authorities to ensure inclusion of cross-cutting issues in sectoral and district plans. To improve CSO effectiveness, the government of Tanzania has sought to review and strengthen its organisational and management frameworks at the national, regional, district and community levels.

Private-sector enablement is defined as minimisation of regulations and removal of barriers, to allow the private sector to move in freely without undue pressure from laws or regulations and to ensure that investors are comfortable with the business environment (Accaro, 2007). Central questions here are what licenses need to be adhered to and what services must local and central government provide to facilitate unencumbered private-sector operation. In this regard, little delegation of strategy development tasks to the lower levels of government has yet been observed in Tanzania. Tanzania's BEST programme (Business Environment Strengthening for Tanzania) (URT, 2003: 12), citing a worldwide survey (Brunetti et.al, 1997), has stated that a government undermines economic performance when it fails to provide a credible system of rules through which the private sector can do business (Brunetti, Kisunko & Weder, 1997). The survey referred to constructed an 'index of credibility' combining five aspects: (i) unpredictability of changes in rules and policies (including regulations and implementation of commercial laws); (ii) instability of government; (iii) insecurity of property; (iv) corruption in public provision of services to the private sector; and (v) unreliability of the judiciary in judging commercial disputes.

Following Van Dijk and Mishili (2011), in this research I measured private-sector enablement at the district and village level according to implementation of the following:

- outsourcing of development projects through tender procedures;
- service delivery and issuance of licenses for businesses;
- licensing for all who exploit natural resources, for example, in hunting, tree felling, charcoal burning, brick making, mat making, maize milling, oil pressing and fruit processing;
- decision-making on landownership on the basis of customary rights⁶ to enable smallholders to obtain loans using their land as collateral;
- decision-making on development of economic infrastructure, including construction, operation and maintenance of all-weather roads, agricultural storage facilities (godowns) and a functioning market (mnaada);
- decision-making on development of the vocational skills necessary to effectively and efficiently process and exploit available or potentially available resources, for example, by skilled technicians, carpenters, brick-makers, masons, blacksmiths, tailors, millers, bakers and butchers;
- decision-making to facilitate service delivery in the productive sector, such as towards a functioning agricultural extension service, functioning veterinary and cattle dipping services and licenses for taxi and bus stands, petrol stations, postal agencies, telephone services and internet facilities.

Historically, collective action is institutionalised in formal and informal procedures, routines, norms and conventions within the organisational fabric of society (Amenta & Ramsey, 2010: 16-17). Umbrella and network organisations may embrace collective action, with a focus on bottom-up membership groupings. As an outcome of such institutionalisation more social capital is created (Sanginga et al., 2007).

In addition to Agrawal's (2001) enabling conditions for sustained collective action, actors have to gain experience in order to know when, where and how to participate, subsequent to an actor's own claim or an actor being given an opportunity or being invited to participate (Gaventa, 2005). Campbell (2007: 19) posited institutionalisation as a product of the way actors become involved in an institutionalisation process, how

actors perceive themselves vis-à-vis institutions, whether actors understand institutions as providing opportunities and how actors perceive the interrelatedness of local, national and international institutions. As part of the institutionalisation process, Ostrom (2010: 810-812) discussed rule-setting in relation to collective action for managing socio-economic services or for producing or processing resources. She identified seven rule types: (i) boundary rules, describing how one enters or leaves a situation; (ii) position rules, describing the various positions and the number of actors holding such positions; (iii) information rules, describing channels of information among actors and the types of information that should or should not be shared; (iv) authority rules, specifying the levels of decision-making among the various groups of actors; (v) aggregation rules, describing whether decisions are taken by consensus or by majority; (vi) scoping rules, which stipulate the outcomes that could be affected; and (vii) pay-off rules, guiding distribution of benefits and costs among members and actors in various positions.

Political party and local governance organisations at the community level are governed mainly by top-down established constitutions or legal acts. Faith-based CSOs similarly tend to have a constitutional governing structure. Sport groups need each other, as otherwise there can be no competition; their 'rules of the game', in most cases, are determined internationally, while the actual organisation of competitions is arranged between groups with bottom-up support.

All collective action is important, as it contributes to capacity building in collective management. I consider collective action for socio-economic development and the institutionalisation thereof as most important for bottom-up development. In such collective action, groups of people need each other for further cooperation and learning. Increased complexity, however, makes communication more difficult and requires establishment of 'checks and balances', and consequently more human capital in the form of analytical capacity (Dorward et al., 2009).

Checks and balances are defined here as the institutionalised way that members of a collective retain an overview and control of income and expenditures. Part of such institutionalisation is quality monitoring of products dealt with collectively. Institutionalisation of collective action is investigated in this research as it pertains to construction and management of, for example, a water supply or other socio-economic facility such as micro-finance services, lobbying and advocacy. A key question

asked is, 'What political and social capital must be institutionalised for groups to act collectively?'

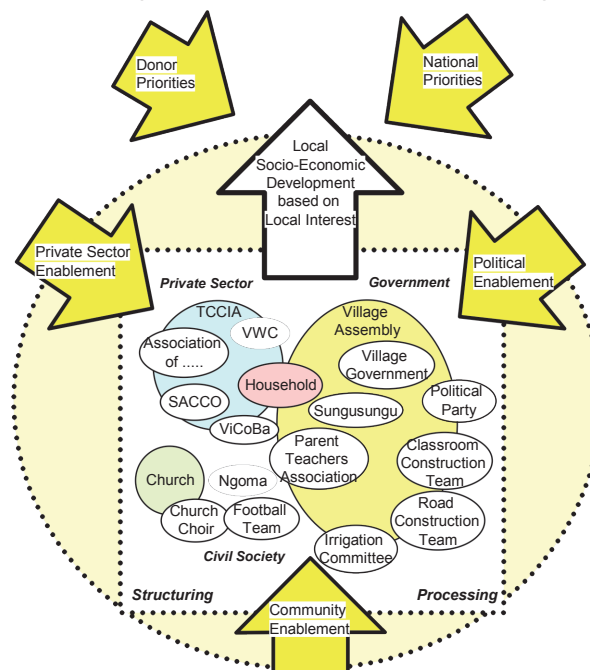
To ensure that all aspects of local economic development are adequately addressed, it is important to focus on organising practices at the household and community level. In line with the sustainable livelihoods framework, this research focuses on the transformation of structures and processes within households and within communities to address their vulnerability context or to grasp opportunities to better communicate their demands to others and shape local economic development. It thus reflects on political enablement, community enablement and private-sector enablement from the local and national government perspectives. It also focuses on enablement in which exogenous financiers play a role (Figure 3.4).

Awareness of how political, community and private-sector enablement has evolved is important to identify the role of local structures and processes in strategy development. In what institutional environment do local structures and processes operate? What role do local structures and processes play in local socio-economic development? How do these structures and processes support households in gaining more income, increased well-being, reduced vulnerability, improved food security and more sustainable use of natural resources? Human capital enables households to develop their other capitals and to organise themselves in all kinds of constellations, reflecting opportunities and obstacles and facilitated by political, community and private-sector enablement. Upbringing, experience, education and extension enable residents to understand and grasp the available potential and to structure it in such a way as to minimise transformation and transaction costs to gain better livelihoods.

The awareness raised through either own experiences or external support allows the 'owner' of an organisation to envision what society might require in the future; to develop a mission that the organisation works towards to achieve the required output; and to ensure that the available human and other resources are positioned to perform together to enable potential users to apply the output once produced. The process of working towards the required output starts with translation of the formulated mission into a workable strategy, incorporating what others in society are able to supply, perform or produce. Depending on the strategy, the resources available and the output required, tasks and responsibilities are divided among staff and specific steering mechanisms

are agreed upon. Depending on the quality of available members and staff, management supervises or develops human resources such that adequate output is realised.

Figure 3.4
The household's position within local structures and processes



Source: Author

Institutionalisation was also addressed by Ostrom (2005) in her rules for making collective choices. Such institutionalisation in turn enables umbrella or network organisations to make operational rules to govern the day-to-day interactions of such organisations. Institutional development processes require a multitude of actors to transform, design and shape institutions. In the process, development of higher-level institutions is nested in that of lower-level institutions, with the latter also being dependent on the former. Institutionalisation of collective action takes place in stages. Through cooperation experimentation and practice, joint

activities are designed and constitutions, contracts and agreements are drafted and agreed upon. In the replication stage, arrangements operational in one place are copied or adapted to become operational along similar lines elsewhere (Gomez, 2008). Ostrom (2010) concluded, in her framework for institutional analysis and development, that each of these stages is influenced by rule setting and relations among the root institutions, by the nature of local conditions and by the capacity and interaction of local actors (Ritchie, 2013).

3.4 Livelihood outcomes and local economic development

The current research defines development at the household level by changes in income and well-being, which are dependent on changes in livelihood capital, among other things, over time. Development at the community level is defined in terms of changes in socio-economic infrastructure as the consequence of collective action. Both household and community development are taken as relating to local economic development, which Tegegne, Egziabher and Helmsing (2005) defined as a process in which partnerships are established between local NGOs, community-based groups and the private sector to manage existing resources, to create jobs and to stimulate the economy of a defined territory. Local economic development emphasises local control, using the potentials of local human, institutional and physical capabilities. Local economic development initiatives mobilise actors, organisations and resources; and they develop new institutions and local systems through dialogue and strategic actions (ibid.). Local governments must realise that they are not in the driver's seat when it comes to local economic development. Local economic development is about enacting new roles for the public sector at both the central and the local level, by providing the right mix of local public goods and enabling other actors, such as communities, private firms, producers, workers and NGOs, to make their most productive contribution. Promotion of local economic development is therefore (i) multi-actor, as it depends on the ability to mobilise public, private and non-profit actors; (ii) multi-sector, as it refers to both the public and private sectors of the economy and seeks to upgrade local producers in an industry; and (iii) multi-level, as globalisation, both as a competitive threat and as an opportunity, forces local initiatives to be framed within the context of global changes. Local economic develop-

ment has been posited as ‘think globally and act locally’ (Helmsing, 2005).

‘Subordinates’ or ‘lower-level’ actors in development chains can create a degree of autonomy for themselves and their fields of action. The relationship between policy and development practices exhibits a number of characteristics: (i) policy primarily functions to mobilise and maintain political support, that is, to legitimise rather than to orientate practice; (ii) development interventions are not driven by policy but by the exigencies of organisations and the need to maintain relationships; (iii) development projects work to maintain themselves as coherent policy ideas (as systems of representations) as well as operational systems; (iv) projects do not fail, rather, they are let down by wider networks of support and validation; and (v) ‘success’ and ‘failure’ are policy-oriented judgements that obscure project effects (Mosse, 2005). Collective action is a critical condition to upgrade marketing and production within a community. Local producers apply their knowledge and skills to get organised to cooperate with external agents and add value to their produce in the most sustainable way (Helmsing, 2006).

It is the interaction between top-down facilitation and bottom-up claiming or making use of a given space that adds value to local socio-economic development. Amin and Thrift (1995) discussed the ability of regions to develop their institutional capability to ‘capture’ global economic flows in terms of ‘institutional thickness’. They defined institutional thickness as ‘a combination of economic, social and cultural factors, necessary for local economic development’ (ibid.: 100). For instance, what financial structure is required to create, allocate and put to use local credit facilities? What knowledge structure is required to produce, distribute and exchange knowledge for local governance and local economic development? What technology is required to access, for instance, market information? Locally-based institutional thickness has not yet been proven to be a precondition for local economic regeneration. What matters for local economic development appears to be having access to a certain institutional thickness, including enterprise support systems, political institutions and social citizenship. For these, path dependence needs to be determined. In the current research, I identified collective action that generated the support functions necessary to enhance local economic development.

3.5 Drivers of change

In their analysis of organisational development processes, Ackerman and Anderson (2002) identified seven interlinked drivers of change: (i) the larger context of social, economic, business, political, governmental, technological, demographic, legal and natural environmental forces within which people and organisations operate; (ii) the aggregate set of changing customer requirements or changing market requirements which challenge a person or organisation to produce a specific quality at a specific time; (iii) a given customer's or market's changing requirements, which may stimulate a producer or service provider to adapt its mission, strategy, goals, products or services, pricing or branding; (iv) a changing production process, which requires an organisation to function differently in terms of structure, systems, processes, technology, resources, skills base or staffing; (v) a change in organisational behaviour, which influences the way people work together; and (vi) changing styles of cooperation, which influence individual and leadership behaviour. These result, finally, in (vii) changing mindsets among individuals and their leaders, which provokes them to look differently at the external forces, causing organisations to change, as mentioned under (i).

Changes in the outside world may evoke insights on one's own functioning. These may consequently propel changes in relationships, leading to structures and processes being formed afresh in order to operate optimally once again. Such changes may take place within and among organisations at the local, national or international level within government, civil society and the private sector. To grasp such forces, DFID (2004) designed several leading questions for use by the country offices of the Department for International Development (DFID). The aim was to help them to understand the linkages between agents, structural features and institutions and to identify drivers of change in pro-poor development interventions. DFID identified institutional drivers of change as, for example, access to land, the launching of agricultural subsidies, decentralisation, taxation and social sector spending. It identified structural drivers as the history of state formation, ethnicity and economic and social structures. Agential drivers were identified as migration flows and the interests of political, cultural, faith-based or trade union groups. DFID posed its questions at the national level, examining the social, political, economic and institutional factors affecting the dynamics of and possibilities for change. At the intermediate level, its inquiries centred on

policy processes, including incentives and capacities of agents operating within institutions. Concerning the role of external forces, it examined intentional and unintentional actions of donors. Regarding the link between change and poverty reduction, it inquired into how change had affected poverty and in what timeframe. Concerning operational implications, it examined organisational learning of all agents regarding strategies and actions. Concerning DFID's own functioning, it looked at its retention of country knowledge. The DFID 'drivers of change' approach thus provides a broad meta-framework for development partners to understand which interventions may be best to bring about more *pro-poor* outcomes (Warrener, 2004). Other development partners have used other approaches to grasp the development processes they are involved in, though all emphasise the potential benefits of local ownership (OECD-DAC, 2005: 18).

In analysing value chain development, Helmsing (2013: 31) identified learning from past practices, trust and timely creation of complementary institutions as drivers of local institutional change. He concluded that institutional change was strongly associated with actors or organisations that were capable of implementing, adapting and replicating new institutional designs (*ibid.*).

In local development processes, it is key to analyse how people learn, adapt and do better (Cernea, 1985; Chambers et al., 1989). From a household and local community perspective, the household's human, social, cultural and political capital is triggered by the market and by other external forces, to organise and institutionalise itself and to formulate strategies by which to cope with the vulnerability context and improve livelihood outcomes. In the current research, I analysed how livelihood assets, in terms of human, social, cultural and political capital, enabled households to organise themselves to address their vulnerability context and enhance their well-being.

Notes

¹ De Haan (2006: 141) defined agency as 'people's capacity to integrate experiences into their livelihood strategies and to look for outlets for aspirations, ambitions and solutions to problems. Human agency enables man to reshape social conditions. Agency is embodied in the individual but embedded in social relations through which it can become effective. Individual choices and decision-making

are embedded in norms and values and institutional structures. Structures may change through human agency, leading to long-term livelihood changes.’

² The theory of peasant cooperatives was initially published in 1919 in Russian under the title ‘The Basic Ideas and Organisational Forms of Agricultural Cooperation’, reprinted in 1991.

³ URT (1982): Local Government Act and Semboja, Joseph & Ole Therkildsen (1991): The Handbook on District Level Administration in Tanzania.

⁴ The Murray River in Australia that Heinmiller uses to base his path dependency theory on should not be confused with the Murray ward in Mbulu district in which Kwermusl village is situated. The name Murray seems to have a Celtic, Irish or Scottish origin and means ‘lord of the sea’.

⁵ PMO-RALG (2008): LGRP I; and (2009): LGRP II.

⁶ A customary right is defined as a right required by custom, a local usage belonging to all inhabitants of a certain area (Webster, Oxford dictionary).

4

Research questions

Survey data from the research area at two points in time provided my basic data on development level, in terms of livelihood assets and collective action. This means that I had a known ‘beginning’ and ‘end’ situation for the households and communities in the eight villages sampled. At the household level, my dependent variables were income and well-being. At the community or village level, my dependent variables were chosen in relation to collective action overseeing socio-economic service delivery.

We do not yet know why there is or is not development. We do not know what development paths were chosen or what livelihood strategies were adopted to address the initial vulnerability context. Nor do we know how livelihood assets were coordinated at the community level or what institutional changes occurred to facilitate collective action towards development of socio-economic infrastructure and delivery of the related services. After identifying the major changes in development at the household, community and local government level using the given indicators, the question arises as to how such changes were initiated, facilitated and implemented in operational, strategic and policy terms. In this research, thus, I focused on two central questions:

- (i) How did change at the household level influence development at the local institutional and village level?
- (ii) What has driven local institutional change in Mbulu and Karatu districts from 1988 to 2010 and also in the subsequent years

These initial questions were answered through three related lines of inquiry. The *first*, in accordance with the presented sustainable livelihoods framework, examines how household capitals were coordinated at

the community level in the eight villages. What collective action took place in each village in the various fields of action for socio-economic development? What local institutional changes occurred to serve the changing needs for collective action? The *second* line of inquiry zooms in on collective action, seeking to identify differences in collective action between the villages and how these could be explained using the sustainable livelihoods framework. Finally, the *third* line of inquiry relates to the conditions under which collective action has been successful in grasping opportunities to communicate demands to others and shape local economic development.

It is 'the end result' that counts. Therefore, I set out to find any similarities or differences with respect to collective action that might explain how local economic development took place. My aim was to learn what played the key role in development processes and why. To this end, I investigated how changes at the household level influenced development at the local institutional and village level. In situations where 'the end result' of the collective action was not achieved, I sought to learn what frustrated the end result. Hyden (1983) observed, 'there are no shortcuts to progress'. Nonetheless, the route to progress merits exploration. This, in short, was my aim with the current research.

5

Research methodology

5.1 Surveys in the study area

The starting point of the current research was the change in development level between 1988 and 2010 among households in eight villages in Mbulu District (later Mbulu and Karatu districts). In 1988, the Mbulu District Council commissioned a baseline survey, which was conducted by the Institute of Resource Assessment (IRA), based in Dar es Salaam. In 2010, I initiated a follow-up survey in cooperation with staff and students of the Institute of Rural Development Planning (IRDP) in Dodoma, Tanzania. Annex A1 and A2 present the village and household questionnaires used in each of these surveys. The completed questionnaires from both were processed using SPSS. Part of the initial data was presented in the Mbulu District socio-economic baseline survey (IRA, 1989). I processed and interpreted the remaining data as part of the current research. The baseline survey encompassed 430 households, constituting roughly 15% of the then target population of the eight villages. Each village represents a particular agro-ecological zone, each with specific farming systems and socio-economic characteristics. The households surveyed were selected randomly within each zone. Each village exhibited its own development pathways.

The second survey involved 440 households in the same eight villages, though by then the district had been split (in 1995) to form two districts, Mbulu and Karatu. Separate focus group discussions were held with leaders of each village to capture their perceptions of the main developments and significant changes in their community over the study period. These data were developed into timelines which could be compared across the study area.

The aim of this combined research was to develop theory (Eisenhardt, 1989, 2007), not to test it. Referring to the original questionnaires developed in 1988, I extracted household development concepts such as livelihood assets, structures and livelihood strategies, based on definitions from the literature and the correlated survey data. As noted, the 1988 questionnaires were used again in 2010 to ensure data comparability. Minor adjustments did have to be made, however, for example, adding ownership of mobile phones and televisions to reflect current trends. The second survey, like the first, sampled households randomly.

By comparing the 1988 results with those of 2010, changes in aggregate household development could be determined, as indicated by educational level, agricultural production, income (inflation corrected), asset ownership, energy use and access to socio-economic services. These changes were then translated into livelihood assets, in line with the sustainable livelihoods framework. Changed indicators, such as on education, agricultural production, livestock ownership, ownership of material assets and expenditure patterns, were taken as my point of departure for exploring prevailing community development pathways, institutional frameworks and local economic development. The availability and development of socio-economic infrastructure at the community and village level was further investigated through interviews with village government representatives (see Annex A1). Where applicable, traditional leaders, leaders of local community-based organisations and managers of the primary society were interviewed in the villages concerned (see annex A3). Changes at the district level were measured using development indicators taken from overviews provided by the Tanzanian National Bureau of Statistics, relevant sectoral ministries and district statistical offices (IRDP, 2012; KDC, 2011). In sum, the changes in development reported here for the household, community, village and district levels were derived from the outputs of the two surveys, additional research on the functioning of local organisations and statistics from national ministries, district planning offices and the National Bureau of Statistics.

5.2 Measuring types and levels of change

To measure change at the *household level*, two series of household interviews were conducted in the eight study villages. These centred on household livelihood assets and livelihood outcomes (see annex A2).

Specifically assessed were six types of capital: (i) human capital (with educational level as an indicator of quality, and household size and time spent on productive activities for quantity), (ii) social capital (membership of local organisations), (iii) natural capital (land size and availability of domestic water, pasture and fuelwood), (iv) physical capital (ownership of assets related to shelter, transport, agricultural and other production and access to socio-economic infrastructure in the surroundings), (v) financial capital (income and expenditure pattern, livestock herd size and access to savings and credit or micro-finance services); and (vi) political capital (one's position in society). As noted in Chapter 3, the Iraqw people perceived development mainly in terms of changes in material asset ownership between generations (Snyder, 2005: 8). Cultural capital changed little in the villages under study here, though minor differences were registered in some villages. Indicators used for livelihood outcomes were as follows: income, material well-being (ownership of radios, manufactured pots and pans, clothes purchased at stores, bicycles, corrugated iron sheeting and burned brick houses), vulnerability (educational level, landownership and a perception of land scarcity), food security (agricultural production, livestock ownership and nutrition) and sustainable use of the natural resource base (erosion control, rainfed and irrigated agriculture, livestock production and energy use).

At the *community or village level*, focus group discussions in the eight villages explored changes in their vulnerability context (see Annex A1) and in structures and processes of collective action (see Annex A3). Changes from the initial vulnerability context were measured in each village by examining collective action and organisational development to cope with shocks, trends and seasonality. Questions addressed, for example, what structures and processes were present or developed, what collective action took place and what institutional development took place that affected the functioning of collective action. Forms of collective action that had developed at the community level were counted and categorised. These collective action initiatives sought, for example, to safeguard norms, values and cultural identity; to manage resources and maintain economic infrastructure for service delivery; to facilitate savings and credit or sports; or to organise interactions between political interests. Where collective action was identified, its functioning was examined. Also investigated were the roles of policy design (development of by-laws, a vision and mission for local organisations; issuance of land in line with

customary rights), institutional development (control over resources like land, water, forest and minerals); and decision-making processes (the way choices were made, e.g., in village government, village assemblies, PTAs, village water committees, cattle dip committees, irrigation committees and micro-financing bodies).

I looked into which actors formulated an organisation's vision, mission and the required outputs, and who owned and managed the inputs. I investigated who designed the strategy and operational systems within an organisation. Who was responsible for human resource development? What outputs were produced or what services delivered? Who made use of those outputs and services? In other words, who had access to the livelihood outcomes? All organisational elements were, furthermore, described and scrutinised with regard to the property rights pertaining to the collective action. Finally, I assessed how these organisations responded to crises and shocks in the community's vulnerability context (see annex A3).

District-level change was measured in conjunction with the evolution of political responsibility, public administration and private-sector development over time, particularly its institutionalisation (e.g., in underpinning legislation), its planning and its day-to-day administrative practices. For this purpose, I constructed an overview of how the institutional setting of political, private-sector and community facilitation changed over time to enable collective action to take place. I also analysed the institutional setting over time, in regard to political, financial and administrative decentralisation and its enablement of collective action, both within government and within NGOs, whether private-sector, faith-based or community-based.

5.3 Achievements of collective action in socio-economic development terms

It is my assumption that people, within their cultural environment, develop competencies to understand and deal with their natural and socio-economic environment. They do so both individually, linked to their human capital development, and as members of communities in various constellations, linked to social capital development. A traditional upbringing, for example, may impart technical competencies in subsistence farming, livestock rearing and artisanal work. It may also convey social

competencies for collective action. As mentioned above, at the *community or village level* I developed a time-related overview for each village depicting the establishment and functioning of socio-economic infrastructure associated with collective action and organisational policy development. In this process I raised specific questions to identify how tasks and responsibilities were distributed within organisations and to understand decision-making and management processes for construction and maintenance of socio-economic infrastructure in conjunction with service delivery (e.g., education, health care, water for drinking or irrigation, all-weather roads, cattle dipping, agricultural storage (*godowns*) and savings and credit). I also posed questions regarding if and how community, village and district councils were instrumental in initiating activities in, for example, dairy farming, afforestation, maize milling, oil pressing, erosion control, input supply, marketing, credit supply, land allocation and tourism. I sought answers in conjunction with the identified enabling functions of government and others. In addition, I raised questions concerning the way development initiatives were generated and supported. Did they emerge from within a community or did such initiatives receive external impetus and support? I sought to identify what conditions seemed to enable collective action to grasp or adhere to national and even internationally formulated priorities as well (see annex A3).

5.4 Pathways followed to achieve local economic development in Mbulu and Karatu districts

Within the political economy of Tanzania, I sought to describe changing power relations over time. Focusing particularly on organisational structures and agencies, the likely causes of development at the household, community or local government level were analysed or otherwise identified. My aim here was to reflect on what is required for development to take place at each of these levels.

At the *household level*, development pathways were derived from the survey results. At this level, education was found to be correlated with socio-economic activities and employment and consequently with income level. Where development was found to have taken place at the household level, I examined which indicators best explained such change. In other words, I sought correlations between changes in devel-

opment levels and the availability of functioning socio-economic services or infrastructure in the villages, or changes therein.

At the *community or village level*, in-depth interviews were conducted to attribute responsibility for the development, operation and maintenance of socio-economic services, infrastructure and other collective action at the village level. In qualitative terms, I sought correlations between the average development level within a village and the functioning of socio-economic services and infrastructure by comparing the development levels of the eight villages over time.

At the *district level*, correlations were sought between community or village development levels and the way the political, community and private-sector agencies were enabled to operate and how they took up their responsibilities. To this end, I conducted a literature survey of legislation and documentation referring to local government, decentralisation, privatisation and cooperative development. This helped me to identify the consequences of political, community and private-sector involvement in local decision-making and in decision implementation for socio-economic development over time.

After the structural aspects of the research were assessed, I conducted a final analysis to identify whose agency, at what level, had been key in the development process. Drivers of change were identified by means of focused discussions with village and district leaders.

5.5 Methodological steps summarised

In this research, I first analysed the results of two sets of surveys and interviews, conducted in 1988 and 2010, to determine change. Thereafter, I described the context in which village development took place, as depicted through focus group discussions with village leaders. In addition, I analysed the prevailing institutional context, particularly government's role in enabling or disabling the operation of local government, civil society and the private sector. My analysis of government's role was done mainly through a literature review, documentary study and discussions with village and district leaders. The literature served particularly to shed light on the evolution of the institutional setting for collective action over time. I examined how government had facilitated collective action and how the villages responded to government priorities. After reviewing the literature, I conducted some 80 focus group discussions

with actors who had been involved in collective action. These focus groups zoomed in on cultural, human, social, economic, financial, environmental and political aspects of life.

Findings from these inputs enabled me to trace livelihood development in the eight villages sampled, each representing a particular agro-ecological context, starting from the vulnerability context of each, to getting organised and developing strategies to address their vulnerabilities. Ultimately, this process enabled me to draw conclusions concerning all of the elements in the sustainable livelihoods framework from the perspectives of heads of household and village leaders, on educational levels and agricultural and livestock production. This served as a basis for making deductions about the various ways that institutionalisation of collective action had taken place and how such institutionalisation had enhanced local economic development. Finally, it provided a basis for theorising on what factors may determine routes to 'progress'.

6

Historical aspects of institutional development in Tanzania

In his presidential inaugural address of November 1962, Julius Nyerere encouraged the Tanzanian people 'to live in villages in order to develop our land and [to] raise our standard of living, by [for example] providing schools for our children, building hospitals, having clean drinking water, starting small village industries and using tractors instead of depending on towns for all our requirements' (Nyerere, 1966: 183-4). He also pointed out that Tanzanian cooperative societies had joined together in a nationwide union and that a cooperative bank, the first bank to be started by the people of Tanzania, had opened its doors. He announced, too, the government's intention to enable cooperative societies 'to undertake every kind of enterprise which can be run by cooperative effort' (ibid.: 185).

These announcements continued Tanzania's long history of its peoples working together. In his 'Freedom and Development Speech', Nyerere (1973: 67) explained the functioning of *ujamaa* as 'voluntary associations of people who decided of their own free will to live and work together for their common good. People would themselves decide how much of their land they would cultivate together and how much they would cultivate individually.' Two other types of *ujamaa*, or villagisation, however, arose as well. The first was a campaign which stimulated people to join together as a way to obtain aid or other concessions from government, though among leaders there was a continued tendency to divert income and benefits from communal efforts to private ends (Von Freyhold, 1979: 83). In the second, people were compelled to live together, despite the disruption this caused to traditional cultivation. The result of this latter was more backward production systems and reduced livelihoods, as participants were no longer able to cultivate their – now – far away 'rich' agricultural fields (Coulson, 1982: 247; Mlay, 1985). Later, in the 1970s and 1980s, government sought to harness 'self-help labour' for economic activities in the form of collective action, for example, for

ujamaa shamba (collectively worked community agricultural fields) or to raise seedlings for collective tree planting.

Also spurring the collective spirit, in its first 20 years after independence Tanzania launched sympathetic top-down policies, like free medical care, primary and university education and water supply, as well as subsidies for essential consumer items such as maize, rice and wheat flour, though it never had the resources to implement such policies (Mudoola, 1985). Under *ujamaa* the central government appointed *balozzi* (ten-cell leaders): one to represent roughly every ten households. These structures enabled government to penetrate into the everyday lives of households. In parallel, government encouraged top-down institutionalisation, creating mass organisations for the youth, for workers, for women and for parents, alongside cooperative unions. These organisations were all affiliated with the governing party, first the Tanganyika African National Union (TANU) and later Chama Cha Mapinduzi (CCM). Many people believed in the success of these policies, though their bureaucratisation consumed much of the nation's meagre resources, reducing even those limited services that could be provided. During these times, even the powerful cooperative movement with its vast resources was under the direct control of government (Van Cranenburgh, 1990: 191).

Table 6.1 presents a chronology of Tanzania's rural development and local governance strategies. Central government enabled the functioning of local government, the private sector and civil society in various ways over time. These sometimes encouraged and sometimes discouraged local initiatives. Parliament passed several acts and introduced reforms and strategies to shape the structure within which stakeholders in local socio-economic development operated. Power was decentralised, then centralised; 'deconcentration' policies were then introduced, followed by delegation of power, then 'devolution' of power. Such reallocations of power, however, succeeded only insofar as the entities involved were given adequate capacity to operate (see, e.g., Coulson, 1982: 254; Kahama et al., 1986: 315; Van Cranenburgh, 1990: 220). Linkages between top-level decision-making and implementation capacity at the local level were inadequate. Even where policy development was formalised in legislation, this was hardly consistently implemented, and legal, administrative, human and financial resources to enable and operationalise the intended policies fluctuated over time. Therefore, the elements necessary for the development of cooperation at the individual level – reputation, trust

and reciprocity – did not blossom. Political, civil society and private sector enablement are addressed in the forthcoming sections 6.1, 6.2 and 6.3 from the perspective of the encouragement of local initiatives for local socio-economic development.

Table 6.1
Chronology of Tanzania's rural development and local governance strategies

1926	Local government established by colonial government*
1953	Local Government Ordinance
1953-75	Primary cooperative societies operate.
1961	Independence
1967	Arusha Declaration; adoption of <i>ujamaa</i> villages (a form of collective action) as official policy
1968	Cooperative Societies Act
1969-73	Operation to resettle peasants in planned villages
1969	State farms and ranches set up.
1970	Abolishment of cash contribution for construction, operation and maintenance of rural water supply
1972	Parastatal crop authorities formed as marketing boards Local government abolished and deconcentration of central government functions
1973-76	Villagisation (without emphasis on communal production)
1974	Water Utilisation Act
1975	<i>Ujamaa</i> Village Act, mandating that villages take over cooperate society functions
1975-77	Universal primary education implemented
1976	Operation <i>Maduka</i> abolishes private village shops
1978	National Education Act
1981	Reintroduction of regional cooperatives. Re-legitimisation of private large-scale farming Regional pricing policy for basic grains Dropping of export taxes on coffee, cotton and tobacco
1982	Local Government Authorities Act Local Government Finances Act Cooperative reforms mandating reintroduction of primary society under party control
1983	Human Deployment Act
1984	Reintroduction of local government

1985	Agricultural policy and land tenure reform
1988	Liberalisation of marketing of agricultural (food)crops
1991	Cooperative reforms mandating reintroduction of primary societies as membership organisations Water policy reforms mandating that the village councils own the village water supply scheme
1992	Foundation of the Savings & Credit Cooperative Union League of Tanzania Government decision to adopt multi-party democracy
1993	Civil service reform, reducing the size of the public service, introducing controls on the wage bill, decompressing the salary structure and initiating the process of decentralisation
1995	Chama Cha Mapinduzi CCM election manifesto Multi-party democracy
1996	Local government reform agenda introduced to make local government authorities more effective, efficient, transparent and accountable Community development policy introduced
1997	Regional Administration Act National Poverty Eradication Strategy Micro-Finance Act
1998	Establishment Tanzania Private Sector Foundation Freedom to form trade unions Tanzania Development Vision 2025 National External Debt Strategy
1999	Amendment of the Local Government Act 1982 (No. 6) focusing on good governance, transparency and accountability at all government levels Village Land Act
2000	Launch of Poverty Reduction Strategy Paper Public service reform First phase implementation of local government reform in 38 local authorities Local Government Finance Act 1982 (version 2000) Local Government Financial (Block Grant) Regulations Local Government Councillors/Staff Code of Conduct Special presidential committee to revive cooperatives Micro-finance policy
2001	Public Finance Act
2002	Village Planning: Obstacles and Opportunities to Development NGO Act No. 24 Business Environment Strengthening for Tanzania (BEST) programme National Water Policy
2003	Cooperative Societies Act
2004	Local Government Reform Programme (decentralisation by devolution) Public Procurement Act Property and Business Formalisation Programme (MKURABITA)

2005	Cooperative Reform and Modernisation Programme 2005 - 2015 Local Government Reform Programme Phase II National Strategy for Growth and Reduction of Poverty (NSGRP = MKUKUTA) Rural Energy Act
2006	Local Government Laws Act
2007	Land Use Planning Act
2008	NGO Code of Conduct (GN 363)
2009	Water Supply and Sanitation Act Water Resources Management Act
2011	Public Procurement Act Public Private Partnership Act
2012	Amendment of Local Government Finance Act

* During the pre-colonial era, local governance was embedded in chiefdoms and councils of elders.

Source: Derived from McCall-Skutch (1983); Ngwilizi (2002); IRDP (2009); and author's own research

Ongoing institutional change, related to the various initiatives enumerated in Table 6.1, shifted governance responsibilities from one level to another. Responsibilities were affected, alternately, by centralisation, 'decentralisation by deconcentration', 'decentralisation by devolution', 'delegation to cooperative action' and liberalisation. They were also affected by the changing hierarchical structure of Tanzania's ruling party, as the country shifted from a one-party democracy towards a multi-party democracy with multiple party structures. These ongoing institutional changes were, however, accompanied by insufficient capacity building among the actors concerned, though actors were often called upon to take up new responsibilities they had not had before.

6.1 Local government enablement in its historical context

6.1.1 Independence to 1982

Upon independence in 1961 new authorities took over the local government structure that had been established by the colonial powers in 1926 and institutionalised by the Local Government Ordinance of 1953. Post-independence, however, it soon became clear that these structures would not function in the new governmental constellation. District councils had been established in 1962, but were not performing. This prompted institutional changes nearly immediately after their creation,

for five main reasons (Mutahaba, 1985). First, there was little cohesion between district councillors and their staff, and distrust was amplified by mutual suspicion, due to the different roles the two entities had before independence. Second, there were poor relations between the district councils and the central government's political and technical organisation. Third, the financial situation generally deteriorated, largely due to an inability to maintain acceptable standards of integrity and efficiency. Fourth, the district councils' financial problems evoked dissatisfaction among citizens regarding the quality and quantity of social services on offer. Although some councils were effective, the central government could not address the disparities. Lastly, the central government could not remedy the clash between centrally determined development plans and local demands. As a result of these deficiencies, the central government resorted to gradual diminishment of the autonomy of local authorities, starting from 1963.

A hierarchical relationship had initially been established between the regional commissioner and the district councils. Thereafter, the Local Government Service Commission was introduced, which reduced the autonomy of the district councillors, as they could no longer hire their own personnel, including their senior staff. From 1965 onwards the TANU chairperson automatically became the district council chairperson. A year later, TANU was put in control of the election of all district councillors. In 1969 local autonomy was further reduced by withdrawing from district councils responsibilities for primary education, health centres and district roads. These functions were returned to the remit of the national technical ministries. In 1970 the process of centralisation continued, with the central government abolishing the district councils' prerogative to raise local and produce taxes. Finally, in 1972 the district councils were officially abolished and replaced by an integrated development organisation. Instead of devolution to local participatory institutions for governance and development, the newly established integrated development organisations emphasised the delegation of substantial decision-making responsibilities to field-based central government personnel. This move, which was described as 'decentralisation by deconcentration', included the following elements:

- Regional and district development councils, which involved central government officials, technical staff, party officials and members of parliament, were introduced to approve development projects.

- Village assemblies and village councils were introduced.
- The Prime Minister's Office was established to plan and control the work of the regions, including formulation of rural development policy.
- All ministerial plans were coordinated by the Ministry of Economic Affairs and Development Planning with the aim of ensuring that all initiatives were directed at achieving common objectives.
- An economic committee was established within the Cabinet to review all development plans.
- All development ministries were reorganised.

This form of decentralisation addressed some of the problems stemming from the pre-1972 period, such as the absence of coordination between development agencies at the district level and lack of funds within the district councils. Also, salaries started to be paid. In theory, the new set-up made it easier to dovetail local plans into national planning and to facilitate the disbursement of funds, as regional and district development directors now became 'accounting officers'. Yet, while the new system solved some problems, it caused others. Primarily, it created a dependency on the centre, it thwarted regional and district initiatives and it led to unrealistic planning and budgeting, as the district had no responsibility for revenue collection. Budgets were slashed by central government anyway, and participative governance was eliminated. Meetings were dominated by bureaucrats (from both party and government) and technocrats, and real authority was lacking. Indeed, the districts felt little responsibility for their personnel, who were in fact employees of the central government. At the time this decentralisation programme was launched, the government had committed itself to implement a recommendation made by McKinsey, Inc. (1972), that the regions should be allocated 40% of the national development budget. However, actual development expenditures for the period 1972-1986 by central government ministries and parastatals and by the regions indicate that the regions never received more than 17.2% (in 1975/76). On average, the regions received only 12.3% of the national development budget during this period (Ngasongwa, 1988: 103). In the meantime, in 1974, the National Executive Committee (NEC) declared the supremacy of the governing party in policy-making, a decision endorsed by parliament in 1975 (Kjekshus, 1976: ix). According to the Villages and *Ujamaa* Villages Act of 1975, all

necessary decisions regarding village socio-economic development were now to be taken by the village council. This newly decentralised system, however, did little better than the one before it. The effectiveness of rural development management in fact seemed to slacken with these decentralisation efforts (Mutahaba, 1985). This led to the reinstatement of local elections.

6.1.2 The Local Government Act of 1982

The 1982 Local Government Act reinstituted the district council much as it had been pre-1972 in regard to powers, authorities and responsibilities. The new councils were 'inserted' into the existing decentralisation structure without much change in the latter (Semboja & Therkildsen, 1991).¹ For example, the district and regional development committees continued to exist in the same setting. A major difference now, however, was that all development activities were integrated under the management of the district council. The central government remained responsible only for non-developmental departments, as well as for law and order. The new system was designed to solve the pre-1972 problems without exacerbating the post-1972 problems. The problem of sectoral divisions was solved by integrating sector planning into the district council. Moreover, senior staff were now employed by the Local Government Service Commission (LGSC), in an effort to enhance coordination between the local and central level. Local government funding was obtained through local revenue collection and central government subsidies, the latter enabling central powers to interfere to prevent regional disparities. Uniform staffing policies were adopted with the aim of ensuring adequate support in all fields. This led to employment of more, though not yet sufficient, qualified personnel. Technocrats acted as advisors with the councillors as the decision-makers. The act's reinstallation of local government, however, could not ameliorate local government functioning. Though the councillors became the decision-makers, this did not mean they had control over those charged to execute their decisions. Executive functions were still nearly fully under the management of central government, and therefore subject to transfers determined by national rather than local interests. Human resource policies fluctuated and there was little local accountability.

The 1982 Local Government Act describes the functions of village government organs as follows: A *village assembly* is the supreme authority

on all matters of general policy-making in relation to the affairs of the village. It is responsible for election of the village council and removal from the council of any or all members, and for the performance of any other functions conferred upon it. The 1982 act indicates also that all persons of and above age 18 years who normally reside within the village are members of the village assembly. The assembly was made responsible for election of the village council; for the removal of any or all council members; for proposal of village council by-laws; and for any matter of extraordinary public importance (art. 7, 55, 103). The *village council* was defined as the organ vested with all executive power in respect to all the affairs and business of a village. The village council was mandated to (i) do all such acts and things necessary and expedient for the economic and social development of a village; (ii) initiate and undertake any task, venture or enterprise to ensure the welfare and well-being of the residents of a village; (iii) plan and coordinate the activities of and render assistance and advice to village residents engaged in agricultural, horticultural, forestry or other activity or industry of any kind; (iv) encourage village residents in undertaking and participating in communal enterprises; and (v) participate, by way of partnership or any other way, in economic enterprises with other village councils.

In areas in which, according to the act, a minister had delegated power to the village council, that council was enabled to formulate by-laws for implementation or purposes of any of the functions conferred by the act. Where a village council proposed to make such by-laws, it was to convene a meeting of the village assembly where the proposals were to be considered. It was then, at a meeting of its own, to consider the proposed by-laws and pass them with or without amendment, taking into account the views expressed by the inhabitants of the village on the proposals at the village assembly meeting. Consequently, it was to submit the by-laws, together with the minutes of the meeting of the village assembly which had considered the proposals, to the district council of jurisdiction for its approval. If approved by the district council, the by-laws were to be instituted and come into operation on a date agreed by the district council upon the recommendation of the village council concerned.

The act appointed the chairperson and secretary of the CCM as ex officio chairperson and secretary of the village council. Under the 1975 act, all other candidates for the village council had to be active CCM mem-

bers, residents of the village and qualified according to the CCM leadership code (Semboja & Therkildsen, 1991), but this requirement was dropped in the 1982 act. The later act indicated that to stand for elections, one had to be 21 years of age or older and a member of a household ordinarily residing in the village. Village councils had three standing committees: (i) finance, planning and economic affairs; (ii) social services and self-help; and (iii) justice. In the early days, the social service committee could co-opt non-council members to serve as well. The act gave the village councils executive authority over all affairs and business of the village, including social and economic development; ensuring the welfare of the villagers; coordinating advice on agriculture, horticulture, forestry and other activities of any kind; encouragement of villagers to engage in communal action; participation in economic enterprises with other village councils; protection of people and property; allocation of land; and dealing with employment issues. Its standing committee on finance, planning and economic affairs, specifically, was assigned to manage the council's financial matters; production activities of both the council and the village as a whole (including natural resources management); marketing issues (including those of the primary cooperatives); and transportation. The standing committee on social services and self-help presided over all matters concerning community welfare, health, education, culture and water; all self-help activities like those for roads, water, health facilities, primary schools and tree planting; and activities related to the Human Deployment Act of 1983. The standing committee on justice was responsible for the village security force and protection of lives and property (Semboja & Therkildsen, 1991).

The re-introduction of local government structures, starting in 1984, again changed the allocation of responsibilities for planning, executing and monitoring rural development between the local and central government levels. A few examples are indicative of the fluctuating responsibilities across the various governance levels through to the mid-1990s: (i) the Ministry of Agriculture and Livestock Development was recentralised in 1985; (ii) ministerial responsibility for local authorities evolved from the Ministry of Local Government, Cooperatives and Marketing, via the Ministry for Regional Administration and Local Government (1990), to a department under the Prime Minister's Office (1991); and the ward secretary position was rearranged between central and local government. Consequently, local government policy, and strategy devel-

opment and planning, implementation, monitoring and accountability mechanisms, remained undeveloped for some time (MDC, 1989: 72). Local government staff had difficulties accounting for policy implementation (MDC, 1990: 97). Adding to the confusion was contradictory World Bank advice, for example, on road infrastructure (centralisation) and local government (devolution). The lack of clarity on divisions of responsibility, authority and accountability impeded rational allocation of resources between ministries, regional administrations and local government (Therkildsen & Semboja, 1992). Lack of management capacity and funds at the local level remained an obstacle to local-level development capacity (Kahama et al., 1986: 315; Kauzeni, 1988). These hurdles, which had still not been resolved in the mid-1990s, jeopardised the success of the renewed local government set-up. As an example, parliament's November 1991 decision to make employment of the district executive director a matter of district council authority, was not endorsed by the prime minister afterwards.

After independence, access to water 'free of charge' was proclaimed a basic right of every citizen. Cash contributions for construction, operation and maintenance of rural water supply were abolished (URT, 1970, 1974, 1981). This illustrates the central government's intention to support its rural population. However, the government was unable to secure sufficient resources to maintain water supply infrastructure, while the village governments were prohibited from collecting money from water users to operate and maintain existing water infrastructure (Therkildsen, 1988: 42). Consequently, many initially government-supported village water supply facilities became 'out of order' most of the time. Village governments only occasionally received fuel to run diesel pumps, and water technicians seldom visited villages to do necessary repairs and maintenance (Van Dijk, 1988). Gradually, after enabling village governments to open their own banking accounts, from the early 1990s onwards, village water committees were established and authorised to collect 'water user fees' on behalf of village government to pay for operation and maintenance and thus safeguard more reliable water supply (URT, 2002). In 2009 ownership of water supply schemes in rural areas was handed over to the respective communities, enabling all beneficiaries and stakeholders to participate effectively in management of community water supply (URT, 2009).

This review suggests that the ongoing institutional changes confused who was responsible for maintaining resources and service provision, among other things. Through to the early 1990s, local government was hardly able to establish itself. Tasks and responsibilities had no time to become embedded in the minds and practices of the actors concerned. Nationalisation, villagisation, pastoral communal resource use and hunter and gatherer 'no-man's lands' obscured feelings of ownership and responsibility for maintaining natural resources, such as through erosion control measures. The unceasing institutional changes can thus be said to have undermined firm establishment of responsibilities among the electorate, district councillors and civil servants within the local administration (Semboja & Therkildsen, 1991; Tidemand & Jamal, 2010). The continuing institutional change, in parallel with a hierarchical party structure, switched responsibilities from level to level, though not without leaving gaps. The result was that few were held accountable for adequate service delivery in the 1985-1995 period.

'Operation *Maduka*', starting in 1976, replaced private activities, such as shops, by cooperative ventures. Although nearly all villages operated a village shop, and some operated up to 18 communal-led service activities, many of these were managed improperly from 1985 to 1995 (Van Dijk, 1988). The reintroduction of the local government authority in 1984 raised hopes for improved service delivery through greater involvement of citizens. However, these were disappointed for various reasons, including weak human resource capacity and management, weak leadership and poor management of the councils, shortages of qualified, disciplined and committed personnel, shortages of revenue due to the narrow tax base, overemployment within the councils and lack of transparency and accountability in the conduct of council business (URT-PMORALG, 1998). In 1988, a number of institutional constraints were identified by the Mbulu District Council, primarily, inadequate council policy and strategies in regard to road maintenance, rural water supply and livestock development; inadequate financial control to maintain development and service delivery; inadequate monitoring of the development process and insufficient accounting for its implementation; and lack of support from transport and financial institutions to ensure reliable supply of and payment for materials (MDC, 1989). Although at that time local government *de facto* employed staff and paid salaries, this level had little say in staff selection, motivation and discipline. It had to ac-

cept employees provided by the central government and had no authority to fire them (World Bank, 1999: 52). The Local Government Reform Programme (LGRP) of 1996, was an effort to overcome these obstacles.

6.1.3 Local government reform

In 1994 multi-party democracy was introduced at the village level, and in 1995 democracy was introduced at the district and national level. This had a number of consequences. The 'automatic' supremacy of the party (CCM) ended. The village secretaries were no longer on the payroll of the CCM, but became employees of the district council instead. The function of village chairperson became a voluntary one, and the party no longer received a central government subsidy to pay them. Political parties had to raise their own revenues, for example, through membership fees, to pay their employees. The CCM election manifesto of 1995 provided the starting point of the most recent local government reform (URT, 1998), focusing on political, financial and administrative decentralisation and changing the relationship of local authorities with line ministries (Lawson et al., 2005: 133). Political decentralisation was to be achieved through devolution, implying creation of multi-functional government departments at the local level within the framework of national legislation. Financial decentralisation was to allow local councils to raise their own revenues and pass their own budgets, reflecting their own priorities, leaving central government to the role of supplying adequate unconditional resources and other grants. Administrative decentralisation mandated that local staff be delinked from the respective ministries, making them accountable to local councils instead. Finally, local-central relations were to change. Line ministries were to become policy-making bodies, overseeing support and capacity building, monitoring and quality assurance, and regulating bodies (legal control and audit) within the local government legislative framework.

The 1995-2004 period witnessed major improvements in public financial management, inducing an enlarged percentage of general budget support (Lawson et al., 2005). This enabled expansion of education, health and road infrastructure services. But Lawson et al.'s (*ibid.*) evaluation of general budget support in Tanzania gives few specifics about improvements of these services. In addition, the actual share of budgets going to local authorities seems to have changed little over time (*ibid.*). The strategy for reforming local government included steps like identifi-

cation of stakeholders and service providers in development, collection of baseline data, data analysis, formulation of strategies and performance indicators, cost-benefit analysis, development of human resource policy and conduct of human resource appraisal, design and approval of implementation plans, alongside implementation of service delivery strategies and design and implementation of a monitoring system (URT, 2000). Ten objectives can be identified for the local government reform (Masanyiwa, 2009):

- allowing people to participate in government at the local level and to elect their own leaders, such as councillors and mtaa and kitongoji (neighbourhood) leaders;
- bringing public services under the control of the people through their local councils;
- giving local councils powers (political devolution) over all local affairs;
- determining appropriate and cost-effective organisational structures for local government authorities;
- improving financial and political accountability;
- securing finances for better public services;
- creating a new local government administration answerable to local councils and local needs;
- delinking local administrative leaders from their former ministries;
- creating new central-local relations based not on orders but on legislation and dialogue;
- creating good governance based on political and financial accountability, democratic procedures and public participation (Masanyiwa, 2009; URT, PO-RALG, 2002).

The Local Government Reform Programme (LGRP) intended to make the local government fully responsible for planning, recruiting, rewarding, promoting, disciplining, development and firing its staff (URT, 1998). Local government was to be service- and performance-oriented. This strategy was abbreviated as 'D by D' or 'decentralisation by devolution'.

Shortly thereafter, in 1999, the Village Land Act was launched as part of the local government reform. This legislation authorised the village

land council and village assembly to issue land based on customary rights, an activity that had in the past been conducted by the council of elders (Snyder, 2005: 42). The Village Land Act facilitated formalisation of individual land rights and enabled villagers to operate as individuals and as autonomous entrepreneurs instead of as recipients and implementers of central government directives (Pallotti, 2008). Households could now access bank loans, too, as landownership under customary law was accepted as collateral.

Baker et al. (2002: 24) cited Mbulu District Planning Officer Rashidi, who described the planning process launched by the President's Office's Regional Administration and Local Government (PO-RALG) as follows:

The process for development planning is bottom-up. The whole process of planning starts from sub-village level (*kitongoji*=*hamlet*) whereby people identify their problems, prioritise and come up with alternative solutions to these problems taking into consideration availability of resources within the sub-village. At this stage they can also indicate what is to be done by themselves and what assistance should be requested from the Council. The proposals from the sub-village levels are forwarded to the village whereby they are scrutinized, compiled and presented to ward level. At ward level the ward development committee scrutinise proposals from villages, compile and forward to the district level for further action. At the district level more scrutiny is done and projects selected are compiled and discussed in the DMT (District Management Team), Council Standing Committees and final approval is done by Full Council (*italics added by Baker et al.*).

However, this vision, named 'Opportunities and Obstacles to Development', was never worked out at the village level, according to Meindertsma et al. (1997). The capacity of the community and village leadership and enablement of the private sector were thought to be critical factors in application of the 'Opportunities and Obstacles to Development' approach in local government planning (PO-RALG, 2002). Indeed, after its introduction, Van Dijk et al. (2004) and Mollell (2010) concluded that on many occasions village plans were not taken up and discussed at the ward and district levels, but just left in a drawer. Van Dijk et al. (2004) observed that inadequate knowledge and skills among village and ward leaders and planning officers hindered development of planning proposals into valuable and implementable ward and district

plans. According to Mollel (2010), the district officials concerned in fact preferred to act on the basis of their own opinions.

The Local Government Reform Programme 2005-2008 was structured towards four systemic outcomes: (i) decentralisation by devolution; (ii) local government fiscally empowered and made accountable; (iii) human resource empowerment within local government; and (iv) a legal framework for decentralisation by devolution. Two operational outcomes were foreseen as well: (v) local government authorities restructured and (vi) adherence to principles of good governance. Local government accountability has since been measured in annual country-wide assessments of minimum conditions and performance of local government authorities (PMO-RALG, 2006). According to these, in financial year 2004/2005 both the Mbulu and Karatu district councils collected less local revenue than in the year before. In 2006, both district councils received only provisional status, pending a review regarding shortfalls identified. This delayed their access to capacity development grant (CDG) funds. Nonetheless, in 2007 both had improved their status, meeting the minimum conditions under the CDG, which they continued to meet up to the time of this writing (PMO-RALG, 2010).

Upon the launch of the Local Government Act, the majority of decision-makers at the village council level had a 'standard four' level of education. By the end of the period under study, most village council members had a 'standard seven' level of education.² Though the majority of village executive officers had standard seven, the formal educational level required for entry to the Local Government Training Institute (LGTI), where one is trained to become village executive officer, was form four.³

Village councils comprised 25 members as follows:

- an elected chairperson;
- ex officio *kitongoji* chairpersons (not more than five);
- preferential seats for women, allocated on a political basis and comprising not more than one quarter of all council members;
- other members elected on the basis of political parties, who together with the other council members, add up to a maximum of 25;
- the village executive officer, who serves as secretary to the council, but has no voting rights.

The *kitongoji* (neighbourhood or hamlet) is not a local government authority but rather part of a village and its smallest administrative unit. The *kitongoji* committee is composed of the following members:

- a chairperson elected on a political basis;
- a secretary appointed by the *kitongoji* chairperson;
- three persons who are members of the *kitongoji* advisory committee and are appointed by the *kitongoji* chairperson (see Baker et al., 2002: 29).

The 2010 Local Government Act stipulated that the village council was to have three standing committees and the 25 village council members were to be appointed to the planning and finance committee, the social affairs committee and the justice committee. Besides these standing committees, over time, additional committees have been formed to discuss, organise and monitor specific tasks assigned, by law, to the village government. Thus, most village governments had appointed an 'Ardhi' or District Lands Office committee, responsible for distribution of land within village boundaries; an environmental committee, to monitor the state of the environment; and a primary health care committee, to monitor public health and services to mothers and children. This last committee was often linked to the association of traditional birth attendants. Other committees founded were HIV committees, calamities committees, construction committees and artificial insemination (AI) committees. Some villages formed primary school committees or PTAs, secondary school committees, rural health centre or dispensary committees, cattle dip committees, village water committees or associations, irrigation committees, *mnaada* (market) committees and *mbegu mbora* (improved agriculture) committees. These additional committees – linked to the village government or not – could include non-members of the village council; some of the committees had their own banking accounts and own decision-making structures. The *sungusungu* or *mgambo* operated under the auspices of the standing justice committee. The construction, PTA and rural health centre committees ensured implementation of construction and maintenance of village buildings and roads. Where applicable, village committees ran cattle dips. Herforth (2010: 69) differentiated four cattle dip management models: a group model, a village committee model, a private individual for public model and a private individual model. In the study area, both the group model and the village commit-

tee model were found, being loosely structured and usually without registration, which led to some confusion regarding ownership. There was a lack of clarity, too, regarding who was responsible for operation and maintenance of the dips and who was to be paid when cattle owners made use of the services. Although by-laws had been formulated, these were hardly enforced.

The 1978 Education Act established and described the functioning of school committees, or PTAs, which were to be appointed by the village council ensuring representation of the local community. The PTA was mandated to ensure that the school was integrated into the life of the community, self-reliant and enhanced the welfare of pupils and teachers. The PTA was also to promote the development of the school. The 1995 Education Act added that the school committee would be responsible for school management and maintenance, development planning, discipline and finances.

The policy of universal primary education initially led to a high enrolment and literacy rate, though this later dropped as a consequence of the structural adjustment programme in which government introduced a cost-sharing mechanism. The net enrolment rate declined by some 57% in 2000, though it climbed again to reach 97% in 2007 (Sitta, 2007).

In the 1980s water was considered a public good, to be used by the rural population free of charge. However, many villages lacked water supply infrastructure and depended on open water sources. In places where infrastructure was available, government did not supply funds for operation and maintenance to keep the infrastructure functioning (Van Dijk, 1988; MDC, 1989: 77). According to the water policy of 1991 the village council was made the owner of the *water supply* scheme in the village of its jurisdiction, although at that time the legal and practical consequences of this shift had not yet been worked out.

In 2009, ownership of water supply schemes in rural areas was transferred to the respective communities (URT, 2009). In this year, the Water Resources Management Act, including the rural and urban water supply acts, was introduced by the Ministry of Water and Livestock Development and passed by parliament. This legislation described the responsibilities of water user associations and village water committees. Water user associations were defined as the lowest level of management of rural water supply and sanitation services. Subject to the approval of the district water supply and sanitation team they were to (i) own and

manage all water schemes within the area of their respective jurisdictions; (ii) resolve disputes among users of water supply schemes; (iii) provide a link between wards, district and basin water offices on water-related matters; and (iv) participate in surveys and collection of various fees and charges from users and community members. In addition, in every village a water user association or village water committee was to be established to operate, manage and maintain the community water schemes in the village. The minister was mandated – by regulation – to provide for the composition and constitution of the committees. Rural communities were mandated by law to implement the objectives of national water policy through the village water committees in all areas where water users' associations or water user groups had not yet been registered. At the lowest level of water supply schemes – such as irrigation furrows, tributaries around the villages, and common water sources for smallholder farming communities, fishers, pastoralists and other similar groups – nine roles were set out for the village water committees to perform: (i) local water allocation among competing uses from the quantities stipulated in water use permits; (ii) ownership, operation and maintenance of water schemes to minimise wastage and ensure sustainability; (iii) contributions in cash and in kind towards financing rural water supply schemes and paying for operation and maintenance costs in full; (iv) participation in surveys, planning, designing and managing rural water schemes; (v) setting water tariffs and collecting fees and revenues from members while maintaining accounts and records; (vi) contracting out some responsibilities to private-sector operators; (vii) resolving disputes among community members; (viii) communicating through the village councils with district councils in the operation and maintenance of rural water supply projects; and (ix) participating in the integrated planning of water supply projects and the use of water resources. Up to 2009, water laws linked the water management system to the local government administration and not to local communities' active participation in management. Up to that time, legislation had not facilitated the emergence of a functioning market for water (Lein & Tagseth, 2009: 216).

The district commissioner (DC) chaired the District Consultative Committee (DCC), formerly called the District Development Committee (DDC), in which local government, civil society and the private sector were represented. The DC was the central government representative at the district level. The DC operated as assistant proper officer, and car-

ried the main responsibility for security and justice. The 1982 Local Government Act stipulated that the DC, the party chairperson and secretary (by that time the CCM only), members of parliament, the district council chairperson, members of the finance and planning committee and the district executive director were to be members of the DDC. In addition to the maintenance of order and good governance, the DC's tasks included considering and advising on all economic and developmental affairs, including district council budgets, central and local government programmes, and parastatal and cooperative activities to enhance local economic development (Semboja & Therkildsen, 1991). While the DDC was established as an advisory body under the central government, its functions were taken over by DCC after the amended 2006 Local Government Act. By this act, the committee's membership was also broadened to include other political parties in the district, while gradually umbrella organisations from civil society and the private sector could be taken on board as well. Although all political parties represented in the district became a member, district councillors, who had been members of the DDC, were no longer mentioned as DCC members, except the chairperson of the district council. In addition, all ward executive officers became DCC members. This gave the DC a direct communication link with lower local government bureaucrats (table 6.2).

Under the heading of 'such other members that may be invited by the district commissioner', representatives of civil society umbrella organisations (e.g., NGO platforms) and the private sector (e.g., the district branch of the chamber of commerce) could be invited to participate in the DCC. According to the amended 2006 Local Government Act, the functions of the DCC were to include considering reports and advice on national and regional programmes within the district, in conjunction with district council development plans and activities of the local government, parastatals, cooperatives and NGOs within the district. It also mandated adherence to a code of conduct for political parties, maintenance of law and order within the district and management of natural disasters and coordination of disaster relief.

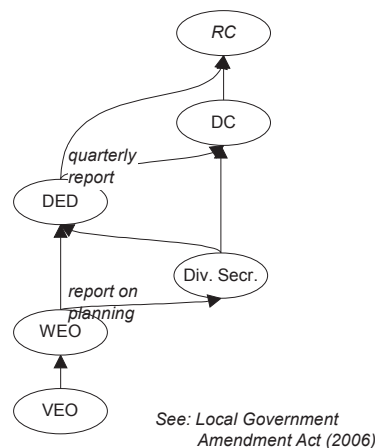
Table 6.2
Composition of the District Consultative Committee (DCC) and the District Development Committee (DDC) as per the Local Government Act

District Development Committee (DDC) of 1982	District Consultative Committee (DCC) of 2006
<ul style="list-style-type: none"> • District commissioner (<i>chair</i>) • District officer (<i>secretary</i> but not a member) • District party chairperson (CCM) • District party secretary (CCM) • All members of parliament residing within the district • Chairperson of the district council • Members of the finance and planning committee of the district council • All divisional secretaries • District executive director 	<ul style="list-style-type: none"> • District commissioner (<i>chair</i>) • District party chairperson of all registered parties • District party secretary of all registered parties • All members of parliament residing within district • Chairperson of the district council • All divisional secretaries • District executive director (<i>secretary</i>) • All heads of division • All ward executive officers • Such other members that may be invited by the district commissioner

Source: Author

The amended 2006 Local Government Act gave the ward executive officer additional functions, too, reporting to both the district executive director and to the central government. Specifically, the ward executive officer was to advise, coordinate and report to the district executive director, who represented the local government, on all actions taken within the ward to promote participatory development and establish cooperative action. The ward executive officer was to report to central government, via the divisional secretary, on security and justice matters. For development issues, the divisional secretary reported to the district executive director, which in turn reported to the district administrative secretary (DAS) under the DC. The same act gave the sector ministries the responsibility to ensure adequate employment and human resource development of professional staff at the local government level. This meant that local government control over its staff was diminished. Figure 6.1 depicts the local government reporting structure in 2006.

Figure 6.1
Local government reporting structure in 2006



Abbreviations: RC= regional commissioner; DC=district commissioner; DED=district executive director; Div. Secr.=divisional secretary; WEO=ward executive officer; VEO=village executive officer. Source: Amended 2006 Local Government Act. Source: Author

Although the original Local Government Act was passed in 1982 and versions of the act have been valid since then, it has never been operationalised as written. Establishment of the legal framework for its implementation has remained far from complete (REPOA, 2008: 46). Decentralisation by devolution, as designed, was in reality at odds with the centralisation of decision-making that was enacted regarding development programmes and human and financial resource allocation. The amended 2006 Local Government Act put local economic development even more within the purview of central government, while simultaneously making it difficult for local government to autonomously implement its own decisions to enhance local economic development. Indeed, authority to hire and fire civil servants was within the central government's remit, a structure which influenced staff loyalty and their motivation to carry out decisions taken locally.

Administrative decentralisation as set out in LGRP II resulted in a system in which all government staff was screened and employed by a central agency. The bottom-up local government reporting structure was thus diverted through the central government hierarchy. All local gov-

ernment staff, including village and ward executive officers, were screened and employed through the central government system, with the respective local governments responsible only for the specific job description.

Fiscal decentralisation under the LGRP resulted in little discretionary power for local government, as most allocations were earmarked by central government. The recurrent block grants for primary education, for example, were calculated wholly based on the number of school-aged children. Regarding the recurrent block grants for local health services, these were calculated as follows: 70% based on the population, 10% on the number of poor residents, 10% on under-five mortality rate in the district, and 10% on the average distance to nearest medical facility (URT).⁴ Central government provided funding to local government authorities through local government development grants (LGDGs) and other sources, though again, roughly 85% of development funds were earmarked (URT-PMO-RALG, 2011). Local government was held to specific transparency and accountability standards. Indeed, transparency and accountability have remained key terms used to gain the confidence and trust of the electorate. In recent years, 'online' accountability systems have been developed, such as the Local Government Monitoring Database (LGMD), which traces socio-economic indicators. There is also 'PlanRep', a system for general planning at the district level based on the 'Opportunities and Obstacles to Development' approach. Further, the Procurement Management Information System (PMIS) seeks to provide clear management information concerning purchasing, and EPICOR business management software is used to track accounting. However, as of 2012, these systems operated in most districts as 'stand-alones', not linked to national systems within the Prime Minister's Office or Ministry of Finance. Some observe that data input by village executive officers is seldom scrutinised by ward executive officers or district planning offices, resulting in data inaccuracies and errors.⁵ At the district level the different systems have not yet been linked to one another, though with such connectivity an integrated planning, monitoring and evaluation and human resources management system might be created (ibid.; Van Dijk & Timothy, 2013).

6.2 Civil society enablement in its historical context

6.2.1 State control

Besides traditional organisations like the *aya* (environmental management group) and *ngoma* (dance group), religious organisations, primary societies, trade unions and the Tanganyika African National Union (TANU) are civil society organisations (CSOs) that existed upon independence. In 1964, when the chiefdom system was abolished,⁶ a number of traditional organisations disappeared with it. A TANU precursor, the independent Tanganyika Federation of Labour, came in conflict with the government and was replaced by the government-controlled National Union of Tanganyika Workers. Similarly, an earlier cooperative society organisation was replaced by the Union of Cooperative Societies, also controlled by the governing party. Other mass organisations defended the interests of the youth, women and parents. These were organised from within the party and top-down, given the country's one-party monopoly to organise the people. The single party ruled from 1965. Thus, in the early years of independence popular participation in the development process mainly took the form of participation through party-related organisations only. Up to that time, civil society had hardly organised itself other than in informal, still traditionally or religiously based, collective action. The Arusha Declaration of 1967 encouraged collective action through party mechanisms only. This state of affairs lasted some 20 years, up to the 1990s. As the country was governed as a one-party democracy, this meant that collective action was under state control.

6.2.2 More autonomy for civic organisations

In the early 1980s, 15 years after nationalisation of the education system, the government moved to allow non-state secondary schools. In 1986, it requested churches and NGOs to assist in providing education and health services. Gradually, non-state service providers were enabled to operate and civil society organised itself accordingly. From 1984 to 1992 the number of NGO-operated schools in Tanzania grew from 85 to 258 (Lange et al., 2000). In the early 1990s, trade unions and cooperatives were unlinked from CCM, the political party leading government at that time. They were allowed to write their own constitutions and elect their own leaders. From 1993, interest groups were established, even at the

national level, like MVIWATA, representing smallholder farmers. These gradually spread out over the regional, district and lower levels as well.

In response to the poor functioning of the party-controlled membership organisations and weak public service delivery during the 1980s and 1990s, the donor community encouraged establishment of NGOs and community-based organisations in Tanzania. This led to an exponential rise in the number of registered NGOs in the country, from 224 in 1993 to 8,499 in 2000 (Lange et al., 2000; Sola, 2001). Tanzania's 1996 Community Development Policy referred to community-based organisations as a phenomenon, but not as an instrument for development. Households, together with local government, central government, politicians, donors and religious denominations, were described as key in the community development process. A role for community-based organisations was foreseen only in the functioning of community-based savings and credit facilities. Households and, more generally, 'the community', were given first responsibility to ensure community development, though with the support of professionals.

According to Lange et al. (2000) and Shivji (2004), Tanzanian NGOs were typically top-down, urban-based, well-intended organisations led by elites. Few addressed real concerns of the working people, as they had not developed organically from the masses. In that sense, these NGOs cannot be construed as membership organisations.⁷ Most were funded by foreign donors. Consequently, their accountability at that time was mainly to their funders and not to the masses. In addition, CSOs had little management capacity, and few personnel were adequately trained, especially in financial administration and planning. Record-keeping was a problem in virtually all of the organisations. Their leaders, though committed, had inadequate education to ensure that the groups performed well (Mushi, 2001). The increasing numbers of NGOs justified the government's development of an NGO policy, as there was a need to enhance NGO self-regulation, transparency and accountability and to establish modalities for interaction between NGOs and the state and between NGOs and other stakeholders.

In 2002, Tanzania's Vice President's Office introduced an NGO policy that established transparent and decentralised registration procedures to facilitate better coordination of NGOs while safeguarding the freedom of association. The policy also sought to strengthen the relationship between the government and civil society; to enhance mechanisms of

collaboration between NGOs, government, funding agencies and other stakeholders; to facilitate government support to NGOs; and to promote transparency, accountability and awareness among the NGOs themselves and towards government and other stakeholders.

Table 6.3
*Civil society as defined by two organisations,
Hakikazi and the Development Partners Group*

Hakikazi (2002)	Development Partners Group*
<ul style="list-style-type: none"> • National and international NGOs • Community-based organisations • Voluntary and self-help groups • Organisations of socially excluded groups • Professional associations • Religious organisations • Trade unions • Cooperatives • Research organisations • The media • Political parties • Legal and human rights groups 	<ul style="list-style-type: none"> • Membership-based organisations • Community-based organisations • NGOs • Voluntary and self-help groups, community-based groups and societies • Social movements and networks of organisations • Non-membership associations, professional associations, foundations and non-profit companies • Faith-based organisations • Trade unions • Private-sector associations • Employers' associations • Cooperatives • Research institutes in economic and policy analysis • Non-profit media organisations • Multi-party organisations

* Ingelstam & Karlstedt, 2007

Source: Compiled by author.

The National Strategy for Growth and Reduction of Poverty (NSGRP, also known by its Tanzanian acronym MKUKUTA) (URT-VPO, 2005: 57) referred to CSOs as a 'key actor in poverty reduction'. The NSGRP encouraged CSOs to mobilise community resources for poverty reduction; to mobilise and enhance community participation; to build local capacity and empower communities; and to participate in monitoring and evaluation at the national and community levels. To improve the effectiveness of CSOs the government set about reviewing and strengthening organisational and management frameworks at the national, regional, district and community levels (ibid.: 58). According to In-

gelstam and Karlstedt (2007), CSOs in Tanzania became increasingly involved in advocacy work, expecting an active role in demanding rights, accountability, participation, transparency and so on.

Hakikazi (2002), one of the earlier established NGOs operating at the national level, defined civil society as covering a wide range of organised groupings occupying the public space between the state and individuals. These were mainly interest groups with different degrees of accountability to their memberships. Some were explicitly pro-poor, and among those some took a rights-based approach to empowerment and advocacy. The Development Partners Group defined civil society in terms of citizens: men, women, boys and girls, organising themselves and acting together for their common interests (Ingelstam & Karlstedt, 2007). Its approach was practical and included various types of organisations. Table 6.3 presents the range of organisations included under civil society as defined by these two organisations.

In its 2007–10 accountability strategy⁸ for Tanzania, DFID used the term ‘CSO’ in reference to a very broad range of organisations and institutions outside the apparatus of government (DFID, 2007). These included organisations established as NGOs in line with the relevant legislation, usually not for profit, as well as the media, academia, research institutes, trade unions, faith-based organisations and professional associations. At the local level, Van Dijk and Masanyiwa (2010) concluded that nearly all of Tanzania’s NGOs and faith-based organisations were involved mainly in service delivery in the fields of health and HIV/AIDS, education, community development and extension. As service delivery organisations they actively rejected more confrontational approaches, seeing constructive citizen engagement as a more productive way to change mindsets, policies and practices, especially given the top-down planning tradition from which Tanzania was emerging and the sense of Tanzanians working together against a common threat. Van Dijk and Masanyiwa (*ibid.*) took civil society to include the private sector, too, as well as business membership organisations. Based on their research in three districts, Mbulu being one of them, they described three other features of civil society in the Tanzanian context as follows:

- Many NGOs in practice behave more as ‘contractors’, accountable to donors for delivering certain outputs (safety nets, services, pieces of research or advocacy) than seeing themselves as having a role in accountabil-

ity, let alone seeing themselves as accountable to the poor and marginalised.

- Other NGOs model themselves on a different style of development intervention, arguably more like the churches and mission organisations, or more traditionally like accountable chiefs, ‘bringing development to an area’.
- ‘Having an NGO’ is sometimes seen as a (private) income generating opportunity – often in the face of retirement or retrenchment from formal sector employment (Van Dijk & Masanyiwa, 2010: 15).

These features were valid for the large national CSOs as well as smaller more locally based organisations, whether branches of business organisations, trade union offices, community-based organisations or NGOs. Among all, low educational levels, low capitalisation and lack of a clear vision and mission contributed to an overall inadequate understanding of their potential to contribute to governance and accountability.

In its civil society index, ForDIA (2011) measured the functioning of Tanzania’s civil society in terms of several characteristics: (i) structure (e.g., number of members, extent of giving and volunteering, number and features of umbrella organisations and civil society infrastructure, and human and financial resources); (ii) external environment and functions (e.g., legislative, political, cultural and economic context; relationship between civil society and the state as well as the private sector); (iii) values (e.g., democracy, tolerance and protection of the environment); and (iv) impact (e.g., public policy influence, empowerment of people and meeting societal needs). It differentiated CSOs according to the various roles played and activities performed, starting with their political role. Tanzanian civil society has an active tradition of participation in politics, starting long before independence and extending throughout the early post-independence years to the current era of multi-party democracy. Such activity has included, but not been limited to, augmenting and influencing change (policy advocacy, development lobbying and advocacy for particular causes); playing a part in elections (delivering civic and voter education and performing election observation); raising funds for election campaigns; and involvement in pressure and interest groups.

During one-party rule, the ruling party was considered part of government rather than as part of civil society. Despite the abolishment of the chieftain system just after independence, the socio-cultural role of

traditional leaders remained, at least among the Iraqw people. Traditional leaders were particularly key in governing social behaviour and in environmental management. The functioning of councils of elders and performances of dance groups (*ngoma*) also lingered. The *kwaslema* is a traditional meeting in which members cooperate in a ritual action, reassert their common rights to the land, reaffirm their boundaries and purify an area of dangerous 'outside' influences (Thornton, 1980). It is composed of the elders of each household in the *aya*, thus representing the whole population of the area. The 1999 Village Land Act brought an end to the role of councils of elders in arbitrating local land disputes, leaving these councils to focus mainly on ritual matters (Snyder, 2005: 43). Similarly, the developmental and economic role that had been played by missionary-induced collective action was taken over by cooperative undertakings, oftentimes geared towards production and procurement of consumer goods and agricultural and livestock inputs, as well as savings and credits facilities. Traditional dancing – together with church choirs – may also be viewed as part of civil society's cultural role; or it may be seen as falling under its recreational role, which includes sports as well.

Of later advent, CSOs in the form of NGOs were established to play an educational and informational role, for example, to disseminate environmental messages related to erosion control.

Very few CSOs fulfilling a democratic or watchdog role were found at the village level in Tanzania. But these did play a role at the district and higher levels of government, particularly to fight abuses of power, to demand accountability and transparency, to educate on human rights and to nurture democratic norms and processes.

According to Boettke et al. (2008), the functioning of CSOs cannot be forced from the outside. People form groups themselves. In Mbulu, most CSOs addressed development issues like education, water, environmental conservation, HIV/AIDS, children's and women's rights and the economy in general. This suggests that CSOs in Mbulu had great potential to impact people's lives. But whether they had the capacities necessary to pursue their missions, such as human and financial resources, skills, and open and transparent structures and systems, is another matter (Van Dijk & Masanyiwa, 2010). Indeed, CSO functioning is dependent on the capacity of their members and leadership. In addition, for smaller groups in particular, it depends on their capacity to join with other groups to form a broader platform to make members' voices heard

where and when necessary. According to ForDia (2011), the fact that civil society networks were perceived as a rather new (post-2000), amateur and non-institutionalised phenomenon, with rather inexperienced leaders, limited their potential and sustainability.

Within Mbulu, three CSO networks were found to be operational at the end of the study period: (i) the Mbulu NGO Network (MbuN-GONet), active since 2006 and focusing on HIV/AIDS, women's issues and poverty, counted 16 members in 2010 (1 NGO, 2 faith-based organisations and 13 community-based organisations); (ii) the Mbulu Network for Civil Society Organisations (MNCO), which had been in operation since 2009 and sought to raise awareness and improve the performance of CSOs (it had 17 members, both CSOs and faith-based organisations); and (iii) TECDEN, an early childhood development network that started operating from Babati in 2004, with 25 members in the Manyara Region, of which 10 were in Mbulu. Although these three networks were in place it is still difficult to conclude that there was a functional CSO network in Mbulu. None of the three networks were very active in creating a platform in which CSOs could discuss practical issues related to interventions. Moreover, they competed for the same members and were hardly able to assist members in building their capacities. In many ways, the networks themselves went the traditional way of implementing their own interventions, indeed, becoming similar to their members (Van Dijk & Masanyiwa, 2010). This suggests the need for a single, more active umbrella entity which would function as a platform for CSOs in the district – unlike those observed in this research. The District Consultative Committee (DCC) did express interest in supporting such an endeavour, and suggested that the district council could play an advisory role in making this happen. However, the CSOs themselves did not seem to recognise the added value of a strong umbrella organisation.

Though CSOs cannot be forced from the outside, external forces do sometimes play a facilitating role. At the district level, a good number of CSOs were established in 2009 to tap resources from a Tanzania Commission for AIDS (TACAIDS) initiative, offered through a regional facilitation agency.⁹ However, since this was a one-time, foreign-introduced exogenous funding initiative, most of the NGOs it produced faded after funding was phased out. Those that survived existed almost entirely on member contributions, too meagre a funding base to enable them to carry out meaningful interventions. My own observation is that such exoge-

nously introduced 'seed money' is unlikely to bear lasting fruit, as the CSOs that emerge tend to be inadequately aware of the issues facing their community – in this case those affected by HIV/AIDS – and how to address them. Rather, indigenous institutional inducement is key to CSOs' sustained development, and from there exogenous opportunities can be grasped (Boettke et al., 2008).

Church and faith-based development offices have a long history in the greater Mbulu District. Both the Evangelical Lutheran Church in Tanzania (ELCT, known also by the acronym KKKT in Tanzania) and the Roman Catholic Church have regional headquarters in Mbulu town. However, other than Haydom Hospital (ELCT operated) and Catholic Women in Development (WID) and Gender and Development (GAD) groups, most faith-based organisations were just starting to emerge during the research period. Most of those that did exist still operated under the auspices and registration of their 'mother' institutions. For example, Karatu Hospital operated under the ELCT banner, and numerous religion-affiliated organisations could be found operating at the village or ward level only. At the time of this writing, a few larger organisations were in the process of registering as autonomous faith-based organisations. One of these was Baraza Kuu Waslamu Tanzania (*Bakwata*), a CSO operating in Mbulu town since 1968. The Centre for the Sick and Handicapped opened its doors in the town of Bashay in 1997. The Mission to Unreached Tribes (MUT) was founded in 1999 in Dongobesh. The Fellowship Ministry for All People opened its doors in Mbulu town in 2000. Generally, faith-based organisations were trusted by the people they served, owing to their link to moral leadership institutions. This suggests their potential to carry out meaningful interventions if well capacitated and organised.

For most CSOs, internal accountability took the form of reports submitted to funding agencies and presented to constituencies at official meetings. Where donor funds were involved formal audits were also conducted. Other contributions, mainly local membership dues, were either audited and assessed by the district treasurer and executive committee concerned, or were not formally accounted for. CSOs were accountable to the district council through their own networks, but this was not a very effective arrangement. In that sense, little coordination took place. Though compulsory, few CSOs regularly submitted plans and implementation reports to the district council. It is difficult to fore-

see such a procedure working well, as few CSOs could produce the required documents (Van Dijk & Masanyiwa, 2011).

Some national and international NGOs such as Farm Africa and the SNV Netherlands Development Organisation operated in the district, though they were not based there. Farm Africa was based in Babati, while SNV operated from Arusha. Other NGOs were the Ujamaa Community Resource Trust (U-CRT), the Pastoralists Indigenous NGO's Forum (called the PINGO's Forum) and ORGUT-SEDIT (an independent Sweden-based staff-owned service provider in international development cooperation in support of social and economic development initiatives in Tanzania). These, again, all operated within the district but had no offices there. ORGUT-SEDIT provided financial support to CSOs in the district, while Farm Africa and SNV were basically involved in implementation of interventions at the grassroots level. Some of the CSOs mentioned were funded or requested funding from the Foundation for Civil Society, U-CRT or the PINGO's Forum.

Except for the Tanzania Teacher's Union (TTU), trade unions at the local government level seemed not to be well organised. They hardly met, and when they did it was usually to prepare for 1 May celebrations (Van Dijk & Masanyiwa, 2011). They had limited financial resources and their leaders tended to be regarded as part and parcel of the employers' system. They were therefore not expected to bring about any meaningful change. TTU's capacity building at the district and school level focused mainly on raising teachers' awareness of their rights by disseminating information on and training in labour laws. The Trade Union of Government and Health Employees (TUGHE) was dying out in Mbulu District, with most of its supposed members (health workers) falling under the Tanzania Local Government Workers Union (TALGWU), since they were employees of the district council.

Organisations like the Agricultural and Livestock Development Organisation (ALIDO) were founded to enable members (retired technical officers) to share their competencies with the public to help address agricultural and environmental issues.

All of the CSOs mentioned above were registered as NGOs or faith-based organisations, of which Mbulu counted about 60 in 2011. For most, however, membership was limited to board members, and beyond a relatively small contribution base, most sought to tap external resources to fulfil their service delivery function. It was because they were

generally dependent on external resources that they needed to be registered, for accountability reasons.

CSOs at the village level included both registered and non-registered membership organisations. During the single-party era, before the 1990s, little distinction was made between public, private and civil society-linked community-based organisations. All collective action was discussed at the party and village assembly level. After the single-party era ended, a bit more distinction emerged, as the village government and party became separated from one another. Nonetheless, most collective action initiatives were still discussed by the village assembly. Among the organisations falling under civil society were the council of elders; the *ngoma* (rain dancers); the *aya* (environmental management groups); village community banks (ViCoBa); savings and internal lending communities (SILCs); church choirs; orphan care organisations; sports, youth and women's clubs; the trade union; and even various political parties. Most community-based organisations at the village level were as yet unregistered. In 2011, the Karatu Community Development Office had registered just 47 community-based organisations and 4 faith-based organisations (Karatu District Council, 2011). In general, organised civil society in rural areas focused on service delivery and establishment of good relations with the state, displaying awareness of the bureaucratic attitude of government institutions in their service delivery (Mushi, 2001; Van Dijk & Masanyiwa, 2010).

Government enablement of CSOs since the mid-1990s has encompassed mainly registration. Thus, it cannot be said that the government facilitated CSOs' operation. Rather, registered CSOs were permitted to join in socio-economic service delivery, which mainly took place after CSOs received external support from development partners and their services paid for. It was through this external support that the CSOs were able to develop their own capacity.

6.3 Private-sector enablement in its historical context

Other forms of local organisation were established in the period after independence. Villagisation took place, initially without communal production, but in 1975 the *Ujamaa* Village Act guided villages to take over the cooperative society function that had operated since the early 1950s mostly very successfully (World Bank, 2002).¹⁰ The cooperative move-

ment in Mbulu and Karatu districts, as in the rest of Tanzania, initially had a voluntary membership base of farmers and focused on the marketing of agricultural produce. The *Ujamaa* Village Act abolished private enterprises, like village shops, under 'Operation *Maduka*'. Thereafter, agricultural products were traded exclusively through the so-called 'primary societies', supervised by village or party leaders (Van Cranenburgh, 1990). Subject to the provisions of the Cooperative Societies Act (1982), 'a village council shall as far as is possible and advantageous, and taking into account the resources available to it, facilitate the undertaking by the residents of the village, ventures which are of a co-operative nature or encourage or promote the development and enhancement of the spirit of *ujamaa* in economic and other public enterprises'. In the 1980s, households were given access to services provided by the primary societies, such as supply of agricultural inputs, on the condition that payment was settled when the harvest was transported to market. All was arranged through the society and crop prices were guaranteed or determined by government. However, the primary societies did not have sufficient resources for these operations (MDC, 1989: 56). As a result, in 1988 the marketing of agricultural products was once again liberalised. According to the 1991 Mbulu Statistical Report, nearly all farmers quickly reverted to trading their own agricultural produce, mainly food crops, privately, as this enabled them to earn a better income. While the primary societies were reinstated as membership organisations in 1991, few examples of cooperative production, processing or trading endured. It has since become clear that the primary societies were negatively viewed throughout the country, for reasons of inefficiency, mistrust and delayed payment for agricultural products. Mushi (2001: 83) identified leaders' low educational level as a major cause of these deficiencies. Though savings and credit cooperatives began operations under the Cooperatives Societies Act of 1991, it took quite some time for them to garner the confidence of the population, as initially they were poorly managed due, once again, to overwhelming bureaucracy and insufficient training of officials (Bwana & Mwakujonga, 2013). Collective entrepreneurship thus had to be developed afresh.

In 2003 the new Cooperative Act defined the objectives of the primary society as (i) to raise members' standard of living, (ii) to facilitate the operations of the individual members and (iii) to provide services to members, including supply of agricultural inputs and collecting, pro-

cessing and marketing of members' products. This Cooperative Act allowed for registration of the following types of societies: (i) agricultural cooperatives, designed to deal with crop production, purchasing, processing, marketing, distribution and any such activity as may be provided for in the rules and by-laws; (ii) savings and credit societies, financial co-operatives, micro-finance institutions and cooperative banks, with as primary activities to mobilise savings and furnish secured and unsecured loans and credit to households, smallholders, entrepreneurs and micro-enterprises in rural and urban areas; (iii) consumer cooperatives, for wholesale and retail business among members; (iv) industrial cooperatives, for production, manufacturing and sale of goods; (v) housing co-operatives, to organise building, construction and housing programmes for members; (vi) livestock cooperatives, to provide for the animal husbandry, livestock keeping and dairy farming needs of members; (vii) fisheries cooperative societies, dealing with fishing, processing and marketing of fish and other sea products; (viii) producers' cooperatives, for agricultural, forestry or other natural products; (ix) mining cooperatives, dealing with mining operations and mineral marketing; and (x) such other societies as may be established. The 2003 Cooperative Act stipulated that every registered society would have the power to make by-laws on any subjects deemed necessary or desirable for the purpose to which the society was established, including '(a) the object for which the society is established; (b) the purpose to which the funds of the society may be applied and the mode of custody and investment of such funds; (c) the qualifications for membership of the society, the terms of admission of members shares, the entrance fees, and the mode of election; and (d) the manner of conducting meetings of the society and the powers of such meetings' (Article 45). Where the objectives of the registered society included raising funds to be lent to members, additional by-laws were to be introduced regarding conditions on which loans could be made to members. These were to include (i) the rate of interest; (ii) the maximum period that could be granted for repayment; (iii) the maximum amount that could be lent to a member; (iv) the purpose of loans; (v) security for payment; and (vi) the consequences of default on payment of any sum due on account of shares or deposits or loans and the consequences of failure to use a loan for the purpose for which it was granted. The act mandated every registered society to keep proper accounts and other records and to prepare annual statements of accounts within three

months of a year's end in a form conforming to the best accounting standards. The accounts of registered societies were to be audited at least once annually by the cooperative or any competent and registered auditor appointed at a general meeting and approved by the registrar. Every society was furthermore to hold a general meeting at least once a year.

Much writing on cooperative movements assumes that such movements are instrumental in enabling individual farmers to optimise gains from their agricultural production. In rural areas in particular, cooperatives have been instituted to replace the private sector. These cooperatives are essentially non-profit enterprises that exist to benefit members or users via the services they provide rather than to make a profit for the organisation itself. Though in the current research the cooperative movement is discussed under private-sector enablement, cooperatives as a social movement could equally be viewed as government-controlled CSOs. Economic viability was long not a consideration of Tanzania's government-dominated cooperative societies (Lyimo, 2012). Private-sector cooperation or cooperatives are assumed to offer collectively more efficient input supply and savings and credit facilities, alongside services for production, processing, transport and export. In the research districts, cooperatives were found for dairy farming, sunflower oil extraction, tree nurseries, crop monocultures, livestock dipping and all kinds of artisanal crafts (e.g., via women's groups). Larger sunflower, barley and coffee farmers partnered in cooperatives with processing plants. Some cooperated with transporters to bring maize and onions to market.

This detailed description indicates the top-down institutionalisation of the cooperatives. Despite their role in cooperative institutionalisation, in 2005 a government evaluation identified weaknesses in cooperatives including lack of accountability to members, untrustworthiness and persistent corruption (URT, 2005). Indeed, far from being models of member self-empowerment, cooperatives' image was tarnished by poor administration and leadership, poor business practices and corruption (Bibby, 2006). URT (2005) identified the following as among the challenges facing savings and credit societies: low capitalisation, delayed remittance of member deductions, weak internal control, ineffective supervision and guidance, limited range of products and services, unsustainable interest rates, low outreach, poor loan repayment rate and high loan delinquency, inadequate human resource capacity and inadequate knowledge among managers and staff of micro-finance 'best practices', and lack of emergency resource

funds. Despite the growing number of savings and credit societies in the country, Maghimbi (2010) and Bwana and Mwakujonga (2013) concluded that education and training of managers and members in governance, transparency, accountability and client-oriented functioning were key to gainfully revive the cooperative movement.

In the year the marketing of agricultural products was liberalised, 2005, the Tanzanian Chamber of Commerce, Industry and Agriculture (TCCIA) was founded. At the village level private-sector operations were allowed again, and these started up gradually. However, it was some time before private-sector actors had organised themselves at the district level to represent the interests of local businesspeople. This research defines the private sector loosely as encompassing all agents in the economy not formally classified as part of the public domain. This definition therefore excludes government ministries and departments, public and state-owned enterprises and parastatals, independent public agencies and voluntary associations dependent on government subventions for their operations, for example, community secondary schools (World Bank, 2002). Although the national-level TCCIA was founded in 1988, it was not until 2005 that the TCCIA established branches in Mbulu and Karatu districts. By the end of the research period, the district councils were inviting TCCIA inputs on issues like the introduction of by-laws affecting the private sector and establishment of business levies (TCCIA, 2011: 58).

A number of sectoral policies, strategies and programmes related to private-sector development, economic growth and income generation were elaborated by the central government in the early 2000s. These included the 2000 Rural Development Policy and Micro-Finance Policy, the 2002 Small and Medium Enterprise Development Policy and the Business Environment Strengthening of Tanzania (BEST) programme. In 2003 a trade policy was formulated, followed in 2004 by the Property and Business Formalisation Programme (locally called MKURABITA, or Mpango wa Kurasimisha Rasilimali na Biashara za Wanyonge). In agriculture there was the 2001 Agricultural Sector Development Strategy (ASDS), the 2006 Agricultural Sector Development Programme (ASDP) and the 2008 Sector-Wide Approach (SWAP) for forestry and beekeeping. Together these were to provide an enabling framework for local+ economic development. As formulated in the BEST programme objectives, the overall aim was to reduce the burden of regulation on busi-

nesses and ensure that the essential services government must provide to businesses were of high quality and delivered effectively and efficiently. Though there was overlap between the different policies and programmes, there was little coordination between the different ministries and institutions in charge of the different policies and programmes, and government's knowledge and understanding of local matters often remained weak.

Olomi et al. (2005) identified several constraints that hampered the creation of an enabling environment for pro-poor private-sector development. In order of priority according to the people interviewed on the matter, the constraints were formulated as follows: (i) inadequate governance capacity and transparency; (ii) insufficient access to credit; (iii) low awareness and capacity of individuals and organisations regarding rights, obligations, policies, regulations, taxes, entrepreneurial and business skills, mutual trust and communication, and facilitation and conflict resolution in multi-stakeholder dialogue processes; (iv) inadequate capacity to form associations; (v) a complex and non-transparent tax regime, including harassment; (vi) widespread price fixing by government; (vii) insufficient access to markets and weak market linkages; and (viii) expensive inputs. In short, despite the enabling policy framework and notwithstanding the gaps in the framework, at the local level, communities lacked the capacities required to grasp the potential benefits of the framework as institutionalised.

Under President Benjamin Mkapa (1995-2005), there was strong public-private dialogue at the national level through the National Business Council (NBC). The NBC was formed in 2001 by the Tanzania Private Sector Foundation (TPSF) as a consultative mechanism whereby the private sector and government could discuss issues of improving Tanzania's business and investment climate. However, the NBC was not a statutory organisation, and it had inadequate vertical links to regional and local organisations. This meant that larger enterprises and their associations dominated discussions, with smaller enterprises and their more informal associations under-represented.

TPSF encompassed the TCCIA, the Confederation of Tanzanian Industries, the Banking Association, the Fishing Association, the Tanzanian Chamber of Mines, the Merchants Chamber and all regional chambers of commerce. In total, some 100 associations were represented (Tirabassi, 2007). According to TPSF (2000: 2), 'an enabling environ-

ment for private sector development is one that has all regulations minimized, to enable the private sector to move in freely without being pressured by laws or regulations, and to ensure that the investors are comfortable with what they're doing'.

Private-public dialogues were held at the district, ward and village levels (Olomi et al., 2005; Van Dijk & Mishili, 2011) but were not yet firmly established and institutionalised. Though private sector and civil society umbrella organisations were not explicitly mentioned in the amended 2006 Local Government Act, local business councils did become operational and public-private dialogue forums were established. By 2012, some of these umbrella organisations perceived the District Consultative Committee as a platform for dialogue among stakeholders on local economic development (Van Dijk & Timothy, 2013).

As discussed, community-based groups in the study villages were active primarily in service delivery, particularly related to social welfare or economic production. They included cooperatives or primary societies, community health funds, tree nursery committees, beekeeping groups and dairy product development groups. Although these were set up for collective production and business and operated by entrepreneurial principles, they are most accurately classified under civil society, meaning that the private sector was particularly underdeveloped at the village level.

6.4 Conclusion

The government, the private sector and civil society together assumed collective responsibility for the governance of local resources nationally and in the research districts in Tanzania. Following independence, the new government brought the people together under a combination of traditional values and socialist ideology. The *ujamaa* philosophy spurred collective action to develop socio-economic infrastructure in order to improve service delivery to the masses.

Continued governance changes, however, from centralisation to 'decentralisation by devolution', to deconcentration and delegation, and a corresponding inadequacy of capacity building for collective action, hampered the socio-economic development process, as leaders and staff lacked the competencies they needed to take up the responsibilities given to them by the various legislative acts. Table 6.4 summarises institutional

factors that enabled or disabled communities' capacity to undertake collective action.

Table 6.4
Institutional factors influencing communities' collective action capacity

Disabling factors	Enabling factors
<ul style="list-style-type: none"> • Deconcentration facilitated national decision-making at the local level but created a disconnect between local demand and national supply, hampering mutual understanding • Central government auditing delayed, and local government and communities not provided timely information on changes • Lower local authorities not allowed to raise funds for operation and management of water points and prohibited from opening banking accounts, as all government income and expenditure was centrally controlled • Cooperative action compulsory, under party supervision • Relatively high education required to perform roles in government and elsewhere (e.g., parastatals). Yet, qualified candidates often unavailable, the consequence being low levels of quality assurance and implementation of accountability structures • Shops and private enterprises were abolished at the local level • External actors stimulated capacity building 	<ul style="list-style-type: none"> • Devolution facilitated local government to operate more autonomously, in conjunction with local community interests within the limitations of nationally determined regulations and policy guidelines • Social and public accountability and transparency enhanced and local governments and communities assumed responsibility for initiating external audits • Government encouraged local authorities to find their own ways to operate and maintain water points in the most effective and efficient manner within local socially acceptable conditions • Cooperative action based on voluntary interest with self-elected boards and own appointed management; checks and balances under member supervision, with external auditors invited by board • Local creativity encouraged in developing own initiatives where required competences were lacking, leading to local learning in cases where mistakes were made. Members themselves responsible • Licenses issued to shops and private entrepreneurs to operate within a given tax environment and quality standard • Capacity building facilitated upon local leaders' own initiative

Source: Author

The institutional legacy of early legislation structuring resource mobilisation led to path dependency, thus continuing to influence collective action in common pool governance. Institutional legacies are as im-

portant as knowledge, preferences and mutual trust among actors in determining the outcomes of collective action efforts (Heinmiller, 2009: 145). In the study villages, it took time for people to undertake initiatives and institutionalise collective action outside *ujamaa*. However, Tanzania's initial TANU/CCM party ideology to stimulate collective action on the basis of traditional values and socialist thinking did stimulate people to decide and operate collectively, based on consensus, as far as the construction of socio-economic infrastructure was concerned. Collective action to develop socio-economic infrastructure continued up to the time of this writing. In rural areas it remained people's collective responsibility to organise the construction of classrooms, health centres and digging for water supply. Villagers did these tasks themselves, contributing their own labour and often materials too. Similarly, local residents took responsibility for collective clearing of brush to allow construction of feeder roads for accessibility, and they collectively dug irrigation channels for irrigated cultivation on new fields. Depending on the scope of the area concerned, such 'self-help labour' was usually organised by the elected *kitongoji* or village leaders.

Although upon independence, faith-based CSOs were major actors in social development, this stopped in the mid-1980s, at which time they were requested to be involved only in the management of such service delivery. Since then, faith-based organisations have managed social service delivery using their own funds and government subsidies.

Up to the mid-1990s, one-party rule, abolition of private shops at the village level and abolition of initiatives like cash contributions for rural water supply sought to encourage collective action. However, cooperative organisations gained a poor reputation, due to inadequate checks and balances and low educational levels among their leadership, which undermined capacities to plan, perform, assure quality, monitor and learn from monitoring. Consequently, local level management and implementation was weak, and collective action enjoyed little confidence among the public. Economic inefficiencies and scant individual gain from operating collectively led people to decide to operate individually insofar as productive activities were concerned.

Path dependence considers choices from the past to contribute to future choices, narrowing the freedom of choice in the future. The Tanzanian government made several choices that influenced the generation of collective action. In particular, it set rules on how collective action was to

operate, though these rules did not seem to work. Up to the time of this writing, government was still active in regulating the space in which people decided on how they would operate, through for example, the BEST programme; the NGO Act (2002), the Cooperative Act (2003), LGRP (2004) and Mkurabita (2004, 2005). With such legislation, the government delimited the space in which the people could forge their own development paths.

In the context of ongoing institutional changes, collective action assumed shape in different settings, each with its own structures and processes. Traditional forms of collective action included the *aya*, the council of elders and the traditional dance group (*ngoma*), in addition to the collective action that took place within the household or clan. Among religious groups, collective action was sometimes found in the form of a choir or diaconal care.

The government structured and provided space for many forms of collective action. The Local Government Act stipulated the structure of cooperation within the *kitongoji* (neighbourhood), which was envisioned as replacing cooperation within the *aya*. The act specified the structure of the village assembly and village government, and enumerated the standing committees required. These together were to fulfil the governance functions erstwhile performed by the council of elders. Depending on local circumstances, local government established operational committees for various activities: policing and justice tasks (*sungusungu*), land distribution, environmental management, raising HIV/AIDS awareness, preventing girls' circumcision, supervising primary health care, coordinating calamity assistance, supervising construction and supervising artificial insemination of livestock. Over time, the government expanded its role to enablement of all kinds of – rather independent – committees which fell under collective action, like school, health, water, irrigation, tree nursery and beekeeping committees. Some of these forms of collective action had already been established before they were represented in or linked to the local government. Some, like the traditional birth attendant group, operated autonomously, and were linked to local government authorities (health sector) only to share information on traditional and modern maternity practices. Gradually, therefore, local government incorporated some traditional forms of collective action.

Collective action under *ujamaa* and collective action within cooperatives were also subjected to various institutional changes. Some of these

collapsed, while others took on new forms, like savings and credit societies (SACCOS), village community banks (ViCoBa), and savings and internal lending communities (SILC).

Outside of government, various sports clubs organised themselves for recreation and competitions.

Interest groups, like those of farmers (MVIWATA), businesspeople (TCCIA) and NGOs (various platforms) assumed collective action to lobby or to advocate for their specific interests.

The generation of all these forms of collective action was in part determined by the vulnerability context people faced, alongside the livelihood assets possessed by households and the changing institutional environment, as described in this chapter. Chapter 7 presents the development trajectories of the study villages, as perceived by the village leaders, followed by an analysis of the development of various types of collective action. The initiation and pursuit of collective action in the villages was associated with households' vulnerability context and livelihood assets. Chapter 7 thus seeks to understand whether collective action did in fact lead to specific livelihood outcomes.

Notes

¹ Semboja & Therkildsen (1991): The Handbook on District Level Administration in Tanzania gives a full description of the responsibilities of all actors on central, local and party level, involved in current district level administration, which does not to be repeated here.

² In the 1980s many people left primary school after four years (standard four). Since then the majority finish primary education (standard seven).

³ Dijk, T. van & V. Timothy (2013): Baseline Study Enhancement of Procurement Capacity of Local Government Authorities, PPRA: Four years of secondary education is defined as 'form four' education.

⁴ URT: Annual Guidelines for the preparation of Local Government Authorities' Medium Term Plans and Budgets, which may be adjusted annually.

⁵ Scrutiny of Local Government Monitoring Database (LGMD) digital data Kwermusl, 29th of July 2010.

⁶ Within African Socialism as proclaimed by Nyerere (1962) all Tanzanians are equal and Chiefs were stripped of executive governance powers like revenue collection (Nyerere, 1966: 162).

⁷ Karatu District Profile (2011) indicates 440 women NGOs with 573 members in total.

⁸ DFID Tanzania (2007).

⁹ For instance, in Mbulu District 33 HIV/AIDS-related CSOs were established (Van Dijk & Masanyiwa, 2010: 97).

¹⁰ In Tanganyika the first cooperatives were founded by peasants in 1925, at that time mainly to capture trade profits for cash crops such as coffee and cotton. Kilimanjaro Native Cooperative Union (KNCU) was registered as the first cooperative in the country in 1932. After abolishment in 1976 the KNCU was re-established in 1984.

7

Development trajectories

Chapter six described the historical institutional context in which development took place over time. *Ujamaa*, Operation *Maduka*, cooperative reforms, local government reforms and ongoing liberalisation frustrated or enabled people's initiation and pursuit of development trajectories, both individual and collective. Within this context, the development process took place in different ways in the different villages, depending on the village vulnerability context and the livelihoods that residents pursued, alongside the livelihood assets available to people to cope with the environment and external influences. This chapter presents an overview of development as perceived by the respective village leaders, followed by an analysis of the various types of collective action that played a role in the development process and their outcomes.

7.1 Development per village

7.1.1 Mapping development

Within the given institutional context, village leaders described the interventions they perceived as important milestones in village development.¹ Table 7.1 presents these. Overall, village leaders attributed changes to government, including the various policy changes occurring in the years after independence, and to national and international programmes implemented to support and harness the development potential of local communities. Some developments were attributed to endogenous forces, either individual or collective. In many cases, local communities and groups were said to have joined forces to address issues that could not be approached individually, or when collective action was recognised as more profitable than doing things on one's own. In some cases, individual actions spurred developments that benefitted not only the individuals but, at times, the whole community as well.

Table 7.1
Milestones in development, 1988-2010, as reported by leaders in the eight study villages

	Mbulu				Karatu			
	Harar	Kwermusl	Tlawi	Mongo wa Moono	Buger	Kambi ya Simba	Mang'ola Barazani	Oldeani
Primary education								
Construction of Catholic primary school		1948	1911					
Construction of primary school		1951				1950	3	
Construction of colonial primary school								
Establishment of primary school					1953	1	1956	1954
Construction of various schools (Changarawe)								1972/76
Establishment of primary school	1978	2	1978					2
Mbulu district council assists children to get into boarding school				1990				
Milai primary school								1994
Boarding primary school								1996
School fees paid by CUSO				1995-1999				
Second primary school and teacher housing						1998	3	
Education changes	1999	2						
Construction of second primary school	2000	2					2000	
New primary school by village government								2001
Construction of second primary school					2004	1		2
Improvement of primary school and teacher housing			2005	2				

	Mbulu				Karatu			
	Harar	Kwermusl	Tlavi	Mongo ya Moono	Buger	Kambi ya Simba	Mang'ola Barazani	Oldeani
Expansion of second primary school and teacher housing							2005	
Improvement of primary school and teacher housing		2007						
Third primary school							2007	3
Establishment of primary school				2010				
Secondary education								
Construction of secondary school		1997	3			1994	3	
Secondary school-leavers receive employment						1998		
Construction of Catholic secondary school							2003	
Secondary school (TASAF)			2004	4	1			
Construction of secondary school					2006		2006	3
Construction of two secondary schools								2006
Secondary school established							2007	
School committee								
Road works								
Road works (access road)			1978				1979	
Road works (access road)				1985	1985	2	1988	1
Inadequate maintenance							1990	1989
Road works (TASAF)		2007						
Feeder roads improved						2008		
Construction of bridge to primary school			2009					

	Mbulu					Karatu			
	Harar	Kwermusi	Tlawi	Mongo wa Moono	Buger	Kambi ya Simba	Mang'ola Barazani	Oldeani	
Irrigation scheme									
Traditional irrigation			1974			1952	1	1968	
Construction of inlet/shutter irrigation scheme			2004	1				1990	
Registration of irrigation committee			2012					2011	
Agricultural extension and production									
TBL issues improved seeds						1985			
Fruit trees, pyrethrum and coffee planted		1987							
<i>Mbegu mbora</i> (improved agriculture)*	1988	1				1988	1		1989
Coffee estates deteriorated									1989
Labourers allowed to cultivate areas on estates								1990	
Cultivation of onions									
<i>Mbegu Mbora</i>									
High price for onions (Tsh. 120,000 per bag)			1981	3				1996	
Village government encourages people to grow <i>mitama</i>									
Businesses sell fruits and vegetables in Mbulu		2001	2						
Estate owners stop labourers from cultivating for own consumption									2001
Cultivation of garlic, onions and Irish potatoes			2004	1					
Kilimo <i>mbora</i>							2005		

	Mbulu				Karatu			
	Harar	Kwermust	Tlavi	Mongo wa Moono	Buger	Kambi ya Simba	Mang'ola Barazani	Oldani
TBL issues improved seeds through MESO and procures harvest								
Private business active in improved seeds		2006				2005		
Business in pyrethrum started afresh		2007	4					
Kilimo subsidises improved seeds and fertiliser	2008							
Fluctuating prices for onions (T sh. 10,000 per bag)						2009	2008	
Kilimo kwanza						1		
Mbegu/Mbora		2009						
Improved seeds		2010						
Fluctuating price for onions (T sh. 70,000-140,000 per bag)							2010	
Livestock development and production								
Dairy cows and zero grazing introduced		1993	1					1992
Livestock business and cattle sales	1994	3						
Dairy cows introduced				5				
Slaughtering pigs as business		1997	1	2000				
Improved chicken and beehives introduced (OPAR)					2004	4		
Dairy group established				2008				
Improved chicken and pigs introduced		2008					2008	
Centre for artificial insemination								

	Mbulu				Karatu			
	Harar	Kvernusl	Tlawi	Mongo wa Moono	Buger	Kambi ya Simba	Mang'ola Barazani	Oldeani
Natural resources development and production								
Village government nursery			1988					
Village nursery					1993	4		
Environmental awareness			1995		1993			
Nurseries privatised								
Environmental measures introduced (contour planting, no tree cutting)						2003	1	
Village nursery privatised (tree seedlings)					2004			
Farm Africa introduces 90 modern beehives			2005					
Protection measures for Lake Tlawi			2009					
Harvesting of timber from own planted trees (in 1980s)		2010						
Construction "godown"								
Construction of "godown" (agricultural storage facility)					1989	2	1988	
Maize mill								
Maize mill		1978	1970			1988		
Village maize mill					1999			
Ten maize mills operational			2000					
Kiosks and shops								
Farmer's association (TFA) petrol station established (but closed in 1988)	1988							1972
First kiosk								

	Mbulu				Karatu			
	Harar	Kwermusi	Tlavi	Mongo wa Moono	Buger	Kambi ya Simba	Mang'ola Barazani	Oldeani
Village shop					1990			
First shop opened		1995						
First private shop					1995			2001
People start petty businesses								2008
Rift Valley Children Funds give loans for petty business								
Savings and credit cooperative societies						2010	2007	
Village community bank opened	2008	2009	2010		2009	2010	2010	2009
Savings and internal lending communities (SILCs) started	2011		2010		2009			
Productive cooperation and cooperatives								
Farmer group							2007	2009
Procurement of transport								
Transport well organised						1988		1989
Transport deteriorated								
Procurement of village lorries							1990	
Procurement of ward lorry							1991	
Procurement of individual lorry							1996	
Transport to Karatu opened (again)								1997
Transport well organised		2001	2000		2004			
Regular transport to Mbulu								

	Mbulu				Karatu			
	Harar	Kwermusl	Tlavi	Mongo wa Moono	Buger	Kambi ya Simba	Mang'ola Barazani	Oldeani
First motorcycle procured	2003							
First car procured	2008	2007						
Water supply								
Wells dug					1953			1970
District council provides water supply services								
Shallow wells and pump constructed on open well		1991				1995	4	
Piped water supply								
CUSO-constructed rainwater harvesting tank				1997				
Public awareness by the Health through Sanitation and Water Programme (HESAWA)	1998						1998	
Domestic water supply								
Water pipe constructed by Diocese Mbulu						2001	4	
Two boreholes dug by TASAF				2002				2002
Piped village water supply								3
Water tank at primary school					2004	4		
Piped clean and safe water supply provided by Ingenieria sin fronteras							2005	4
Piped water supply in the dispensary and Catholic secondary school			2010					
Village water committee						2011		

Mbulu					Karatu			
	Harar	Kvernusl	Tlavi	Mongo wa Moono	Buger	Kambi ya Simba	Mang'ola Barazani	Oldeani
Piped water supply				2013				
Health care		?	?			1970	2	1972
Dispensary established								
Hospital								
Traditional birth attendants trained				1989				
Maternal and child health activities	1991						1995	2
Construction of Catholic rural health centre and pharmacy								
Family planning started	1995							
Airstrip and maternal and child health clinic					1995	3		
Vaccination campaign								
Health centre established by village government	1998							2001
Latrine constructed by Fam Africa				2008			2009	4
Improved dispensary and doctor's housing							2010	
Dispensary committee								
Improved housing								
First improved housing and tile-making			1926					
Improved housing (with iron sheets)	1989							
Brick burning	1986							
Construction of improved housing		1997				1996		
Construction of improved housing								

	Mbulu				Karatu			
	Harar	Kwermusl	Tlavi	Mongo wa Mooto	Buger	Kambi ya Simba	Mang'ola Barazani	Oldeani
Modern types of housing introduced							2000	
Village government								
Village government elections	1985	1985	1985	1985 YC	1985	1985	1985	1985
CUSO-constructed village office				1992				
Village registration				1994				
Women join competitive village government elections			1985					
Village government trained	1987	4				1987	3	
New democratic leadership at KDC								2000
Police station							2003	
Chadema takes over (local democracy improved)							2005	
UCRT prepares village land use map				2007				
Farm Africa arranges for traditional land titles				2008				
NGO support								
CUSO starts operating				1989				
Doroba Safari tours given contract				1995	2			
Electricity								
Connection to national grid								1996

	Mbulu				Karatu			
	Harar	Kwermust	Tlawi	Mongo wa Moono	Buger	Kambi ya Simba	Mang'ola Barazani	Oldeani
Introduction of mobile telephony								
Introduction of mobile telephony for improved communication						2001	5	
Introduction of mobile telephony	2004		2003				2006	5
Introduction of mobile telephony to improve communication		2007						
VODACOM hired land for communication poles, yielding income to Kambi ya Simba						2008	5	

Note: The figures in the yellow columns indicate the level of importance village leaders gave to the activity in the village development process. '1' was labelled as the most important development intervention. Abbreviations: KDC= Karatu District Council; MESO=Multi-Environmental Society; TASAF= Tanzania Social Action Fund; TBL=Tanzania Breweries Limited; TFA=Tanzania Farmer's Association UCRT=Ujamaa Community Resource Team.

* Mbegu Mbora is a programme to introduce improved agricultural practices and inputs

Source: Author

Village leaders tended to conceive the start of village development as the date of establishment of schools – 1911 in Tlawi, 1948 in Kwermusl, 1950 in Kambi ya Simba, 1953 in Buger, 1954 in Oldeani, 1956 in Mang'ola and 1978 in Harar. Another important date was that of establishment or re-establishment of the village government, which was 1985 in all villages except Mongo wa Moono. Formal registration of the villages took place somewhere in between these dates, though the village of Mongo wa Moono was registered relatively late, only in 1994.

In four of the study villages – Kwermusl, Tlawi, Buger and Kambi ya Simba – more than 90% of the population was locally born in 2010. These villages were among those established when the Iraqw people gradually dispersed throughout the district from the Mama Issara Region. These four villages were located in hilly areas, and their residents carried out agricultural cultivation on the slopes. In conjunction with the village government, traditional norms and values guided environmental governance and protection of the slopes in these areas (Thornton, 1980). Decisions in these villages were made based on consensus and trust, and most village leaders mentioned the start of primary education as a key milestone in local development.

In Mongo wa Moono, Harar, Mang'ola and Oldeani the majority of heads of household were not born locally. In 1988 just 5% of the heads of household in Mang'ola were born in the village, 10% in Harar, 14% in Oldeani and 32% in Mongo wa Moono. Even in 2010, less than 40% of the heads of household in Harar, Oldeani and Mongo wa Moono were born in the village, and only 56% of the Mang'ola heads of household were born in the village. Consequently 'trust' was less apparent in this group of villages, as they can be seen as relatively recent rural settlements. Majority decision-making was common in these four villages, and establishment of a village administration was mentioned as a key development milestone. The Hadzabe people of Mongo wa Moono, as hunters and gathers, remained mobile, though – nowadays – within a bounded area. Hadzabe individuals traditionally defect from their group if they disagree with a majority decision. Registration of the village in 1994 was identified as a key development milestone, as it enabled the Hadzabe to safeguard their hunter-gatherer way of life. Settlers had come to Harar in search of lands for cultivation. Their relatively recent arrival in the area, in combination with changing administrative boundaries, had somewhat frustrated their willingness to cooperate and contribute to collective ac-

tion. In Harar, capacity building within the village government was considered a key development milestone. Mang'ola was an attractive migration destination, as it offered water resources that enabled farmers to irrigate fields. Moreover, up to recently, land was available for newcomers. In Mang'ola the vulnerability context, combined with access to irrigation water, led to the setting of common goals and cooperation. Villagers' decisions were guided by transparent, understandable procedures for the exercise of authority. In Oldeani, high demand for unskilled labour four months of the year attracted people to work on the coffee estates. The rest of the year villagers sought employment elsewhere or got involved in petty businesses, often collectively, with small groups focusing on specific trades. Here, collective action among villagers was stimulated by a similar background (being underemployed on the estates), lacking access to their own land to cultivate and, initially, having an above average level of education. These attributes facilitated their setting of common goals and establishment of transparent procedures for the exercise of authority. In both Oldeani and Mang'ola, introduction of multi-party democracy was mentioned as a key development milestone.

The sections below summarise the development processes in these different villages, as recounted by village leaders in focus group discussions. In addition, for each village the emergence of development interventions is discussed stemming from both external influences and endogenous collective or individual action.

7.1.2 Individual villages

Tlawi

The village government of Tlawi was registered only in 1985, despite the much earlier opening of the Tlawi missionary school, in 1911. Collective manufacturing of roof tiles began in 1926, while collaboration on irrigation dates from 1974, and collaborative road construction dates from 1978. After registration of the village government, a village tree nursery was set up in 1988.² Introduction of *mbegu mbora* (i.e., a drive for improved agricultural practices and inputs, including improved seeds) followed in 1991, alongside cultivation of cash crops like garlic, onions and Irish potatoes, in 2004. Regular public transport was mentioned as a positive development. Regarding livestock, introduction of zero grazing in 2000 was followed by collaboration among women towards a collective

livestock health insurance scheme, which began in 2008. Some village leaders mentioned construction of an irrigation inlet and shutter beginning in 2004 as a crucial milestone in the village development process, as irrigation facilitated cash crop cultivation. Actual registration of the group of farmers involved in irrigation took place much later, in 2012. Participants in the Tlawi village leaders' focus group said that increased agricultural production had been the most important factor in enhancing village development over the years, followed by the introduction of education and dairy development.

Tlawi's natural resources have enabled farmers to irrigate, and villagers cooperated in water distribution. In 2004, they received support from the Mbulu District Council through the Tanzania Social Action Fund to dig an irrigation canal and construct three sluice gates. With these structures, farmers could allocate and use water more efficiently. Farmers assumed responsibility for operation and maintenance, particularly cleaning the channels. But as regards investment, they only contributed in kind (unskilled labour). Questions on water sharing between Tlawi and the neighbouring village of Silaloda, however, remained unresolved at the end of the research period.

Village government action began in the late 1980s with management of a tree nursery. However, these activities were privatised in the mid-1990s, and since then additional private tree nursery enterprises have been established.

Collective action towards construction of the required teacher housing had failed to yield the necessary results. The school committee was unsuccessful in convincing other local governance bodies to act jointly to gather sufficient funds to undertake the construction. Moreover, parents claimed they were unable to pay for school operation and maintenance. Teachers in the village lost motivation, as their salaries went unpaid. Moreover, teaching materials were lacking, and teachers had to buy their own books for teaching. Many parents kept their children home, and truancy was not followed up upon by any authority.

Regarding socio-economic development, goals had been set, but again there was little authority to follow up on their implementation. An administrative split in 2009 had deprived Tlawi of its own village government office. Furthermore, a decision by the village government to raise funds for infrastructure had not been implemented, and lobby and advocacy activities to convince district authorities to establish a water supply

had failed to elicit adequate action. Some support for social infrastructure had been provided by the Catholic mission.

In productive terms, collective action was observed in input supply and veterinary treatment, for example, among the group of woman dairy farmers. Collective action in agricultural input supply included the distribution of improved seeds. As Tlawi is along the main road and close to Mbulu town, farmers could sell their own agricultural produce individually.

Savings and credit facilities were available through cooperative societies, several savings and internal lending communities and a village community bank. These had enabled households to save for emergencies and make small investments.

Kwermusl

Despite a missionary school opening in Kwermusl in 1948 – an institution taken over by the colonial government in 1951 – formal registration of Kwermusl as a village took place only in 1974.³ The first road from the village to Mbulu town was established collectively in 1978. The village government was formally established in 1985.

Traditional birth attendants in Kwermusl have long shared their experiences in a collective learning process to enhance maternal and child care. They simultaneously operated as a social movement under UWT (United Women of Tanzania),⁴ supporting one another in deliveries, carrying or accompanying women to health dispensaries and looking after each other's children.

Traditionally people in the village took environmental management measures to prevent erosion, particularly planting trees and cultivating along contours. From 1987 onwards, villagers took joint action to develop cultivation of fruit trees, pyrethrum and coffee. Collective management of a shallow well began in 1991. Construction of a secondary school started in 1997. Regular transport was introduced in 2001, at which time villagers began businesses to sell fruits and vegetables in Mbulu town. An additional road project in 2007, supported by the Tanzania Social Action Fund, enabled Kwermusl together with Murray to start operating a weekly market. After the ward was split, Kwermusl took the initiative to construct another secondary school for the newly established ward.

As key milestones in the development process, Kwermusl village leaders noted the introduction of dairy farming and timely (i.e., just matured) livestock slaughtering, followed by education and the introduction of cash crops (especially pyrethrum).

The Mama Issara Region, where Kwermusl is situated, is considered the cradle of the Iraqw people. Here cultural capital has continued to exert strong influence, giving guidance to traditional collective action. Communities inhabiting mountain slopes work together in their *aya* to ensure that the environment is maintained. Such collective action includes the aforementioned contour planting, sustainable grazing and tree planting, and construction and maintenance of roads. Also, the *aya* maintained its own law and order. Tradition allowed residents to call each other to account for their actions. In more modern times, the *kitongoji* (neighbourhoods) operate similarly to the *aya* of the past, though construction and maintenance of socio-economic infrastructure, like roads, schools and health facilities, are more emphasised within the formal responsibilities of the recent structure. The 'safety net' function has remained partly under traditional collective action, though by the end of the study period this was reinforced by the use of social funds under a village community bank. Collective decision-making was based largely on consensus. In the past, the church, the party, the local government and the council of elders had very similar decision-making processes. However, over time changes have gradually appeared.

In the past, land disputes were settled by the council of elders. By the end of the research period, disputes were resolved within the 'Ardhi' or 'Lands' committee at the lower local government level. Land disputes that could not be settled here had to be taken to the regional court to be resolved. Other traditional functions had also been taken over by committees related to lower local government. The *Wazazi* (parents association) emphasised further education for all children. The construction committee supervised all kinds of lower local government construction activities, with goals often set collectively. One neighbourhood, for example, set the goal of ensuring that all of its roads were passable year-round, and all 130 households were involved in road maintenance.

Kwermusl was among the first villages to have a primary school and, together with Murray, a secondary school as well. It was able to attract external funding for a girls' dormitory for the secondary school without government intervention. Within the PTA, the examination performance

of pupils was discussed in general terms, and the committee ensured that adequate books were available, even for teaching agricultural subjects. Collective action by the PTA has enabled the village to employ additional teachers since 1998.

The recent administrative split of the ward prompted the villages in the newly-created ward to establish collective action for their own secondary school. Funds were collected to level the chosen construction site, which was accomplished. However, the district authorities then intervened to challenge the majority decision-making among the villages that had led to the activity and sought to impose construction of the school elsewhere. This was a case in which higher local government in fact obstructed decision-making by lower local government. The situation remained at a deadlock for some time as lower local government lobbying and advocacy was unable to convince the district authorities to cooperate. However, the dispute served only to further stir collective strength, power and solidarity, leading villagers to resist what they considered to be illegitimate decision-making from above. In 2014, government procedures were followed; the lower local government majority decision was endorsed and construction commenced.

With regard to production, little collective action was reported in the village other than input supply through, for example, distribution of improved seeds, or in reference to savings and credit facilities via savings and credit cooperative societies and the many village community banks. These enabled villagers to undertake entrepreneurial activities individually, like selling their agricultural, horticultural or wood products in Mbulu town. Kwermusl is a major supplier of food stuffs at the Mbulu daily market.

In reference to socio-economic service delivery, collective action was enhanced by goal-setting and the exercise of authority to ensure that residents adhered to decisions taken. Collective action addressing higher local government actions had produced some successes.

Kambi ya Simba

Kambi ya Simba residents joined hands to construct a primary school in 1950 and to construct a health dispensary in 1970.⁵ This village has a long history of cooperative action (Raikes, 1975). From 1985 onwards, farmers worked together with Tanzania Breweries to make improved seeds available and to bring combine harvesters to the area. From 1988

onwards, introduction of improved seeds through *mbegu mbora* raised production. Villagers constructed a *godown* (agricultural produce storage facility) collectively too. The Mbulu District Council constructed an all-weather road to Kambi ya Simba in 1988. From that time onwards, farmers joined in collective environmental management measures, such as contour-making and tree-planting to prevent erosion. A secondary school was constructed in 1994 and collectively managed thereafter. In 1995, villagers joined hands to construct and operate a piped water supply. In 1998, a second primary school was constructed. Agriculture was always a high priority for collective action, and collective efforts to maintain the environment gained impetus after 2002.

Village leaders noted the following key milestones in the village development process: establishment of the irrigation system, environmental protection measures and introduction of improved seeds. These were followed in importance by construction of health and education facilities, with specific emphasis on capacity building among village leaders. Piped water supply was also noted as a key contribution. The introduction of mobile phones and – as a village – having a regular source of income by renting out a piece of land to Vodacom contributed as well.

Kambi ya Simba was among the first villages outside district and divisional headquarters to construct a secondary school. It was also the first village in the research area to do so. The village leaders were proud to announce that in 2013 the first secondary school graduates had found employment at the village level. Construction of primary schools and the secondary school was done entirely by the village, but collective action was inadequate when it came to constructing the required housing for teachers. Most construction works were organised by leaders of the *kitongoji* (neighbourhood). Construction of roads, schools, the health dispensary and agricultural storage facilities (*godown*) was organised by the leaders of the *kitongoji* and village. The *kitongoji* also operated tree nurseries, mainly to ensure they had an adequate number of seedlings to plant in order to prevent erosion. To this end, goals were set and authority was exercised to ensure their implementation.

School committees took responsibility for supervising the quality of education. Parents were asked to pay salaries for additional teachers, for cooks and for school security staff. School committees also followed up on misbehaviour and discussed incorporation in the curriculum of subjects like agriculture, livestock and use of ATMs (cash dispensers) and

mobile phones. The committee discussed its responsibilities and ways to motivate parents to contribute in cash or in kind.⁶ At the secondary level, the school committee envisaged procurement of a generator and laptops. At the village level discussions were taking place concerning what share parents would be asked to pay and what part was to be paid by the village, as the village had some income, generated by the land rented to Vodacom.

Since the mid-1990s villagers had worked together through a village water committee to arrange a limited water supply. In 2001, the water scheme was expanded with the support of the Mbulu diocese. In 2011, a joint intake with the neighbouring village of Kilimamoja was arranged. Both villages had their own water committee to oversee water distribution and payments.

In Kambi ya Simba, three small rivers provide water for irrigation. The village's irrigation infrastructure was made up mainly of earthen channels. Farmers knew each other and distributed water amongst themselves under supervision of the chairperson of the *kitongoji* concerned. Farmers who did not cultivate themselves, rented their lands out.

Cooperative development in Kambi ya Simba has been a trial and error process (Raikes, 1975). Economic activities, like the collective running of a petrol station, ceased when the village government proved unable to sustain its operations, though fuel sales did continue through a private enterprise. A village primary society and village *shamba* (collectively worked agricultural field) had operated in the past, but were discontinued. A 46 hectare village *shamba* was rented out between 1997 and 2008. In 2009, the village began cultivating wheat on its *shamba*, though production was low (only 431 bags in 2009). Village leaders blamed the rains for the disappointing result. Renting out land to Vodacom was the only economic activity conducted by the village government at the time of the focus group discussions.

A savings and credit cooperative was operational in the village and had 236 members as of 2010. Members were taught how to maintain profit and loss accounts for their individual enterprises, and there was a strong social control system to ensure that members repaid loans in a timely way. Members came from all over the ward. Similarly, village community banks and savings and internal lending communities operated in the ward. The village community banks were seeking to work together amongst themselves. However, there was no institutional ar-

rangement to govern such action as yet. In addition to *mbegu mbora*, for improved agricultural inputs such as seeds, Kambi ya Simba counted the most forms of collective action among all of the research villages. Collective action here was enhanced by long-term collective goal-setting, a relatively good understanding of the context, and informal and formal structures for coordination of economic and social service delivery, both within the village and in conjunction with neighbouring villages, all guided by set procedures for the exercise of authority.

Buger

In Buger construction of a primary school started in 1953, and the village was registered in 1976.⁷ Collective road works started in 1985, and collective construction of a *godown* (agricultural storage facility) was accomplished in 1989. In 1990, a collective opened a village shop, and in 1993 a village tree nursery was established in a joint effort to institute environmental management measures. In 1995 an airstrip was collectively established, while in 1999 a village maize mill became operational. In 2004, a second primary school was collectively constructed, followed by a secondary school in 2006. After repair of a village cattle dip in 2005, the dip, used by most livestock keepers, was managed collectively. Collective micro-credit was offered starting in 2009. Transport was organised collectively to sell chickens and pigs at markets such as that in Karatu, although the actual selling was done individually. Traditional birth attendants have long exchanged expertise amongst themselves and maintained links to maternal and child health services.

During the village focus group discussion, the leaders pointed to education as the most important milestone enhancing the development process, followed by construction of the road, which opened up the village, and the *godown*, which facilitated marketing of agricultural and livestock products. Construction of the airstrip was also mentioned as a key turning point, as it facilitated visits of health workers from Haydom Lutheran Hospital. Construction of a water tank was said to have enhanced Buger's development as well.

Collective action in Buger took place mainly on the basis of consensus. Decision-making was guided by deliberations within the council of elders. In the village, it was relatively easy to mobilise labour for construction of basic socio-economic infrastructure. However, some projects, such as construction of housing for teachers, remained difficult.

School committees had not managed to raise sufficient funds for such construction, or for the procurement of books.

The village tree nursery that started in 1993 proceeded privately in 2004. The village shop and village maize mill were also privatised shortly after their establishment. The cattle dip, which initially operated under the village government, was handed over to an independent group of farmers and thereafter run as an economic enterprise.

Goals set by the village government for borehole drilling had not been achieved, as the government was unable to secure sufficient funds from residents to invite a rig. Village leaders themselves indicated that they had been unable to secure sufficient funds to keep socio-economic services operating. A number of initiatives started by the community were privatised shortly thereafter. At the village level, common goals were set but collective authority to lead their implementation seemed to be lacking.

Other collective action activities in the productive sphere comprised dairy farming, chicken raising, pig raising and beekeeping. Small groups of farmers cooperated to arrange input supply and, sometimes, for joint transportation to markets. Actual sales however, remained the responsibility of the individuals. In addition, *mbegu mbora*, mainly improved seeds, was a collective endeavour. Starting in 2009, villagers operated collective savings and credit facilities, through savings and credit cooperatives, savings and internal lending communities and village community banks. These provided means for villagers to deal with household emergencies and raise money for investments. All of these groups operated individually. The savings and internal lending communities, however, did jointly arrange for teachers to provide them coaching for running their savings and credit schemes. These savings and credit facilities were small groups which set goals and exercised authority collectively to ensure their implementation.

Oldeani

In the 1920s German settlers established a trading centre at Oldeani, amidst their coffee plantations (Fosbrooke, 1954). People from all over the district were employed and accommodated on the estates. In 1954 the first primary school was established here. Villagers worked together in a farmers' association, even running a petrol station. Up to the late 1970s the European settlers supported construction of socio-economic

infrastructure by the Mbulu District Council. Such infrastructure deteriorated, however, with their departure. In the late 1990s villagers were able to organise themselves again under what they called⁸ 'new democratic leadership'. Regular transport was re-established as well. New schools, a health dispensary and water supply were collectively instituted. Cooperative savings and credit schemes emerged. Besides the seasonal work on the estates, villagers organised themselves into small groups to engage in all kinds of business in Karatu. Oldeani's leaders noted that the new democratic leadership had enhanced the village development process most. This was followed by education, the introduction of piped water supply and the construction of a health centre.

Oldeani has a long history of local government supervision to ensure a functioning socio-economic infrastructure. Services were said to have functioned better, however, in the distant past, when the estate owners still lived in the area. Nowadays, the estate owners reside elsewhere. In the past, collective action was initiated by the estate owners to ensure the functioning of socio-economic infrastructure and related service delivery for themselves and their labourers. Labourers have a long history of negotiations with the estate owners through their trade union.

By the time of this writing, local leaders had assumed all local government-related responsibilities, such as education, water supply and health services. For example, the local government organised construction and operation of a dining hall, procurement of computers and installation of water harvesting infrastructure for one of the schools. In addition, a local government leader was advocating for and facilitating NGO support to households for biogas, solar power and water harvesting infrastructure. The primary school committee had organised a seminar with other school committees to discuss how to run a school. The Oldeani water supply committee cooperated with three other villages (Changarawe, Qurus and Bashay) to ensure adequate distribution of water from their common source, as well as collection of water dues and maintenance of the system. In addition, villagers organised themselves around domestic points to ensure water supply.

As most employment in Oldeani was seasonal, people moved out of the village in the off season to work in petty businesses, of which a number were pursued collectively in small informal groups. Groups numbering five to six people were involved in, for example, photography and video production, running a restaurant and selling crops. A group of

women supported each other in zero grazing dairy farming. The participants agreed on a uniform milk price and approached husbandry activities collectively. Collective savings and credit schemes were provided through cooperatives (mainly for estate labourers), village community banks and savings and internal lending communities. These enabled villagers to address individual emergencies and access investment funds for private enterprises. All collective action and resources allocation were guided by common goals. Clear procedures were established for the exercise of authority when members proved unable to meet the standards agreed. Household livelihood outcomes were said to be enhanced mainly by salaries and collective action related to small businesses.

Mang'ola

Settlement in Mang'ola began in the 1940s, with newcomers tapping the available water for irrigation purposes. The first primary school was constructed here in 1956.⁹ In 1968, a 10 km channel was dug to increase the amount of irrigation water available. Farmers organised themselves, electing one water committee member per channel. Those representatives were responsible for managing the distribution of water among farmers. As a village, Mang'ola Barazani, as it is officially named, was registered in 1978. In 1979 villagers constructed a road to Oldeani and Karatu. Gradually, onion cultivation expanded and farmers sought new markets to sell their onions. In 1990, the Mbulu District Council provided support for construction of an all-weather road, after which the village procured a lorry to transport onions collectively to the market. In 2005, the centre-right Chadema political party won the local elections, after which villagers became more involved in the development process.

A number of farmer groups were established in the years following 2007, each focusing on a specific operation, such as obtaining technical support for construction of a biogas plant, organising input supply or conducting joint research on onion cultivation and learning from each other. Irrigated farmers registered formally as a group in 2011 and recently sought to cooperate with the Internal River Basin Authority. Farmers here have a tradition of digging trenches and distributing water amongst themselves at certain times of the year. This required transparent procedures to ensure that all farmers benefitted proportionally. When farmers produced more than they needed for subsistence, they joined in action to improve their road connection, in order to sell their

agricultural surplus at the markets of Oldeani and Karatu, or to transport produce to Arusha and farther.

Village leaders of Mang'ola indicated that completion of the all-weather road to Karatu and Arusha was a key milestone in village development, as this enabled them to transport their agricultural produce to the market. Health services, education and piped water supply were similarly observed as important, followed by mobile communication. Village leaders also said that improved local democracy had enhanced the development process.

Natural resources, particularly availability of land and irrigation water, long attracted settlers to Mang'ola. The initial availability of land and water resources was a boon, but challenged farmers to dig, expand and structure channels collectively, in order to manage water distribution for irrigated cultivation. This, consequently, attracted more settlers. Committees were formed to organise water distribution at the side-channel, main channel and village levels. The village irrigation committee oversaw water distribution within the village boundaries, setting common goals. At each level, water distribution was agreed upon and corrective action taken when individual farmers took more than their share or infringed on other rules. Nearby villages had access to the same water source. However, there was, as of this writing, no institutionalised cooperation system as yet among the villages. Such cooperation was being developed. Discussions with villagers in neighbouring Singida had begun, but there was no agreement on how much water each village could take and what needed to be done if a village took more than its share.

In 2009, it was decided that farmers should pay for water, and in 2013 a price per year per acre was agreed.¹⁰ By-laws were endorsed by the villages involved, by the ward, by the district and by the zonal water office. These negotiation processes were complex, as they involved many diverse stakeholders.

An initial dependency on Arusha traders prompted the village to purchase its own transport to bring onions to market, though this service was taken over by local private traders some years later. Onions are a marketable but perishable product, and collective action was unsuccessful in providing adequate storage to preserve all of the various farmers' produce. If, for any reason, some of the onions could not be sold for a premium, the farmers involved were unwilling to share the loss as a group, as each invariably maintained that their onions were not the per-

ished or lower-quality ones.¹¹ If onions of different qualities were transported and sold in bulk, the price paid was that for the lowest quality products. As there was no quality assurance expertise available in Mang'ola to separate the produce by quality, farmers soon terminated the collective transport and marketing and began selling their onions individually.

By 2008, Mang'ola had three primary schools and two secondary schools, though construction of the necessary housing for teachers continued to pose difficulties. The mean educational level of household heads increased from among the lowest to among the highest in the sample over the study period.

Interactions between individual households and the village government were not uniform across the village. For example, contributions to construction of classrooms and teachers' housing were higher for one school than another. Also, follow-up of parents who did not pay school fees was different from school to school. In addition, parents' motivation to send their children to school during the harvesting period was limited, and enforcement of truancy laws -- as education is compulsory -- differed from school to school. School communities within the village also differed in their ability to set common goals, access similar resources and maintain transparent procedures for the exercise of authority, even though they operated under the same village government.

The health dispensary took a similar route as the schools. Though the dispensary itself was constructed, the necessary housing to accommodate the health staff was never completed.

Water supply was operated collectively. A village water committee supervised the functioning of the water system. Collection of water dues was delegated to individuals assigned to oversee the individual water points. Though collective goals were formulated, no transparent arrangements were made to work towards achievement of the goals.

Examples of collective action in the productive sector were input supply, in the form of *mbegu mbora* (mainly fertiliser and agrochemicals) through the village savings and credit cooperative society, and technical advice for construction of biogas plants through the Fatina women group, alongside savings and credit activities through village community banks. Besides working together, participants in these groups exchanged technical information and ideas amongst themselves. A group in one

neighbourhood even bargained to have its members connected to a water supply. Regarding micro-credit, members held each other accountable for timely repayments (social responsibility).

The leaders of the local football club considered football not only a sportive and healthy activity, but also an economic enterprise in which youngsters could operate collectively.

Regarding the village vulnerability context, though water scarcity was a challenge, the availability of natural resources, mainly water and land, did enable villagers to cooperate to produce effectively. Population growth challenged farmers to expand the area under irrigation; and it challenged local leaders, too, to establish, maintain and manage socio-economic service delivery. Nonetheless, increased experience and the rise of the educational level among household heads and village leaders enabled them to find ways to distribute water more efficiently. The reliable availability of water, in combination with enhanced skills and input supply, was mentioned as a key enabling factor for enhanced agricultural production. Goal setting, clarity on rights to resources, formalised arrangements, and transparent and understandable procedures for the exercise of authority fostered trust and use of the system to enhance livelihood outcomes.

Harar

Harar has been operational since 1975.¹² A primary school was constructed here in 1978. *Mbegu mbora* (improved agriculture, in particular seeds) was introduced in 1988 and since expanded. A second primary school was constructed in 2000. Individually, villagers gained bicycles and ox-drawn equipment over the study period, but collectively they failed to secure a reliable water supply. Little work had been done to maintain access roads collectively. Starting in 2006, a group of women produced charcoal burners, selling them collectively at the market in Haydom. Savings and internal lending communities started operations in 2009.

Harar village leaders indicated availability of high-quality agricultural inputs as a key developmental milestone for the village, followed by the rise of education and the livestock business. In addition, they noted that capacity building of the village leaders had contributed to enhance village development.

As a very rural settlement, Harar was dependent on rainfed agriculture. Yet, this vulnerability context did not lead residents to address their vulnerability issues in any collective way, except to maintain the access roads and pray for rain in times of drought. Although the, mainly *Iraqw*, population had settled in the area relatively recently, traditional councils of elders and groups of rain dancers were observed. The local government operated as prescribed, though collective action towards establishment and operation of socio-economic infrastructure was comparatively low. A school committee had succeeded in having classrooms constructed, but the necessary teachers' houses had not been realised, despite collective brick burning by the youth club and every household's payment of 10,000 Tanzanian shillings. Parents did contribute to employ an additional teacher and school cook. The need for a health dispensary, felt since 1988, had not yet resulted in any construction activity as of this writing. The need for an adequate water supply spurred a 2005 village government decision for residents to pay 3,000 shillings annually to commission borehole drilling. But again, as of this writing, no safe and clean water supply had as yet been accomplished. Lack of capacity within the village government was cited as the reason for the delay. Changes in administrative boundaries which placed an additional burden on households to contribute to new socio-economic infrastructure was also mentioned as an obstacle. Ambiguity surrounding common goal setting, low educational level and changing procedures in the exercise of authority had frustrated collective action. Local leaders had been unable to persuade the community to join in collective action, as evidenced by the lack of sufficient health care services, water supply and housing for teachers.

There was some limited collective action in productive activities, such as input supply (mainly improved seeds) and the livestock business. The aforementioned women's group jointly marketed their locally made charcoal burners. Collective savings and credit activities were said to be operating satisfactorily; specifically one savings and credit cooperative society, two village community banks and six savings and internal lending communities. These enabled individual households to cope with emergencies and access funds for investments. Small groups of people, electing their own leadership, set collective objectives, without compromising their individual interests. Collective establishment, maintenance and management of socio-economic service delivery had not been achieved, and lit-

the impact of collective action was thus observed on households' livelihood outcomes.

Mongo wa Moono

Despite the opening of the Mongo wa Moono area through the collective establishment of a road track in 1985,¹³ registration of the village took place much later, in 1994, in preparation for the first village elections in 1995. The Hadzabe people, being hunters and gatherers, follow 'their food', which is everywhere. Also, they are an individually operating people; when a disagreement arises on some local issue, one of the disputants typically defects from the camp and joins another. The Hadzabe had no *shamba* (collective agricultural field) to rely on. Though they did use some temporary shelters made of branches, they did not construct houses for their own accommodation. With the exception of collective action to gain a land title to their area, the Hadzabe were little concerned with or aware of national policies regarding collective responsibility for socio-economic service delivery.

Some local government service delivery had gotten under way. For example, traditional birth attendants exchanged experiences amongst themselves and with maternal and child health staff in Mbulu town. This collective learning process was said to have enhanced local maternal and child care.

Action towards classroom construction for primary education was taken only some twenty years after the lack of such education was first cited as a major issue (Van Dijk, 1988). In 2013, residents participating in a 'food for work' programme dug a trench to enable the Catholic church to complete a piped water scheme. Beekeeping groups had been encouraged, but no collective marketing of honey products was observed.

Village leaders said that registration of the village, though late, had been of utmost importance for their development, as it enabled the villagers to lobby for a land title to safeguard their way of life. In addition, they mentioned the importance of the emerging tourist industry, which had become a source of regular income. Lastly, support in water supply provision was appreciated.

With its comparatively small local government institutional capacity, Mongo wa Moono had the lowest level of collective action in social service delivery and economic production among all of the villages studied.

Given the way of life of the Hadzabe people and their vulnerability context, collective action was not considered necessary except when property rights to their resources were jeopardised. When this happened, village leaders lobbied to ensure they received a property deed for their land in order to secure their way of life into the future. Culturally, the Hadzabe were not accustomed to investing in the future. They did not set common goals, except occasionally for the daily hunt. The existing joint efforts to construct socio-economic infrastructure were guided by external interventions and involved the locals in manual work only. Even where Hadzabe leaders described transformative structures and collective action processes, these had not managed to make socio-economic infrastructure operational. The area was opened up by residents' construction of an access road in the 1980s, but the establishment of a primary school and health dispensary started only much later. As of this writing, such infrastructure was not yet functioning. After two failed attempts to have boreholes dug with external support, a water supply was finally established when villagers dug 10 km of trench for the pipes in exchange for food for the labourers. At this stage no conclusions can yet be drawn concerning the management capacity of the collective action to run the system.

NGO efforts to initiate collective production and marketing, such as in beekeeping, had largely failed. Several interlinked reasons can be identified: incompatibility with the cultural background of the hunters and gatherers; lack of a goal-setting tradition; low educational level of the population, with little change over time; lack of experience and training in taking joint responsibility or in the exercise of authority for collective action; and lack of insight to search for 'a market' for products. The village's only established link with production was the contracts that village leaders had entered into with tourism companies for payment to come into the area and utilise Hadzabe game guides. Livelihood outcomes, in terms of incomes and well-being, lagged here in comparison to the other villages. But livelihoods had remained stable as far as the Hadzabe leaders were concerned.

7.1.3 Conclusion

This section discussed what village leaders perceived as important milestones in their local development process. In addition, it identified

whether achievements could be attributed to endogenous collective or individual action or to external forces or the residents' own strengths.

Although the villages were not far apart geographically, the point at which they embarked on their individual development processes spanned almost 100 years. Primary education got under way in Tlawi in 1911, while the start of primary education in Mongo wa Moono was in 2010. Each village development process was influenced by the livelihoods people pursued there and the vulnerability context they faced.

Recognition in the form of village government registration, access to transport for selling agricultural surpluses and availability of some other economic activity, together with access to education or capacity building, were noted by village leaders as of key importance for the local development process. A long tradition of mutual dependency to prevent erosion in the hilly areas of Kwermusl, Tlawi, Buger and Kambi ya Simba led to decision-making by consensus in local society. The rural settlements of Oldeani, Mang'ola and Harar, which were established more recently, relied on decision-making by majority rule in their local government administration. Only after being registered could villages like Mongo wa Moono receive a property deed for their lands and decide on their own development pathway. Being accessible by road enabled villages to benefit from services and market agricultural surpluses.

Village leaders attached major importance to production and economic activities, though these were different in each village. In Kambi ya Simba and Tlawi, irrigation infrastructure and improved agricultural inputs were mentioned as key economic activities for development. In Harar and Kwermusl, improved inputs were mentioned as well. In Kwermusl, Harar, Tlawi and Buger, introduction of improved livestock breeds and dairy farming were mentioned. In Mang'ola, establishment of the all-weather road was mentioned. In Mongo wa Moono, the link with the tourism industry was underlined.

Both general education and capacity building among village leaders were mentioned as being of major importance to the development process. Thereafter, health and water supply were also highly ranked.

Based on these summaries, derived from the village leader focus discussions, several conclusions can be drawn regarding how collective action began in the villages studied. *First*, accessibility was important. Road development was a natural first step for individual and collective action.

Road development began with manual work among residents but was then taken over by higher authorities when more extensive structural works were required.

Second, production started individually but, depending on the vulnerability context, eventually collective action was needed to enhance or to safeguard activities. For example, safeguarding production through collective environmental measures required local awareness and the ability to persuade all those concerned to act accordingly. Channels for irrigation were dug collectively. Villages managed to arrange collective input supply through external support or collective bargaining with the private sector, which was more efficient than individual input provision. Similarly, collectives arranged for construction and management of irrigation works to distribute water; and this too could not have been achieved individually. Dairy farming support and improved husbandry inputs were accessed collectively; these could have been provided individually only at a very high cost. Collective transport of livestock was less expensive than individual transport. Finally, collective contracts were signed with tourism companies; these agreements would have been much more difficult to arrange on an individual basis.

Third, in nearly all of the villages, social services were established through a combination of external support, local interest and collective action. Establishment of social infrastructure started through collective action in the community, but external support from professionals was still required to operate the related services. In the national institutional context, supervision of the management of such services rested with the local community.

Not only did collective action start in different ways, the types of collective action required at different stages of the development process differed too. Different capacities were needed as well. These different types of collective action are elaborated upon in the section below.

7.2 Types of collective action

Among the sample villages no univocal development path was found, as the vulnerability context and consequently natural resources differed from place to place. Moreover, village development processes were path dependent and historically influenced. Overlaps were found, however, across the key development milestones identified by the village leaders

(see table 7.1). These suggest areas in which villagers at different times set common goals to address perceived problems in their environment. This section identifies a variety of these commonalities, or types of collective action at the community level. They emerged endogenously, from people's own interests or sense of dependency upon each another; or they arose from exogenous opportunities that could be grasped only through cooperation. Particularly, collective action arose in the study villages when residents needed each other to survive or to cope with their vulnerability context; when socio-economic infrastructure was being constructed, maintained or operated; and when support had to be mustered to address a specific constraint or issue.

7.2.1 Collective action to ensure livelihood

Some vulnerability contexts challenged people to act collectively to ensure their livelihood and manage scarce natural resources. For example, a group might dance together to pray for rain. They might assist each other to safeguard mountain slopes against erosion (Thornton, 1980). They might work together to cultivate land, with the landowner providing a local brew in gratitude. Villagers might cooperate to gain access to water, for example, by digging wells. They might dig furrows together to irrigate a *shamba*. Or they might clear brush collectively to ready an area for service delivery by outsiders. The more traditionally societies operated, the more the residents looked after one another to safeguard local livelihoods together. Everyone within a group of households (*aya*) lent assistance when necessary, for example, when someone needed to be taken to the hospital or needed other special help. When an alarm cry (*bayoda*) was raised, everybody reacted to the danger (Snyder, 2005). The council of elders conferred on community affairs. In places where people had less of a bond with each other, like in Oldeani, Mang'ola and Harar, social organisations, such as village community banks and savings and internal lending communities, took the traditional place of safeguarding local livelihoods. Micro-finance facilities gradually emerged in all of the study villages, except Mongo wa Moono. In Mongo wa Moono, nature ensured local livelihoods. When the Hadzabe's way of life was threatened by intruding agriculturalists and pastoralists, the Hadzabe responded by registering themselves as a village and collectively lobbying to secure a land title so their access to nature could no longer be jeopardised. This gave them the right to prevent others from encroaching. In all of the villages

studied, local policing and security from a governance perspective was organised by the village government through police and justice groups (*sungusungu* or *mgambo*).

Villagers coped with their vulnerability context, in terms of food or fuelwood shortages, largely individually, though during *ujamaa* shortages were sometimes addressed collectively as well. Shortages of land, water or, sometimes, pasture prompted people to act collectively. While pastoralists coped with pasture shortages individually, by moving to another area, farmers who kept livestock addressed shortages of pasture collectively, closing off areas to protect them for grazing. This type of collective action was observed in the study villages both with and without involvement of formal governance. Traditionally such collective action stemmed from traditional upbringing, local insight, experience, trust and availability of unskilled labour among members of a peer group, clan, *aya* or neighbourhood. Ultimately such collective action was decided upon by the council of elders, or later, by the village assembly, with such decision-making based on consensus.

When collective action was aimed at ensuring livelihoods, the vulnerability context, in conjunction with the available human and social capital, determined how collective action was structured and operated during the development process.

7.2.2 Collective action to establish infrastructure

Establishment of necessary socio-economic infrastructure, like roads, schools, health dispensaries, water supply and agricultural storage facilities (*godowns*), was generally agreed upon within traditional or, more recently, local governance structures like the *aya*, *kitongoji* or village government concerned. The actual decision to construct a specific socio-economic infrastructure was taken by consensus within the community. In the past, such decision-making was led by the council of elders, though more recently it became the preserve of the village government and village assembly.

In the sample villages, collective action to establish infrastructure usually required a combination of compulsory contributions (*ngumu kazi*), for example, of locally available building materials and unskilled labour, and external resources in the form of technical assistance and materials unavailable locally. Construction techniques and standards were typically

prescribed by the technical assistance partner for the infrastructure concerned. Community or village leadership might review building contracts and verify specifics, but it generally did so with the help of external assistance or higher local government staff. For example, a planning officer, procurement officer, engineer or internal auditor might be involved. National standards were followed, such as those set in the Public Procurement Act (2004 and 2011).

Regarding schools, it was up to the village leadership to determine the number of classrooms and houses for teachers it needed. Village leaders also decided how many desks should be ordered and paid for them. Similarly, they decided what standards were to be adhered to. Community support for schools was provided mainly in the form of one-off contributions, with every household requested to provide, in cash or in kind, certain quantities of local building materials like sand, stone, aggregate or water. Details varied depending on local initiatives and the ability of local leaders both to stimulate their constituency to contribute and to lobby for access to external resources. Different committees were established in conjunction with different stakeholders for different construction projects. When community members did not supply the requested inputs, community leaders might initiate a process of ostracism, as practised traditionally (e.g., in Kwermusl),¹⁴ or levy fines, as practised nowadays, by means of enforcement groups like the *sungusungu* (e.g., in Mang'ola).¹⁵

Human, social and political capital played a role in obtaining external support early in the infrastructure development process. External support for collective action to establish infrastructure was found in all of the study villages. Such support was gradually forthcoming, for example, to help local populations in their efforts to construct access roads and primary schools. If no external support was received and the community established infrastructure solely through its own resources, additional capacity was required to design and supervise contracts and account for income and expenditure. National criteria determined, in part, communities' access to, and the supply of, external resources for social infrastructure. For example, population figures played a role in the resources allocated. However, the combined human, social and political capital within the community also played a role, as this was a key determinant of ability to organise local and external resources.

Though the general level of education among local leaders was below that considered necessary to design and understand tender documents

for construction projects or to oversee accounting documents (Van Dijk & Timothy, 2013), educational level hardly seems to have formed a constraint in the establishment of socio-economic infrastructure after collective action got under way and resources were tapped, external or otherwise. Beyond community members' willingness and ability to contribute, a key constraint was understanding of tendering procedures within the village committee concerned and its dependence on government staff (e.g., engineers and internal auditors) to supervise and ensure adherence to quality standards. Village leaders were sometimes unable to advance an infrastructure project. In 2005, the Harar village government decided to collect money to drill bore wells, but as of this writing, it had not yet been able to implement this decision. In Kwermusl and Buger, residents had dug open wells individually, but little collective effort had been made to safeguard the water source. In Mongo wa Moono the Catholic church had initiated a piped water supply project, which got under way in 2013.

Establishing economic infrastructure like an intake, aligned channels or sluice gates for irrigation schemes was a different issue. The villages in the sample had little experience in collection of dues for long-term investments or expansions. For alignment and other construction works, farmers typically contributed labour and local leaders lobbied for additional funds from external sources. Within the research area no examples were found in which residents were collectively able to construct concrete irrigation infrastructure, despite the fact that irrigated cultivation was profitable for farmers. In Mang'ola, farmers had been unsuccessful in adequately supervising the building of an inlet. The structure concerned collapsed shortly after its completion, due to construction failures.

No examples were found of pastoralists or livestock farmers jointly constructing a cattle dip, despite the fact that they earned quite a bit more if their stock remained healthy.

Villages like Mongo wa Moono and Harar, where the educational level was low, exhibited little interest in establishing socio-economic infrastructure. PTA leaders in Harar said, 'We seem unable to push the village government to have all building materials collected; neither are we able to organise ourselves to do so.'¹⁶ In contrast, some projects, like construction of a secondary school in Kwermusl,¹⁷ demonstrated the capacity of certain village leaders, perhaps the more educated ones, to address institutional concerns, organise work and ensure that quality standards

were met. All Kwermusl households were asked to supply a specific number of burned bricks and contribute in cash and in kind to the actual construction of the school. Institutionalisation of such action involved organisation and follow-up by the village assemblies in the villages concerned. All households in the ward participated, alongside the village governments concerned and the Ward Development Committee (WDC). The village assemblies elected a construction committee, which was made responsible for collecting and managing the necessary contributions and organising construction of the school, including supervising the contractors. Although the WDC decided on the location for the school by majority vote, the minority lobbied to higher government officials for investment of government funds with the stipulation that the secondary school be established in another village, Hayloto. The process then had to be corrected following prescribed government procedure.

7.2.3 Collective action to maintain infrastructure

The job of maintaining the necessary socio-economic infrastructure fell mainly to committees set up by the governing structures that had established the infrastructure concerned. However, no prescribed maintenance rules were found in any of the study villages. Neither did such committees have annual maintenance plans worked out. For most of the feeder roads, portions had been assigned to individual households to ensure that they remained passable, a task requiring mainly unskilled labour. But little was done to monitor people's performance. Maintenance of schools and health dispensaries relied mainly on committee members' interest in keeping the infrastructure up to standard or even to lift the standard. Here, communities were sometimes asked to contribute in cash and in kind as repairs and replacements were needed that involved expense. Committee members needed a degree of technical capacity to formulate and monitor a maintenance schedule as well as supervisory capacity to ensure that the necessary checks and balances were performed, as maintenance invariably involved public funds. No maintenance was reported in Mongo wa Moono and Harar, as the infrastructure there had not yet been completed. The PTA in Harar¹⁸ said it had been unable to convince the governments of the villages concerned to ask the parents to make sufficient contributions for expansion and maintenance of the school infrastructure. A member of the Tlawi PTA said, 'Maintenance of the classrooms has been done since 1963, but it is

actually not done well.’¹⁹ In Mang’ola, a PTA leader said, ‘The committee should take care of school facilities in terms of construction, repair and maintenance, such as construction of toilets.’²⁰ A member of the Oldeani PTA noted feeling ‘responsible for repairs as well’.²¹ Although the PTAs said they felt responsible for maintenance, my own observations of the condition of the schools suggests that maintenance capacity was inadequate. During construction there was some external support in most cases. For maintenance the committees had to rely on their own capacity, and little was done to ensure that such capacity was in place.

Collective action to maintain and operate social infrastructure is different from collective action to construct infrastructure. The former is a continuous process. The committee’s management capacity determines its ability to make sure the necessary resources are available to keep infrastructure and equipment up to standard, and thus facilitate the effective and efficient operation of technical staff. Human, social and political capital, combined, structure collective decision-making to provide physical and financial capital and account for its use or expenditure to facilitate further development. Ability to estimate costs and evaluate the quality of service delivery and expected results is also required. Persuasiveness of committee leaders is needed to motivate community members to contribute in cash and in kind, while committees themselves also need the skills to plan, budget and account for such income and expenditure.

7.2.4 Collective action to manage social services

In the sample villages, management of social service delivery was partly the responsibility of the professional staff concerned, but it was also the task of the locally elected committee. The latter’s ability to organise the continuous flow of resources necessary to operate and maintain social services was thus key. The way such committees envisioned, managed and operationalised checks and balances, and implemented monitoring and accounting for expenditures, determined the actual functioning of the services concerned. Operation of such committees required a degree of governance capacity. For example, it was up to the school committee to decide whether and how much parents must contribute financially to employ additional teachers, a school cook or security guards; or to purchase textbooks, library books or additional educational equipment; or to have quality food arranged for the pupils’ lunch. It was the committee that decided to gather additional resources to ensure, for example, an

adequate number of classrooms and sufficient housing for teachers. The committee also decided on issues like lunch preparation, library construction and whether certain subjects would be offered, for example, agriculture or computers. It decided whether funds for a school cook, security guards or additional teachers were required, and parents or the community at large had to pay. These decisions hinged on the vision the community and its leaders held on what education meant to their children.

The quality of governance also depended on the capacity of local leaders, which relied again on leaders' possession of human, social, cultural and political capital. Governing a social service like education requires a community vision on what society expects school-leavers to be able to perform and insight into how this can best be achieved. It requires knowledge of how professional staff can best be facilitated to perform effectively and efficiently. It requires interest in implementation and capacity to monitor, the ability to learn from monitoring and aptitude to adjust where necessary. As resources are at stake, it requires the capacity to manage funds and establish and maintain checks and balances. Yet, local leaders in Mongo wa Moono showed indifference in these regards,²² as did the casual labourers in Mang'ola.²³ Parents in Mang'ola,²⁴ however, did indicate concern with the quality of education because of its importance to the well-being of their children. In Harar, community members wanted their children to go to secondary school, but the PTA showed no interest in what was actually being taught. One PTA member²⁵ said that that except cultivation of the school *shamba*, they had no interest in school collective action. The PTA in Tlawi said that village leaders²⁶ were interested in changing the village's boundaries and then establishing another school, but there was little interest in the quality of the education on offer. Truancy was rife among pupils. Reflecting on their own education, parents in Kwermusl²⁷ and Kambi ya Simba²⁸ wanted to include elements of leadership, agriculture, tree planting, environmental conservation, animal husbandry, carpentry and savings and credit cooperative societies in the syllabus. They emphasised the need to teach children to help themselves, reflecting a vision of primary education as equipping children to survive in today's world.

In addition to the social services of education and health, the management of water supply required particular capacities, not least negotiation skills to ensure that water distribution agreements with other villages

were maintained. In Mang'ola, construction of water supply facilities began in 1998, with public water points planned to reach all corners of the village. However, no clear tariff schedule existed. People merely paid per bucket to the custodian of the water point. Kambi ya Simba and Oldeani collaborated with neighbouring villages to ensure fair water distribution. It was up to the elected committee to ensure that income and expenditures were in balance and funds accounted for. It was left to the committee's discretion how much water users were to pay, the aim being to gradually make the water supply system available to everyone. Determining whether and how technicians or committee members were rewarded was similarly left to the committee. For instance, in Mang'ola the *fundi* (technicians) received a salary of 100,000 Tanzanian shillings per month, while the village board members (chair, secretary and treasurer) each got a *posho* (a stipend) of 70,000 shillings per month.²⁹

In the more recent study years, village councils participated in planning and managing water schemes. They organised labour for construction and contributions in cash and in kind for operation of all large and medium schemes (including water purification, quality control and minor repairs). For small schemes village councils paid all running costs. The village councils further established water funds and collected, used and accounted for user contributions to the water funds. It decided how to remedy problems of free riders as well. Water user groups (WUGs), associations (WUAs) and water boards (WBs) were required to register under the NGO Act of 2002. Karatu District, for example, had 21 WUGs and WUAs and 4 WBs covering a number of villages.³⁰ A Mang'ola WUA was formed in 2012, as its catchment area was prone to conflicts over water uses. The catchment had high economic potential, but was vulnerable to pollution and environmental degradation.³¹ Board members were elected. People paid some 10 shillings per 20 litre bucket of water. This all depended on the capacity of the community leaders to keep the water supply system operational to serve the people.

In general, it must be concluded that in most cases there was insufficient capacity at the local level to oversee the management of social services to keep them effectively and efficiently operational and sustained. However, in Kambi ya Simba, Oldeani and Mang'ola, where water needed to be shared among various villages, leaders were elected and had gained experience in collectively overseeing water distribution and its financing.

7.2.5 Collective action to manage economic services

Collective action to manage economic services, like a tree nursery, a cattle dip, a market (*mnaada*), a primary society or maize mill, proved difficult in the sample villages. Even though tree nurseries were communally operated by villages as early as the 1980s and 1990s, only in Kambi ya Simba was tree planting still being done as a public means of erosion control at the end of the study period. In this village, the tree nursery was still being managed collectively. In all of the other villages, the early village tree nurseries had been privatised, as they were seen as economic undertakings for the production of timber, fruit or fuelwood for private benefit. Collective management of such communal services proved too cumbersome for members to benefit, though individuals were able to benefit from procuring these services from private suppliers.

Similarly, the cattle dips that were initiated as a government service to livestock keepers were no longer operational at the end of the study period. Only in Buger, where operation and maintenance of the dip had been handed over to a group of livestock keepers, had it been maintained as an economically sustainable enterprise.³² My own observations suggest that management of such collective action is easier to sustain when it is institutionalised in the hands of members with demonstrable capacity.

Monthly markets (*mnaadas*) were scheduled and organised through the district council, but weekly and local *mnaadas*, like in Kwwermusl, Kambi ya Simba and Mang'ola, were organised by the village government concerned.

The functioning of the primary societies changed completely after liberalisation of their memberships in the late 1980s. Up to that time, all collection and transportation of crops was handled through the primary society. However, members were not convinced that cooperative management was effective, efficient and benefitted all. After liberalisation, trade and transport activities were immediately taken over by private channels, and the primary societies were left as empty bodies. My own conclusion here is that insufficient human capital was available to manage the primary societies in such a way as to ensure the necessary checks and balances were in place to prevent mismanagement and losses.

Similarly, in the 1980s many villages operated a maize mill collectively. By the end of the study period, all of the remaining maize mills were be-

ing operated commercially by individuals. The villages had initially received the mills on the basis of soft loans, which in nearly all cases had been repaid without problem. Yet, after repaying the loans, village managers became less strict in levying sufficient milling fees to cover operation and maintenance costs, in addition to depreciation. Over time most of the village governments operating the mills came to realise that insufficient money was being set aside to replace worn-out equipment when needed. Though village leaders proved unable to run the mills collectively, individual entrepreneurs in the villages have managed these enterprises well.

7.2.6 Collective action to manage irrigation systems

After the initial establishment of irrigation schemes, operation and maintenance at the channel level was delegated to an elected committee. Yet, the actual collective operation and management of irrigation infrastructure arose only gradually. In Kambi ya Simba, for example, irrigation began in 1952 when water was diverted from the Haroo River to enable about 200 farmers to cultivate a small field each. In 1953 water was diverted from the Seay River to a school *shamba*, and in 1983 farmers began clearing 16 hectares and preparing traditional inlets. The digging of the main canal was done collectively. No cement was used for the intake; rather, the river was blocked in the traditional way, with sandbags, leaving sufficient water in the river. The participating farmers distributed water amongst themselves, under supervision of the *mwenyekiti ya kitongoji*. Typically, few problems arose in distribution, as the farmers were well acquainted with one another, having long been residents of the same neighbourhood. In 2014 there was still no formal registration of the irrigation committee in Kambi ya Simba.³³

In Mang'ola,³⁴ following some individual irrigation efforts, a joint irrigation scheme began with the collective digging of a 10 km main canal in 1968. Gradually the area under irrigation was expanded, to 2,350 hectares. In the neighbouring village of Bolan, another 1,941 hectares was registered as under irrigation. As of 2013, however, no one had yet paid the fees for use of the water. Mang'ola ward had four irrigation schemes operational, while the valley accommodated seven schemes and related committees in total. Members of such committees were elected from among the farmers using the channel concerned. Each committee member was responsible for water distribution in a particular part of the

channel. When necessary, the committee member asked member-farmers to clean their part of the channel. Non-cooperation or misuse of water resulted in a fine. In 2009-2010, water distribution was a political issue, but after 2011 everything was formally regulated. Irrigated land was registered and the source 'measured' by a beacon, with water shared between the valley (Bonde Eyasi), the (tourist) camps and *Ujenzi* (Department of Road Works and Construction). This means that the water is shared between agriculture, tourist camps and domestic water supply. There was also a link for water users from the Singida Region. Per scheme in 2013, 100,000 Tanzanian shillings was paid to run the water board office; for 2014, 150,000 shillings was paid through the *bmama mfereji* (volunteer). In addition, the board had income from fines for misuse of water. All payments were done on basis of a receipt, meaning that all financial transactions were accounted for.³⁵

The Tlawi irrigation committee began operating 1974, though it was registered only in 2012. When farmers realised that water which could be gainfully used was 'disappearing', they dug a channel collectively in 2004 and approached the Mbulu District Council for assistance. Through a Tanzania Social Action Fund project, they constructed three sluice gates to economise on water use for irrigated cultivation of maize, garlic, wheat, onions and potatoes. The total area under irrigation was between 40 and 80 hectares. Farmers operated collectively in water distribution, cleaning the channels and preventing livestock from entering the channel area. Unauthorised water use was fined.³⁶

Traditional means of irrigation were observed as well, particularly among neighbouring farmers. Here channels were dug and water diverted by blocking outlets with branches or sandbags. This required less local management capacity, but was also less efficient. Farmers themselves were responsible for water distribution in these cases, though the job was not paid. The work was important, however, as if through negligence a farmer did not get the water they needed, their harvest might be destroyed. From a vulnerability perspective, such irrigation was managed in a way as to particularly benefit those farmers who were first. To ensure that scarce water is distributed in the most efficient way for the largest irrigated area requires expertise, as such systems must be professionally designed. As yet, these irrigated farmers had not yet brought in such outside expertise. Or perhaps they were unwilling to gather enough funds (or tax) from the participating and potential farmers to construct the in-

infrastructure necessary to optimise use of the available water, to expand the scheme to enable more farmers to join in irrigated cultivation or to gain additional income for other communal infrastructure. If a system of payment was instituted for operation, maintenance, cleaning or expansion, greater transparency and accountability would certainly be required.

7.2.7 Collective action to manage input supply

Little collective action was observed in the productive sector. Most of those initiatives that were identified regarded a group that requested a supplier to supply seeds, fertiliser or even technical support, for example, for biogas plant construction (in Mang'ola)³⁷. Some inputs were supplied cooperatively or distributed via the village government. Another type of example was that of barley production, in which breweries arranged for combine harvesters to service groups of farmers in certain periods during the harvest (in Kambi ya Simba³⁸).

Joint research on onion cultivation was under way in Mang'ola, run by farmers themselves, with some additional support given by the agricultural extension officer. Farmers were learning together in this case.³⁹

Except in Mongo wa Moono, where people did not invest in future production, in all of the study villages financial inputs were supplied through savings and credit cooperative societies.⁴⁰ These operated with professional support to oversee checks and balances. Besides the weekly contribution (*bisa*) from members, savings and credit cooperative societies could access loans from commercial banks, enabling them to receive credit of more than 2 million Tanzanian shillings to initiate commercial activities like shops, restaurants and tree nurseries. Members of such societies tended to have much in common in terms of educational or professional background. Furthermore, members received training in financial management and in profit and loss reporting.⁴¹ Some savings and credit cooperative societies collaborated together in lobby and advocacy activities through the Savings and Credit Cooperative Union League Tanzania (SCCULT).

A few small, stand-alone cooperatives operated effectively under the close supervision of their members. In several villages, groups made up mainly of women organised dairy farming input supply (Buger, Mang'ola, Oldeani and Tlawi). Another example of collective action was a group health insurance scheme for cattle, to ensure the timely arrival of the vet-

erinary officer in case a dairy cow fell ill (Tlawi)⁴². In all of these cases, service supply and demand were clearly identified and users paid only for the services they received. The collective action was just to maintain the bond between the group and the supplier of the good or service. The benefit of membership was straightforward for the individual. There were few overhead costs to be accounted for. Human and social capital together ensured the bond between the supplier and user group, and both worked together on the basis of trust.

7.2.8 Collective action to manage financial systems

The management of savings and credit services through village community banks and savings and internal lending communities is another form of collective action that relates to the productive sector. This is different from the abovementioned savings and credit cooperative societies. In the sample villages, groups of about 30 people formed village community banks, which operated a savings and credit mechanism amongst themselves. Members contributed about 5,000 Tanzanian shillings weekly, providing up to 150,000 shillings, which one member could borrow (or multiple members might borrow smaller amounts) for a certain period. Loans were repaid with interest. The actual loan was adequate for small economic investments with short-term returns. Both in village community banks and in savings and internal lending communities, rules and regulations were agreed upon in advance, capacity building was offered and, as the groups were small, there was a mutual, institutionalised trust among members. Thus, transparency and accountability were assured.

Members set out a vision, managed and operationalised checks and balances, and monitored and accounted for expenditures. They invested money and time together, trusting in each other's management and technical competence. Collectively these groups decided how to structure and process their decision-making. As a whole, the groups sought out or procured technical advice where and when necessary. Yet, it was up to individuals to make use of such services and to invest. Examples found in the study villages were individuals that bought agricultural produce when available and sold it when it became scarce (all villages), buying livestock or eggs locally and selling them in a neighbouring region at a profit (Buger)⁴³, buying timber and making planks locally to sell in town (Kwermusl)⁴⁴ and buying cloth and making clothes to sell (Oldeani)⁴⁵. Total funds were gradually expanded by interest payments made upon

loan reimbursements. In addition, the groups' growing reserves functioned as a social safety net based on trust within the small groups. Some operated a social fund from which members could borrow interest free in case of social 'emergencies' like payment of school fees, visits to the hospital or a funeral. These loans had to be repaid relatively quickly as well. These small groups operated fully on the basis of social control. Village community banks or savings and internal lending communities were operational in all of the study villages except Mongo wa Moono.

When a village community bank started operating, members attended a capacity building training course on basic savings and credit skills and how to select, plan and manage entrepreneurial activities. The idea was that they would gain skills and the ability to organise and manage checks and balances. This was a clear means of developing human capital in the context of the prevailing social and cultural capital. Although the amounts available differed from place to place, the actual functioning of village community banks and savings and internal lending communities was similar in all villages. Only in Kambi ya Simba did village community bank members show interest in working together with other village community banks to access more money.⁴⁶ But such cooperation had not yet materialised as of this writing.

7.2.9 Collective action to market produce and wares

In reference to production, processing and marketing little collective action was observed in the study villages, as collective management had to cope with the cooperative reforms of 1982 and 1991, which were focused much more on 'togetherness' than on quality assurance of the produce itself. Collective action in the marketing of agricultural produce had failed nearly everywhere. Inadequate technical supervision to differentiate between low-quality and high-quality agricultural produce led to a mixing of various quality offerings, with the consequence being that the total was classified as low quality and sold for the low-quality price. Even the joint transport of onions in the 1990s failed for this reason, as dried onions were put together with those not fully dried, and such mixing was not appreciated by clients in Arusha and farther away. Onion farmers in Mang'ola found themselves unable to enforce quality standards for the onions taken collectively to the market. Nobody was authorised and qualified to do so.⁴⁷ Communal or village run economic undertakings like

beekeeping (Mongo wa Moono)⁴⁸ and tree nurseries (Kwermusl, Tlawi and Buger) either failed or were eventually privatised.

A cooperative reform in 2005 aimed only to ensure improved and sustainable cooperatives, 'capable of fulfilling the economic and social needs of its members' (URT, 2005: 44). Sound and incorruptible technical and managerial capacity, however, was also required to ensure the highest benefits for the farmers producing the best quality. In particular in reference to perishable products, technical and managerial checks and balances needed to be institutionalised to meet high quality standards. Means of such collective quality assurance had not been found. More successful in this regard were small groups, whose members had similar knowledge, skills and experience and trusted each other, like the dairy cooperative of Gongali women in Karatu. This ten-woman cooperative dairy group started its collective action through brick making. Trust slowly developed. The group cultivated a *shamba* collectively, and in 2000 began jointly buying and selling milk, and producing butter and cheese. It even proved eligible for a bank loan, as the women had garnered confidence as a reliable customer of the bank. They built their own capacity and set their own rules and regulations.⁴⁹ Although farmers did indicate that they cooperated in input supply, they transported and sold their produce individually (Tlawi, Mang'ola). Livestock farmers transported their animals collectively, but sold their animals individually (Buger).⁵⁰ In reference to non-perishable products, several collective action initiatives were identified in the research area, mainly among women operating rather informally to produce trinkets for tourists (*utamaduni*) (Mongo wa Moono), charcoal burners (Harar) or mats (Mama Issara), or to run businesses together (Oldeani). Prices of such non-perishable wares were set by the producers, who might then lower the price if nobody was buying.

7.2.10 Collective action to lobby

The Hadzabe lobbied collectively to gain a collective land title to safeguard their hunting and gathering way of life and their access to nature (roots, fruits and wildlife). They lobbied through their leaders, as their very survival was at stake. At the local level, management of lobby organisations like the National Networks of Farmers' Groups in Tanzania (MVIWATA) and the Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA) was less clear. These entities tended to be well or-

ganised where they had received external resources. For example, MVIWATA provided funds for construction of household maize storage facilities. Much collective advocacy and lobbying functioned as in the input supply case described earlier for the biogas plant. Where direct concerns of members were not at stake, less vision was found on what to lobby for. Villagers eagerly awaited initiatives by others at the regional or higher levels to access external funding. There was little awareness of what could be aspired to or lobbied for on one's own behalf. Organisations like TCCIA operated mainly at the district level and higher and, actually, only recently really began to function. In Karatu, TCCIA succeeded in lobbying against the reintroduction of a business levy by the Karatu District Council. Another example was TCCIA's representing the interests of local businesses in countering a double levy on sand transports at both the village and district level. The Karatu TCCIA provided insurance for vehicles. In addition, TCCIA provided the 'certificate of origin' needed to export crops like onions and pigeon peas, for example, to India.⁵¹ In Karatu, the TCCIA acted for the Business Registration and Licensing Agency (BRELA) to register all companies. In Mbulu, the TCCIA furthermore lobbied to investigate the corrupt behaviour of officials of the Tanzania Revenue Authority (TRA). On behalf of the owners of guesthouses in Mbulu, TCCIA lobbied to ensure reasonable fees were paid to the Mbulu District Council.⁵²

7.2.11 Village assemblies

All committee work linked directly to the village government was institutionalised under the Local Government Act, endorsed by the village assembly and run by elected and appointed village leaders, all of whom were volunteers. Only the chairperson was compensated financially, though sometimes a sitting allowance was given for attending meetings. The village executive officer received a salary and was assumed to be a graduate of the Local Government Training Institute (LGTI), Hombolo. Nonetheless, in the villages under study, the village executive officers were found to have a lower educational level – standard seven (Buger, Kambi ya Simba and Kwermusl), form II (Mongo wa Moono, Oldeani) or form IV (Harar, Mang'ola, Tlawi) – than that required for LGTI attendance.

Committees for the school, health, irrigation, water supply, tree nursery and market, though linked to the village government, were in-

cluded in the current research as ‘other’ committees, as their operations relied on local initiatives. Depending on local resources and interests, these committees took their own forms and directions, which differed from village to village as discussed in the section below.

7.3 Shifting patterns of collective action

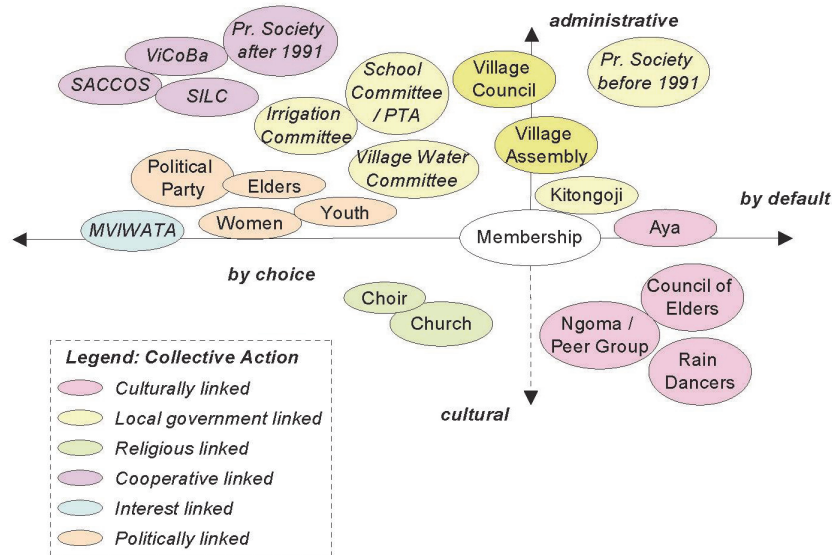
Safeguarding the environment, exploiting resources, obtaining certain socio-economic services, bargaining to invite in certain businesses or to express socio-cultural values are examples in which collective action did make a difference in the sample villages. Agrawal and Ostrom (2001) identified a number of conditions for collective action to achieve its objectives in reference to resource management, institutional arrangements and the external environment. The structure of collective action is determined in part by cognitive, normative and regulative elements generated, respectively, through cultural, moral and legal systems (Palthe, 2014: 61). Social motivation or trust is a general condition for collective action (Tyler, 2011). It may be institutionalised through systems of checks and balances or by public legislation, particularly when smaller groups expand or commence cooperation with other groups in wider networks. In Mbulu and Karatu districts, I observed examples of culturally-derived collective action, established based on tribal norms, in which inhabitants were typically members by default, and they maintained traditional ways of operation. There were also cases in which collective action decision-making was institutionalised through government administration, with the membership made up of residents of a certain geographical area, also by default. Further, in the study area there were many examples of collective action in which people joined by choice, but which operated in the wider context of government-enabled service delivery (Figure 7.1).

By default, every household belonged to certain collectivities, while in addition they could choose to belong to other types of collectivity as well. Thus, households and residents belonged to any number of different collectivities at the same time. Culturally every adult was by default a member of his or her peer group.

Traditional forms of collectivity still existed in the research area, although their function and way of operation had changed. Some of their functions had been taken over by other collectivities, which themselves had changed over time as well. This section describes shifts in the pat-

tern of collective action forms, comparing 1988 with 2010. It looks, in particular, at differences between villages and changes therein.

Figure 7.1
Types of collective action identified in the study villages and whether membership was by default or by choice



Note: Pr. Society = primary society; PTA = parent teacher association; SACCOS = savings and credit cooperative society; SILC = savings and internal lending communities; ViCoBa = village community bank.

Source: Author

7.3.1 Councils of elders

Through their respective councils of elders, men and women safeguarded traditional and tribal values (Snyder, 2005). This means, for example, regarding cases of sickness, funerals or other calamities, a family or neighbourhood would provide care. The care provided was decided upon at the level of the family, peer group, clan, ridge community (*aya*) or council of elders. Councils of elders were operational in all of the study villages except Oldeani. In Oldeani, this social security net function was

provided to some extent by the Community Health Fund/BIMA insurance in a formally documented and institutionalised way.

Geographically, residents belonged to an *aya* or traditional ridge community, through which they collectively maintained their environment. This included erosion control, pasture accessibility and construction and maintenance of feeder roads. At the time of this writing, residents belonged, by default, to a *kitongoji* (neighbourhood) too, which had similar responsibilities to the *aya* of the past. Traditionally villagers helped each other during cultivation, though this custom had largely been replaced by paid labour. Although strong in terms of social control, traditional relationships were informal and 'ruled' by social pressure and threat of ostracism (Snyder, 2005).

Some of the informal cultural functions of the *aya* and council of elders had been taken over by the formal administrative organisation of, respectively, the *kitongoji* (neighbourhood) and village assembly. The operations of the village assembly were mandated by law, in a legislative act of 1982, amended in 1999. These held village assemblies responsible for caring for the environment, maintaining feeder roads and performing socio-economic development functions in general. In the latter research period, most communal work to establish socio-economic infrastructure was being done under the umbrella of the village assembly, the village government and the *kitongoji*. To enforce contributions, the levying of fines had replaced most traditional means of social control. Collective action to establish socio-economic infrastructure was no longer traditionally embedded but rather embedded in public action, as it operated under the supervision of the village assembly to which all adult villagers belonged by default. In the expanding and increasingly diverse communities, particularly of Mang'ola and Oldeani, the councils of elders and village assembly no longer operated to safeguard cultural values collectively, and collective action to establish socio-economic infrastructure was co-ordinated through the respective village governments.

7.3.2 Mass organisations

Churches, political parties, sport clubs and other mass organisations established in the early years after independence were less obligatory than traditional relationships in terms of villagers' own or collective responsibility for socio-economic development. People could join these organisa-

tions by choice. These organisations sought to educate members in a particular religious or political perspective. In addition, members constructed local meeting places (churches or offices) through collections of local contributions in cash and in kind.

The churches originally received external support. Missionary networks were active in, for example, Tlawi, Kwermusl and Kambi ya Simba, and supported local communities by providing primary education and vocational training. After the educational system was nationalised in the mid-1980s, churches and NGOs were again requested to support the educational system, though less directly. At the end of the study period, schools supported by religious missions or NGOs operated under community supervision, exercised through the school committee and village government.

Political parties continued to support development of educational opportunities. Before 1995, these efforts coincided with local government, while after 1995, with the rise of multi-partism, such support came from all parties. For instance, in Kwermusl both CCM and Chadema emphasised that education was of utmost importance for people to make their own living.⁵³ Village leaders in Mang'ola and Oldeani stressed multi-partism and political change in leadership as a major component of the local development process. Public debate and decision-making by majority rule were said to have particularly enhanced the development process.⁵⁴

Everywhere except Mongo wa Moono, office infrastructure for the political parties was constructed through the collective action of members. Both church organisations and political parties held local gatherings to discuss practical issues and exchange views on policy. As these were linked to national movements, local leaders had opportunities to consult with others at 'higher level' meetings within the movement concerned. These movements conducted top-down leadership training to build capacity within their cadre.

The National Networks of Farmers' Groups in Tanzania (MVIWATA) is a mass organisation representing the interests of small-scale farmers, but its membership within the study villages was low. Its main strength appeared to be its ability to lobby at the national policy level. Among the eight villages, Oldeani was the only one with a substantial number of labourers working on the large farm estates. Here, the trade union was a strong partner, helping workers lobby for additional

pay to enable them to invest in other income-generating activities. Movements like MVIWATA and the trade union operated mainly to influence others, predominantly government, to serve the interest of their members. Their leaders needed to be well acquainted with the institutional environment and equipped to advocate for their members' interest.

7.3.3 School committees

Local school committees and PTAs arose gradually in the study area: 1911 in Tlawi, 1950 in Kambi ya Simba, 1951 in Kwermusl, 1953 in Buger, 1954 in Oldeani, 1956 in Mang'ola Barazani, 1978 in Harar and most recently, 2010 in Mongo wa Moono. Whereas religious organisations had previously been involved in establishment of schools, they were prohibited from such activity during *ujamaa*. In the 1980s they were again allowed to provide support, but now under supervision of the local government concerned.⁵⁵

All households contributed to school construction. During a focus group discussion with members of the construction committee of the Haynu secondary school in Kwermusl, participants said that members of the construction committee had been elected by the two supporting village assemblies together (>500 people).⁵⁶ Although the council of elders did not play a formal role, the elders had consulted as a group during that assembly meeting. Thereafter, when the school became operational, all parents with children at the school participated in the deliberations of the PTA to elect representatives to manage the school. By the end of the study period, a close link had developed between the PTA and the village government (pursuant to the Education Act, 1978, 1995). Despite this link, the PTAs relied on their own resources. Whenever necessary, parents contributed to specific actions. For example, PTA members in Harar said that⁵⁷ even though they represented 370 parents, they had been unable to convince the village government to endorse a proposal to procure additional building materials for construction of the necessary housing for teachers. Parents had contributed money to employ an additional teacher and a school cook to prepare lunch for the children. In Kambi ya Simba, the PTA⁵⁸ had organised parental contributions for both a school cook and lunch for the children. In addition, it had discussed special areas of concern with the headmaster, such as the need for agricultural education, lessons in modern technology and actions against pupil misbe-

haviour. In Kwermusl the PTA⁵⁹ had discussed the availability of textbooks and the low pass rate. The PTA here organised the parents to pay for specific teaching aids, including a small generator to give children access to ‘school television’.

In Mang’ola the PTA⁶⁰ felt responsible for additional maintenance of the school and construction of toilets. Parents’ contributions differed from school to school, ranging from 1,500 Tanzanian shillings up to 20,000 shillings. Enforcement of payments differed as well. The only communication found between PTAs was in Oldeani, where there were exchanges between the various schools⁶¹ (see Annex B).

Despite the link with the village government and the capacities of the employed teaching professionals, it was up to the parents to ensure the functioning of the school. Indeed, school functioning differed from village to village, depending on the parents’ interests and contributions. These in some cases stimulated and enabled teaching staff to upgrade elements of the education on offer and to emphasise certain extracurricular activities. Here, every village expressed its own specific interests.

7.3.4 Primary societies

In the mid-1980s nearly all farmers were members of a primary society, as membership was compulsory (Van Cranenburgh, 1990; Lyimo, 2012) and controlled by government (Wambura, 2010). All agricultural products were traded through cooperatives, though at the time they functioned inefficiently. Upon independence, cooperatives in Tanzania had been built on a foundation of dependency. According to Mushi (2001: 79), in those days cooperatives were not created to be self-reliant or competitive organisations. The primary societies had no viable resource-generating activities and therefore could not compete. Although they were called cooperatives at the time, they did not operate according to the cooperative principles as later defined by the International Cooperative Alliance (1996). When government considered all farmers to be primary society members by default – that is, when farmers were prohibited from marketing their produce elsewhere – the functioning of the primary society did little to serve farmers’ interests. Little development took place to enhance social capital in the productive sector.

After the cooperative reforms of 1991 released farmers from compulsory membership, most primary societies died out. In absolute figures,

trading through the cooperatives came to a near stand-still virtually everywhere in 1990 and 1991. On average, the agricultural production figures in the Karatu villages were much higher than in the Mbulu villages. In 1990/91, trading through the cooperatives declined to some 3% of the 1986/87 production in Karatu villages, and to 30% of the production in Mbulu villages (MDC, 1991: 40).

Only after the 2003 reforms (URT, 2003), when primary societies were established fully on the basis of voluntary membership, and members were able to obtain the capacities needed and had control over income and expenditure, did cooperative action start to function satisfactorily.

Collective action concerning input supply (*mbegu mbora*) to enhance production was observed in all villages except Mongo wa Moono. Joint input supply for dairy farming was found in Oldeani, Mang'ola, Buger and Tlawi. In Kambi ya Simba and Buger, farmers produced seedlings together. In Mang'ola there was a joint research project aimed at optimising onion production. In Oldeani there were many other forms of collective action as well. The initiation and success of these activities depended on local capacity and involvement.

7.3.5 Communal micro-credit services

Among the formalised community-based membership organisations in the study area, the majority (69%) was established after 2000. About half of these organisations focused on delivering communal micro-credit services through village community banks and savings and internal lending communities established in 2009 or later. These operated independently from one another, based on groups of about 30 members, often neighbours. Initial support, for example, for cash boxes and receipt books, and capacity building came from external sources. The members of each village community bank or savings and internal lending community decided collectively on the weekly contribution they would make; an amount which could change over time. At focus group discussions held in 2012 with representatives of the various village community banks and savings and internal lending communities, members said they paid between 500 Tanzanian shillings and 1,000 shillings weekly for social development, and between 1,000 shillings and 5,000 shillings weekly for economic development. Similarly, the amounts available for loans to

members differed from place to place, depending on the groups' decisions. In Buger⁶² and Harar⁶³ members could borrow up to three times the amount they had saved, to be repaid in three months. Loans for social development projects were provided interest free; though for economic development projects up to 10% interest was charged upon repayment. In Mang'ola⁶⁴ members were given six months to pay back loans and charged 10% interest. Elsewhere, credit was provided up to a fixed maximum, varying from 100,000 shillings in Oldeani⁶⁵ to 600,000 shillings in Kambi ya Simba.⁶⁶

Most village community banks and savings and internal lending communities operated on a cash basis; that is, the moneys collected were stored in a safe with three locks for which the keys were with three different members. The safe was kept at the residence of a member who did not have a key. Weekly gatherings, at which members deposited money or got credit, were held with the 'board' of the group, and all transactions were openly documented. Some village community banks, like the ones in Kambi ya Simba, operated their own banking account.

In some ways, savings and credit cooperative societies operated as a successor to the above-mentioned primary societies, but with voluntary membership. Such societies tended to be associated with specific occupational groups, independent of government or party. For example, in Kambi ya Simba a savings and credit cooperative society was organised among members of the Lutheran Church.⁶⁷ It had 236 members and provided credit to start projects like shops, restaurants, tree nurseries and agricultural activities. The savings and credit cooperative society in Oldeani counted 45 members and gave members access to loans of up to 600,000 shillings.⁶⁸ The savings and credit cooperative society in Mang'ola counted 130 members and organised joint procurement of agricultural inputs.⁶⁹ Some members had received loans of up to 2 million shillings, repayable at 12% interest annually.

Some savings and credit cooperative societies were large and linked to commercial banking institutions. Board membership was remunerated (*posho*). The district cooperative officer was involved in annual audits.

7.3.6 Irrigation systems and water supply

Irrigation systems had been built in Kambi ya Simba⁷⁰ in 1952, in Mang'ola⁷¹ in 1968 and in Tlawi⁷² in 1974. In these villages, farmers col-

laborated informally to dig channels, construct traditional inlets and distribute water for irrigation, with some form of formal cooperation established afterwards (in Mang'ola in 1990 and in Tlawi in 2004).

Cooperation was most intense among farmers supplied through the same channel. In these cases, one farmer was elected to oversee the distribution schedule, which in Mang'ola was done under the supervision of the neighbourhood (*kitongoji*) chairperson. Farmers were obliged to clean selected parts of the irrigation system as well.

In all these villages insufficient local contributions were available for improvement of the irrigation scheme, particularly to have the system aligned and rendered in concrete so that water could be used more optimally. Elsewhere, external support has been critical for such investments.

In 2012, Mang'ola began the process of institutionalising cooperation in the irrigation system through formulation of rules and regulations, pertaining both to farmers and to neighbouring villages. The aim has been to encourage a more efficient water distribution and enable the irrigation committee to better sanction misuse and misappropriation of water. This institutionalisation emerged when the Mang'ola irrigation committee linked with the Internal River Basin Authority.

Collective action here involved the farmers with access to irrigation water. The focus of collective action has been water distribution, so that all connected farmers get a fair share. In larger irrigation schemes, more government involvement was observed in water rights application and distribution. It warrants noting that economising on water use is only partly in the interest of the farmers who already have access to the system. It is in fact in the public interest to use the water as efficiently as possible, to expand the area under irrigation so that more farmers can access a reliable water source. It is perhaps for this reason that this research could identify few initiatives where the participating farmers themselves invested in construction of improved concrete irrigation infrastructure.

In some villages, water committees had been established, such as in Mang'ola in 1998 and in Kambi ya Simba in 2011, to operate and maintain the domestic water supply. Initially cooperation was voluntary, with residents participating in digging trenches for pipe-laying and constructing the water scheme. After receiving water at their own homestead, some made an enterprise of charging others to use their water, to ensure

that they could pay the water bill. Actual management and decision-making was done by a small committee, with members elected by the users of the water scheme amongst themselves. For water schemes that covered several villages, elections were a major event organised by the committee itself. Fair participation of women in the water committees was a subject of advocacy in national water policy (URT, 2002). Capacity building was undertaken by the committees themselves. The water committees governed water distribution operations and users just paid for the water services they received. As in Mang'ola, gauges were installed to read consumption or taps were installed with a custodian who sold the water. Major decisions, such as the price to be paid for a bucket of water, required endorsement by the village government and village assembly. The income received by the custodians was settled with the water committees afterwards.

In the study villages, collective management of irrigation and domestic water supply appeared to be linked to the development of social capital and in need of further institutionalisation. The more farmers were involved and the wider the area covered, the greater the need was to establish clear rules and regulation to streamline effective and efficient distribution.

In the 1980s, water management bodies had not yet emerged. At that time, village governments were not allowed to collect money for operation and maintenance of rural water supplies, as the 1974 Water Utilisation Act gave the right of free access to water to all. The consequence was an initial lack of top-down institutionalisation of water user groups. Gradually such groups were registered, opened banking accounts and asked for local contributions so that they could pay workers to perform operation and maintenance.

The piped water schemes of Kambi ya Simba,⁷³ Mang'ola⁷⁴ and Oldeani⁷⁵ operated as part of larger schemes spanning various villages. The village water user groups here cooperated with those of neighbouring villages. Formal elections ensured representation in the supervising committees. In Tlawi, piped water supply was organised through the church.⁷⁶ In Buger⁷⁷ and Harar,⁷⁸ decisions had been taken to implement a borehole, but little progress had been made, so residents continued to use hand-dug wells. A shallow well in Kwermusl initially benefitted from external funding and villagers could access the water free of charge, but users did contribute to remedy malfunctions and do maintenance. As

everybody in Kwermusl got water from open sources in or along their agricultural fields, no collective action had as yet emerged there (very few residents in Kwermusl had to dig for water).⁷⁹ The very recently established piped scheme in Mongo wa Moono was being managed by the church. Thus, in the study villages, only the three piped water schemes of Kambi ya Simba, Mang'ola and Oldeani operated cost-effectively for users to manage and maintain; that is, their village governments and water committees had sufficient capacity to manage the schemes.

Irrigation and drinking water supply typically started as bottom-up local-level initiatives requiring collective action to distribute water as fairly as possible. The technology required to find, dig, pump and distribute water prompted users to cooperate. Yet, water supply is inevitably influenced by developments in the wider river basin, where many people seek to benefit from it. Thus, government (or even multi-government) responsibility tends to be found at higher levels to oversee its distribution. Bottom-up institutionalisation, as in this case, seeks to ensure that local interests are served.

7.4 Collective action per village

Social capital develops on the basis of trust. In the above-mentioned examples, various community-based organisations set and implemented policy, rules and regulations; delivered services; or purchased, traded or performed all kinds of other functions that affected livelihoods. They drew their legitimacy from either traditional social or religious intercourse or from the basic governance framework. People in the study areas developed their social capital in collective action related to cultural, religious, administrative, sport, political, social service, economic and government activities. Collective action arose whenever villagers needed one another to pursue objectives jointly, where similar results could not be achieved by individual action.

In addition to conditions for collective resource management, Agrawal (2001) summarised conditions for group formation as being small size; clearly defined boundaries; shared norms; past successful experiences and social capital; appropriate leadership, young ages, familiarity with changing external environments and links to the local traditional elite; interdependence among group members; heterogeneity of endowments with homogeneity of identities and interests; and low levels of

poverty. In addition to trust, Agrawal (ibid.) defined the necessary institutional arrangements as rules that are simple, easy to understand and locally devised; easy enforcement of rules with graduated sanctions; availability of low-cost adjudication; and accountability of monitors and other officials to users. This last one I term as functioning checks and balances.

7.4.1 Trends in communal activities over the research period

In 1988, the maximum number of communal activities counted in a village was 18, including the construction of village offices and working on the village *shamba* (Van Dijk, 1988). Many villages had little collective action other than the village government, its three standing committees, a primary school committee, the primary society and committees responsible for construction of village offices, cultivation of the village *shamba* and collective road establishment. In a few villages residents had joined hands to construct agricultural storage facilities (*godown*), to dig irrigation channels, to establish contours for erosion control or to dig trenches for piped water supply. By the end of the study period, villages easily counted 40 forms of collective action. Some of these were stipulated by legislative acts.⁸⁰ Others were not. There was little differentiation between the villages in their number of lower local government-related committees, as these were established by the Local Government Act. In the sample villages, these numbers varied between 15 and 20. The number of 'other' forms of collective action varied from 16 in Mongo wa Moono to 43 in Kambi ya Simba.

Every village had a minimum of four neighbourhood committees. The size of the village was correlated with the number of neighbourhoods. Villages like Oldeani and Mang'ola therefore accommodated up to ten, while the other villages, except Kambi ya Simba, counted four or five. The number of neighbourhoods and neighbourhood committees in the villages also correlated with their numbers of sports clubs.

Some of the villages had three primary school committees, others had only one. Except Mongo wa Moono, the villages easily accommodated up to ten micro-finance organisations (savings and credit cooperative societies, village community banks, savings and internal lending communities and *mbegu mboru* entities).

The small number of collective actions found in Mongo wa Moono is explained by the culture of the Hadzabe people, as they are known to operate on their own, with few joint initiatives and a lack of investment in the future. For example, a beekeeping group was noted in documents of the supporting NGO, but no production could be observed and therefore it could not be said to actually function. The Iraqw people have a tradition of cooperation. Culturally they have long cooperated to safeguard their environment and assist each other in times of danger or sickness. Table 7.2 presents an overview of the locally established organisational structures for collective action as of 2010.

Table 7.2
Community-based organisations in the sample villages
(Y = yes, available; numbers in parentheses are numbers of groups)

	Harar	Kwer-musl	Tlawi	MwM	Buger	KyS	Mang'ola	Oldeani
Traditional and cultural organisations								
0.0 Council of elders * M	Y	Y	Y	Y**	Y	Y	Y	-
0.0 Council of elders W	Y	Y	Y	Y	Y	Y	-	-
0.1 Ngoma	Y (2)	Y	Y	Y	Y	Y		Y
0.2 Joint management of slopes (aya)		Y						
0.3 Rain dancers (W)	Y	Y					Y	
Religious membership organisations								
1.1 Church committee							RC (HIV)	RC, KKKT
1.2.1 Lutheran	Choir	Choir	Choir	Choir	Choir	Choir	Choir	Choir
1.2.2 Roman Catholic	Choir	Choir	Choir		Choir	Choir	Choir	Choir
1.2.3 Pentecostal	Choir	Choir	Choir		Choir	Choir	Choir	Choir
1.2.4 Tz. Assembly of God				Choir				
1.2.5 Muslim							Choir	
1.3 Orphan care								Y
Sport and social membership organisations								
2.1 Volleyball			Y (f)			Y (girl)		
2.2 Football	Y	Y	Y (5)	Y (2)	Y (4)	Y (6)	Y (10)	Y (10)
2.3 Women's club	Y	Y (2)		Y	Y (3)	Y (2)		Y
2.4 Youth club	Bricks	Choir						
Membership organisations to safeguard political interest								
3.1 CCM***	Y	Y	Y	Y	Y	Y	Y	Y
3.2 Chadema	Y	Y	Y		Y	Y	Y	Y

	Harar	Kwer-musl	Tlawi	MwM	Buger	KyS	Mang'ola	Oldeani
Membership organisations to safeguard labour, farmer or business interest								
4.1 Trade union								TPAWU
4.2 MVIWATA		Y						
4.3 TCCIA								
Membership organisations for social service delivery								
5.1 Primary school committee	Y(2)	Y	Y(2)	Y	Y(3)	Y(3)	Y(3)	Y(3)
5.2 Secondary school committee		Y	Y		Y	Y	Y(2)	Y
5.3 Rural health centre and dispensary committee		Y	Y	Y		Y	Y	Y
5.4 Traditional birth attendants group		Y	Y	Y	Y			
5.5 Community health fund (BIMA)								Y
Membership organisations for economic and productive service delivery								
6.1 Primary society					Y (K)	Y		
6.2 Savings and credit cooperative society	Y (1)	Y (2)	Y (2)	-	Y	Y	Y	Y (3)
6.3 Village community bank	Y (2)	Y (10)	Y (1)	-	Y (4)	Y (4)	Y (3)	Y (4)
6.4 Savings and internal lending community	Y (6)		Y (8)	-	Y (6)	Y		Y (3)
6.5 Mbegu mbora	Y	Y	Y	-	Y	Y	Y	Y
6.6 Cattle dip committee		Murray	Kata		Y			
6.7 Dairy cow group			Y		Y		Y****	Y
6.8 Village water committee or association		Y (1)		Y (3)	Y	Y	Y	Y
6.9 Irrigation committee			Y			Y	Y	
6.10 Tree nursery committee					Y	Y		
6.11 Beekeeping group				Y	Y			
6.12 Mnaada committee		Murray					Y	
6.13 Others	Y*****				Y (5)	Y (12)	Y (3)	Y*****
Lower local government								
7.1 Meeting <i>kitongoji</i>	Y (4)	Y (5)	Y (5)	Y (5)	Y(4)	Y(6)	Y (10)	Y (10)
7.1.1 Joint construction	Road	Road	Road	Road	Road	Road	Road	Road
7.2 Village government	Y	Y	Y	Y	Y	Y	Y	Y
7.2.1 Finance, planning economic affairs	Y	Y	Y	Y	Y	Y	Y	Y
7.2.2 Social committee	Y	Y	Y	Y	Y	Y	Y	Y
7.2.3 Security committee	Y	Y	Y	Y	Y	Y	Y	Y
7.2.3.1 Sungusungu	Y	Mgam-bo	Mgam-bo	Y	Mgam-bo	Mgam-bo	Mgam-bo	Mgam-bo
7.2.4 Ardhi committee	Y	Y	Y	Y	Y	Y	Y	Y
7.2.5 Environmental	Y	Y	Y	Y	Y	Y		

	Harar	Kwer-musl	Tlawi	MwM	Buger	KyS	Mang'ola	Oldeani
committee								
7.2.6 HIV committee	Y	Y	Y	Y	Y			Y
7.2.7 Prevent girl circumcision					Y			
7.2.8 PHC committee		Y	Y	Y		Y	Y	
7.2.9 Calamities committee						Y		
7.2.10 Construction committee*****	Y	Y					Y	
7.2.11 Artificial insemination							Y	
7.3 Village assembly	Y	Y	Y	Y	Y	Y	-	Y
Total								
Civil society	26	35	34	16	43	45	36	37
Local government	15	17	16	16	15	17	20	19
Total	41	52	50	32	58	62	56	56

Notes: M=men; W=women; MwM=Mongo wa Moono; KyS=Kambi ya Simba; CCM=chama cha mapinduzi; MVIWATA=farmers' association; TCCIA= Tanzania Chamber of Commerce, Industry & Agriculture;

*Snyder (2005); **Madsen (2000); ***CCM initially had strong women, youth and elderly 'mass' organisations included; ****in combination with bio-gas development; *****a group of women that makes clay charcoal burners; ***** a group of 240 business (wo)men; *****in some of the villages the responsibility for construction of classrooms, digging of water pipes, etc. is with the kitongoji; *****the above mentioned group of 240 business (wo)men cooperate in small non-registered entrepreneurial activities of 2 to 10 people (average 6) that may add another 40 groups

Source: Author

With the reintroduction of local government in the 1980s, governance functions that were once under the purview of traditional organisations were taken over by local government organisations according to the Local Government Act (URT, 1982). The councils of elders continued to safeguard cultural values and ensure development accordingly. Yet, all of the functions of the traditional *aya* were taken over by the *kitongoji* as mandated by the act. Traditional leadership still wielded influence, but in an informal manner. The *ngoma* dancing groups continued as cultural and religious manifestations without any direct governance function.

Religious organisations proceeded as they had always had, operating choirs and providing some community care. In some places religious organisations were previously involved in delivery of education and health services. Yet, during *ujamaa* they were discouraged from doing so, and afterwards were allowed to operate such services more at arm's length,

under the supervision of the local government concerned. Religious institutions organised leadership capacity building through regional and national structures to enhance the services they delivered.

As noted, numbers of sports and social membership organisations were clearly correlated with the number of neighbourhoods in the villages. Although they were organised bottom-up, their functioning was guided by rules and regulations that were set top-down. Before the mid-1990s, social membership organisations functioned under the control of the ruling party as part of the political organisation. After the introduction of multi-partism these organisations became more socially oriented.

Village leaders in Oldeani and Mang'ola indicated that multi-partism had contributed to the development process, as political parties now had to explain their vision and how they intended to work locally toward its implementation. That by itself was appreciated. It was also argued that a new party taking over district and village leadership had spurred the development process.⁸¹ Individuals organised themselves outside traditional group processes. Local accountability was said to be stronger under the multi-party system, as spokespersons of political groups could demand accountability on behalf of their supporters. Non-traditional leaders, too, had opportunities to argue for local decisions in the interest of their specific constituencies. These changes were said to have led to a broader and more profound decision-making, resulting in more effective and efficient use of available resources. As Mang'ola leaders indicated, 'Up to 2005, CCM [a political party] was supreme in Mang'ola. But since that time Chadema [another party] has led, and participation and democracy has improved since then.' Similarly, a village leader in Oldeani named the change in political leadership as the single largest contributor to the development process in Oldeani.

The number of school committees and PTAs operating in the villages reflected the numbers of schools. Some decisions made by these committees needed to be endorsed by the village government. In taking their decisions, the PTAs considered the local situation. The interaction between school management, PTA, parents and village government determined the quality of education, though the PTA was the supervising coordinator. Government support was standardised through capitation grants, but not sufficient to ensure a high-quality education. Besides classrooms, housing for teachers had to be constructed to attract quality teachers. This construction was a community responsibility, guided by

the PTA. The PTA supervised school maintenance too. In cases where the ministry was considered to have supplied inadequate teachers, the PTA organised the parents to contribute to employ additional staff, often including non-certified teachers. The PTA also organised parents to pay for preparation of school lunches and sometimes to employ a guard. Finally, the PTA organised parental contributions for additional teaching in extracurricular subjects such as agricultural practices and use of computers.

Construction of health facilities, like a village health dispensary, was the responsibility of the village leaders as well. After construction, however, little more needed to be done. Actual health service delivery was professionally guided by the Ministry of Health in terms of supplying staff, equipment and medicine. Residents did use local herbs and treatments for ordinary ailments, and traditional birth attendants helped women deliver, based on local teaching and experience. Support for traditional birth attendants was provided top-down from the Maternal and Child Health Department, or from NGOs, mainly to ensure hygiene. In addition, villages were encouraged to employ health workers trained by the Health Department, to store some 'modern' medicines and to provide these (sell them) to those who needed them. Employment of village health workers lasted only as long as external support was available to ensure the required capacity building and medical supplies.

The government allowed communities to run water supply schemes themselves, so collective water supply developed depending on the geo-hydrological potential of an area, alternatives for water supply and people's ability and willingness to pay. Government and religious organisations were major contributors in construction of water supply systems, with trench digging as the major local contribution. In conjunction with the concerned village government, the water committees did appear to have sufficient capacity to manage the ventures, as demonstrated in Kambi ya Simba, Oldeani and Mang'ola. In Mongo wa Moono no conclusion could yet be drawn, as the piped scheme had just been installed with external support at the end of the research period.

Collective action in irrigation started as a gradual process in which bit by bit more farmers joined and distribution of water was the main activity that needed coordination. My research found no examples where farmers had managed to establish structural works themselves. Where such structures were found, as in Mang'ola and Tlawi, external support

had been requested and provided. In Mang'ola, the cooperation in irrigated farming had developed national level links, as the local irrigation committees had commenced cooperation with the River Basin Water Board (IDBO), which is a nationally established institute. The local committees contributed financially to the functioning of the River Basin Water Board as well.

Membership organisations for economic and productive service delivery can be further differentiated as those for input supply, micro-finance, transportation and actual production. Organising input supply collectively has proven to be effective in the study villages, as decision-making power – to purchase an input or not – remained with the individual members. Collectively managed micro-finance activities were observed at a manageable scale and fully under members' control. The collective facilitation of transport and collective structuring of a market (*mnaada*) were good examples of collective action forms in which villagers could elect to join in. Collective marketing of non-perishable products proved manageable as well, as did collective processing of milk. Equivalent capacity and shared responsibilities among all group members were key reasons for the good results. Only concerning actual production, and particularly the aspect of professional quality control from the farm gate to the point of sale, was little successful collective action observed.

Collective action through lower local government was understood as all processing and structuring guided by the Local Government Act (URT, 1982). Members of the various prescribed committees and councils were ordinary villagers who had volunteered for election. These local leaders guided establishment of socio-economic infrastructure and social service delivery, ensuring maintenance and supervising management collectively. Although guided by the Local Government Act, that legislation provided little more than an indication of how duties should be performed. Village councils thus set their own proceedings and delegated powers to committees as they saw fit. It was the community itself that decided to initiate work towards a specific level of local service delivery. Neither did the act prescribe the means of functioning at the neighbourhood level. Collectively, residents determined the level of social service delivery that they could afford. Collectively they distributed tasks amongst themselves to construct and maintain socio-economic infrastructure. In social service delivery, the quality of local leadership proved

to be instrumental. Collectively local structures determined the level of institutionalisation of services. Collectively they determined how to operate checks and balances. Collectively they succeeded or failed to operate quality checks. However, the line separating collective and public action was vague at the lower local government level. Organisations were subject to higher local government decision-making only where resources needed to be shared with others, like in the case of water and land. In these cases, central government interference was even observed.

7.4.2 Conclusion

Mongo wa Moono and Harar had the fewest examples of collective action among the sampled villages. At the other extreme were Kambi ya Simba with 62, Buger with 58 and Mang'ola Barazani with 56 collective action initiatives, the majority of which were registered and functioned well. In addition to the 56 registered collective action endeavours, Oldeani had another 40 business-related activities in which people cooperated in very small groups, though not registered. These latter ones turned out to be enterprises run by seasonal labourers who had ample time and opportunity to get involved in off-season trade.⁸²

There is no univocal explanation of why some villages had less collective action than others. The Hadzabe people, by tradition, did not invest in the future, and therefore saw little benefit in cooperation. This is why little collective action was found in Mongo wa Moono. In other villages, given the vulnerability context they faced, the Iraqw people elected to prepare jointly for potential disasters or cope jointly with perceived scarcities, for example, by carrying out erosion control measures, managing pasture, distributing water and cultivating fuelwood.

The village of Mongo wa Moono, which did not exist in 1988, counted 32 examples of collective action by the end of the study period, not including the village government itself, which had not yet been registered. However, some of the initiatives registered, like the beekeeping group, hardly functioned. In Mongo wa Moono people traditionally moved around and focused on their own household. They were not educated or capacitated to understand the benefits of collective action. Hadzabe communities are egalitarian and characterised by high mobility, with their camps changing size and composition regularly, which is important for conflict avoidance. According to Madsen (2000: 48), when in

the past the Hadzabe needed to be represented somewhere by any of them, they chose the weakest individuals amongst themselves as their spokesperson. This tactic seems akin to burying one's head in the sand. This no longer applied later in the study period, as the Hadzabe nowadays need strong representation to protect their lifestyle, to retain what they have and to recover what they have lost.

Until recently, the Hadzabe had little political power to counter the encroachment of neighbouring communities seeking to herd their cattle or to start cultivation on the Hadzabe land (Madsen, 2000). Recently CCM established representation in Mongo wa Moono, but this does not mean that Hadzabe interests are well vested in CCM. Nonetheless, other political parties were not yet present there. Collective action among the Hadzabe still needed to be developed to safeguard their collective interest. In their case, a strong lobbying capacity will be key to safeguard their territory, though this is rather beyond their culture, as their tradition is to 'walk away' if conflict arises.

Harar is a village that was settled comparatively recently. Its collective action had not yet produced the necessary service delivery. In fact, the village had recently split into smaller units – as had several other villages in Mbulu District. Due to this restructuring, residents had to focus on necessary new infrastructure, further reducing their capacity to improve service delivery. This was made all the more difficult because a smaller group was left to contribute. In Karatu District, no villages had split. Thus, there remained a relatively large base to contribute to new infrastructure there.

Although there is no univocal explanation for why villages have more or less collective action, residents seemed motivated to act collectively when they otherwise could not access scarce but necessary resources; when access to specific inputs or service delivery was otherwise difficult; and/or when they were threatened by an outside force which was difficult to deal with individually. Traditionally among the Wairaqw collective action is discussed, operationalised and institutionalised area-wise in the neighbourhood (*aya*) or community-wise through the council of elders.

There is no univocal explanation for why collective action does not perform optimally. Imposed membership without effective checks and balances to guarantee quality service delivery will often fail. However, without an institutional environment to enable collective action to ad-

dress such situations, collective efforts are unlikely to perform their roles effectively.

An important change in the structuring of collective action has been the transition from a one-party state to a multi-party democracy. At both the national and the local level issues that were previously discussed internally within the party became publicly debated. Local party cadres explained their views on local issues and sought to gain support based on their own political interest platform. Village leaders noted multi-partism and political change in the leadership as a major component of the local development process. However, empirically I could find no data to substantiate such statements.

The number of lower local government organisations and social service organisations differed little from village to village. The number of sports organisations was correlated with the number of neighbourhoods. Numbers of membership organisations for economic or productive service delivery did differ from village to village, for reasons to be discussed later.

7.5 Collective action and development

As noted in section 7.2, collective management of natural resources, such as wildlife, pasture, mountain slopes and irrigation water started gradually. Growing interdependence on the same resources stimulated inhabitants to cooperate to gain optimal benefit, while simultaneously regulating free riding or misuse behaviour. In general, collective action requires both management capacity and technical understanding if it is to guide resource use in an acceptable way. The right measures must be chosen, for example, to prevent erosion or soil degradation or to minimise water losses. Besides trust (Tyler, 2011) and given rights (Agrawal & Ostrom, 2001), collective action forms a key aspect of local development processes, as most households individually cannot afford to develop the socio-economic infrastructure that can be provided by joint efforts. At the same time, such cooperation is a learning process for everybody involved. Over time it enhances participants' social and political capital. Moreover, the way decisions are taken, implemented and enforced can prove crucial in addressing a given vulnerability context.

For collective action to enhance development, technical competence is needed to exploit given resources effectively, efficiently and sustaina-

bly. Technical competence guides decisions on infrastructure, as well as procedures for overseeing the socio-economic services related to it. Such competence entails the way collective input supply, processing or marketing are organised, and the way participants are able to benefit jointly. Examples in the study villages of collective action requiring technical understanding in design, decision-making, implementation and maintenance were wildlife management in Mongo wa Moono; prevention of soil erosion and regulation of bush fires in Kwermusl, Buger and Kambi ya Simba; and efficient distribution of irrigation water in Tlawi, Mang'ola and Kambi ya Simba. In these instances, enhancing natural resource management capacity depended upon a technical understanding of the changing environment.

Considering the different types of collective action found in the study villages, no clear line can be drawn indicating that certain types of collective action occurred in one village while other types were found elsewhere. The emergence of collective action appeared to be an evolutionary process, differing from village to village. A common understanding is that people's *vulnerability context* stimulates them to act collectively. For the Hadzabe, it led them to lobby collectively to have their land title institutionalised. For Iraqw smallholders, it prompted the institutionalisation of collective erosion-prevention measures. For those dependent on irrigation water, the vulnerability context stimulated farmers to institutionalise water distribution procedures and policies. In the case of irrigation management, complex cost-benefit analyses are required to guide higher level technical investments and ensure that available water resources are used effectively and efficiently.

A common interest in ensuring social or economic service delivery in many cases prompted villagers to join hands to establish the necessary infrastructure. Only Mongo wa Moono had not reached the stage of having basic infrastructure fully established. Though it did succeed in collectively clearing brush to establish an access road, Mongo wa Moono had reached a stage where collective development of some social infrastructure was taking off, but it had not yet been accomplished. All of the other villages had successfully used collective action to establish socio-economic infrastructure. The operation and maintenance of this infrastructure did differ from village to village, as did the quality of the services provided, generally in line with the collective interests and action of the villagers.

In Harar basic education infrastructure had been established, but it was not good enough to attract high-quality teachers to come and stay. Neither was it good enough to attract the standard number of pupils per class. In terms of educational infrastructure, none of the villages studied had achieved the government standard. In some places, educational infrastructure had been constructed and related services were functioning relatively effectively, efficiently and sustainably. There was a gradual improvement observable towards the requisite numbers of classrooms, housing for teachers, desks, textbooks and teaching aids, classroom volunteers, school cooks, guards, computers, video equipment and generators. This was associated with a gradual rise in the educational level of village heads of household and improvements in secondary education graduation rates. Similarly, a gradual improvement was seen in the quality of primary education where collective interests within the PTA guided schools to ensure pupils were prepared to survive in the current society, as mentioned in Kwermusl, Kambi ya Simba and Mang'ola.

In terms of water supply infrastructure, service delivery depended on the original water vulnerability context in each village. Traditionally, people just collected water from rivers, lakes and ponds. When these open sources dried up, they dug wells, individually or collectively. Like in other villages, water supply was not a real problem in Mongo wa Moono, as it had ready access to an available source. Village leaders, however, mentioned water supply as an issue, which they hoped to address through external support. At the end of the study period, however, there was no indication as yet of collective action to operate and maintain such supply. In Harar talk of obtaining an improved water supply had circulated since 2005, but little substantial work had been done. In Kwermusl, Tlawi and Buger, people depended on the river or on their own wells, as dug in their fields. Kwermusl had one shallow well under collective supervision. In Buger, based on collective action, a survey towards borehole construction had been conducted, but no plans for construction had yet been drawn up. Kambi ya Simba, Oldeani and Mang'ola depended on a piped water supply managed collectively and led by an elected board. Among all the water schemes found, collective operation and maintenance was observed where ownership was institutionalised collectively.

Additionally, where collective undertakings aimed to add value, technical and management capacity and trust were required for institutionalisation. Though initially supply driven, improved agricultural input supply

(*mbegu mbora*) had persevered everywhere, except in Mongo wa Moono. In Kwermusl and Kambi ya Simba, for example, it was gradually more in demand and distributed collectively, owing to transparent procedures and trust. Collective organisation of seed supply, technical advice and harvesting equipment hiring, as in Kambi ya Simba, relied to a major extent on relationships with the supplier, which was assumed to be technically adept. Here, however, all households were free to decide for themselves whether to go along with the input, advice or equipment. Collective research was being done in Mang'ola to determine the best producing onion varieties; this initiative entailed locally available technical advice which farmers could individually decide to follow or not. Collective organisation of processing, transporting and marketing requires a high level of trust, alongside technical and management capacity to prevent losses for the participating producers. As individual members' incomes are fully dependent on the quality of the collective action there should be no doubt as to the quality control capacity concerned. The small collective undertakings that emerged in Oldeani started as one-to-two-person undertakings, gradually growing, distributing responsibilities among themselves, appearing close to those described by Mintzberg (1993) in the introduction of his 'Structures in Fives'.

7.6 Conclusion

This chapter described the development process in each of the sample villages, as perceived by their leaders. It discussed whether the development interventions were generated as a reflection of the vulnerability context or other external factors and whether the development interventions were initiated individually or collectively. I identified the various types of collective action that were observed or needed to sustain the specific development interventions.

All of the forms of collective action required common goals to be set and understood, awareness of property rights to the resources concerned, social relations, mutual trust, and transparent procedures to take decisions and exercise authority. I conclude that the various forms of collective action require different levels of knowledge, skills and attitudes to sustain the collective action itself and to institutionalise it. The variety of collective action found in the sample villages required different types

of capacities or expertise among the village leaders and within the community.

The vulnerability context of the various villages challenged residents to collectively safeguard their way of life and livelihoods. The Hadzabe people lobbied collectively to get a title to their land in order to protect their way of life. Farmers in Kwermusl, Buger and Kambi ya Simba took measures to collectively prevent erosion. Farmers in Tlawi, Mang'ola and Kambi ya Simba cooperated to dig a channel and distribute water to irrigate their farms. These villages dealt with their vulnerability contexts on the basis of experience, which their residents' gained over time and which they shared.

Initial establishment of socio-economic infrastructure or service delivery sometimes benefitted from external technical or financial support, but the collection of local building materials for construction was organised collectively. In Mongo wa Moono such action had hardly taken place. In Harar such action had not yet resulted in satisfactory infrastructure. In the other villages, infrastructure had been established, though housing for teachers did not suffice anywhere. After the initial establishment of socio-economic infrastructure, its operation and maintenance depended on the capacity and willingness of the local population to identify and ensure a certain level of quality: for instance, a standard of maintenance, of education, or of the lunch provided to children at school. These standards depended on the knowledge of the committee members concerned, while simultaneously relying on the capacity of the committees to convince others within the community to go along with the chosen quality level and contribute accordingly. Here too, the situation differed from village to village. In Mongo wa Moono, people hardly saw the added value of a basic education, as it did not teach basic survival skills. In Harar, local leadership could not convince residents to support improvements in educational quality. In Kwermusl and Kambi ya Simba, leaders showed keen interest in education and were able to convince both parents and the village government to take measures to improve quality. Capacity to manage, innovate and lobby for development is crucial. Agrawal (2001) among others remarked on the need for simple and easily understandable rules in order to sustain collective action. Yet, in institutionalisation of collective action, rules and regulations are confronted and must be coped with. To understand and supervise the implementation of contracts and to operationalise checks and balances re-

quires experience and expertise that might not be available among members. Nonetheless, it is up to members to ensure the availability of such expertise. Insufficient capacity to monitor quality – as in the case of the collective sale of onions in Mang’ola – can usher in the collapse of collective action. Joint capacity building among village community bank members enabling them to better understand the organisation’s functioning demonstrates how collective action can succeed. In short, capacity is required for collective action to be sustained.

Despite the general rise of education, Mushi (2001) pointed out that most collective action had a low management capacity, as most of these initiatives operated on a voluntary basis with leaders having only a very basic educational level. Very few professionals were found to be involved.

As far as the village community banks and savings and internal lending communities were concerned, groups were small and trust was high. After basic training, members gradually learned by doing. Regarding the village committees for schools, water supply and irrigation, complicated contracts needed to be entered into, and experience or education was crucial to understand their technical and legal implications. Recent research by Van Dijk and Timothy (2013) *inter alia* on community involvement in the procurement of contractor services concluded that ‘standard seven’ was generally insufficient for village leaders to understand, for example, the procurement procedures they had to deal with. Furthermore, leaders of the study villages had insufficient experience in assessing the quality and trustworthiness of the government professionals concerned. Subsequently, village leaders were unable to institute ‘checks and balances’ to prevent fraud.

The question, which will be addressed in Chapter 8, is whether there is a link between the livelihood assets of given communities and the level of collective action emerging in those communities. In regard to the livelihoods villagers pursued, I answer this question empirically by identifying links between the vulnerability context and collective action, between households’ livelihood assets and collective action and between collective action and livelihood outcomes.

Notes

- ¹ The development interventions have been set in timelines worked out during focus group discussions with a good representation of the village leaders in the respective village, as presented in annexes B1 to B8.
- ² Focus group discussion village leaders Tlawi, 26th of July 2010.
- ³ Focus group discussion village leaders Kwermusl 29th of July 2010.
- ⁴ Focus group discussion UWT, Kwermusl, 4th of April 2012.
- ⁵ Focus group discussion village leaders Kambi ya Simba, 5th of August 2010.
- ⁶ Focus group discussion Kambi ya Simba PTA, 15th of August 2013.
- ⁷ Focus group discussion village leaders Buger, 31st of July 2010.
- ⁸ Focus group discussion village leaders Oldeani, 3rd of August 2010.
- ⁹ Focus group discussion village leaders Man'gola, 2nd of August 2010.
- ¹⁰ Interview with the elected leadership of Man'gola, 16th of April 2013.
- ¹¹ In other parts of the country farmers are confronted with 'quality assurance' specifications of the Tanzania Bureau of Standards. Products that do not meet set quality standard are sold locally. Farmers typically do not know how to produce or process their agricultural produce to achieve the required quality level for the national and international markets.
- ¹² Focus group discussion village leaders Harar, 28th of July 2010.
- ¹³ Focus group discussion village leaders Mongo wa Moono, 27th of July 2010.
- ¹⁴ Kwermusl village government focus group discussion, 4th of April 2012.
- ¹⁵ Man'gola village government Sungusungu focus group discussion, 10th of May 2012.
- ¹⁶ Harar PTA focus group discussion, 6th of August 2012.
- ¹⁷ In 1997 the first secondary school was constructed together with the – then – larger ward in Murray. The second secondary school - which is discussed here - of which construction started around 2015, is physically based in Kwermusl itself.
- ¹⁸ Harar PTA focus group discussion, 6th of August 2012.
- ¹⁹ Tlawi PTA focus group discussion, 19th of April 2013.
- ²⁰ Man'gola Barazani PTA focus group discussion, 25th of September 2012.
- ²¹ Oldeani PTA focus group discussion, 26th of September 2012.
- ²² Mongo wa Moono village leaders focus group discussion, 7th of August 2012.
- ²³ Man'gola Chini PTA focus group discussion, 25th of September 2012.
- ²⁴ Man'gola PTA focus group discussion, 25th of September 2012.
- ²⁵ Harar PTA focus group discussion, 6th of August 2012.

- ²⁶ Tlawi PTA focus group discussion, 19th of April 2013.
- ²⁷ Kwermusl PTA focus group discussion, 4th of April 2012.
- ²⁸ Kambi ya Simba PTA focus group discussion, 15th of August 2013.
- ²⁹ Focus group discussion Man'gola village water supply, 10th of May 2012.
- ³⁰ Karatu NGO registrar, 13th of January 2014.
- ³¹ Learning workshop to establish water user associations in the internal drainage basin, 14th September 2010.
- ³² Focus group discussion Buger village leaders, 10th of July 2010.
- ³³ Kambi ya Simba irrigation committee focus group discussion, 31st of July 2014.
- ³⁴ Man'gola irrigation committee focus group discussion, 10th of May 2012.
- ³⁵ Focus group discussion leaders at Mang'ola Ward Office (WEO and former WEO), 1st of August 2014.
- ³⁶ Tlawi irrigation committee focus group discussion, 9th of August 2012.
- ³⁷ Fatina farmers focus group discussion, 10th of May 2012.
- ³⁸ Focus group discussion village leaders Kambi ya Simba, 5th of August 2010.
- ³⁹ Focus group discussion Songabele farmers, 10th of May 2012.
- ⁴⁰ E.g. see focus group discussion Gitoboda, Man'gola, 10th of May 2012.
- ⁴¹ Kambi ya Simba (KKKT) SACCOS focus group discussion, 27th of September 2012.
- ⁴² Tlawi, dairy farmers focus group discussion, 9th of August 2012.
- ⁴³ Buger ViCoBa – SILC focus group discussion, 28th of September 2012.
- ⁴⁴ Kermusl ViCoBa Tiken focus group discussion, 4th of April 2012.
- ⁴⁵ Oldeani ViCoBa focus group discussion, 26th of September 2012.
- ⁴⁶ Kambi ya Simba ViCoBa focus group discussion, 27th of September 2012.
- ⁴⁷ Man'gola farmers focus group discussion, 10th of May 2012.
- ⁴⁸ Mongo wa Moono beekeeping focus group discussion, 13th of August 2013.
- ⁴⁹ Focus group discussion Gongali women, 16th of April 2013.
- ⁵⁰ Buger ViCoBa focus group discussion, 28th of September 2012.
- ⁵¹ Focus group discussion Karatu TCCIA management, 19th of September 2013.
- ⁵² Focus group discussion Mbulu TCCIA management, 20th of September 2013.
- ⁵³ Separate focus group discussions with CCM and Chadema leaders, 4th of April 2012.
- ⁵⁴ Focus group discussions village leaders in, respectively, Oldeani, 26th September 2012, and Man'gola, 16th of April 2013.

- 55 Focus group discussion Tlawi secondary school, 19th of April 2013.
- 56 Focus group discussion construction committee Haynu secondary school, 28th of July 2014.
- 57 Focus group discussion PTA Harar, 6th of August 2012.
- 58 Focus group discussion PTA Kambi ya Simba, 15th of August 2013.
- 59 Focus group discussion PTA Kwermusl, 4th of April 2012.
- 60 Focus group discussion PTA Man'gola, 25th of September 2012.
- 61 Focus group discussion PTA Oldeani, 26th of September 2012.
- 62 Focus group discussions ViCoBa-SILC Buger, 28th of September 2012.
- 63 Focus group discussion SILC Harar, 6th of August 2012.
- 64 Focus group discussions ViCoBa Man'gola, 10th of May 2012.
- 65 Focus group discussion ViCoBa Oldeani, 26th of September 2012.
- 66 Focus group discussions ViCoBa Kambi ya Simba, 27th of September 2012.
- 67 Focus group discussion SACCOS Kambi ya Sima, 27th of September 2012.
- 68 Focus group discussion SACCOS Oldeani, 26th of September 2012.
- 69 Focus group discussion SACCOS Man'gola, 10th of May 2012.
- 70 Focus group discussion irrigation committee Kambi ya Simba, 31st July 2014.
- 71 Focus group discussion irrigation committee Man'gola, 10th of May 2012.
- 72 Focus group discussion irrigation committee Tlawi, 9th of August 2012.
- 73 Focus group discussion water committee Kambi ya Simba, dd. 27th of September 2012
- 74 Focus group discussion water committee Man'gola, 10th of May 2012.
- 75 Focus group discussion Kitongoji committee Oldeani, 26th of September 2012.
- 76 Focus group discussion village leaders, 26th of July 2010.
- 77 Focus group discussion village leaders, 31st of July 2010.
- 78 Focus group discussion village leaders, 28th of July 2010.
- 79 Focus group discussion village leaders Kwermusl, 29th of July 2010.
- 80 For instance the Local Government Act, Cooperative Act, Water Utilization Act, Water Supply and Sanitation Act.
- 81 See notes on focus group discussions in annex B.
- 82 Focus group discussion leaders Waridi Biashara, 26th of September 2012.

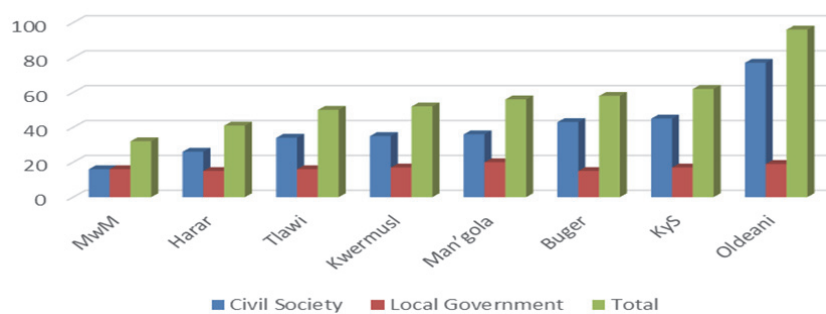
8

Livelihood and collective action

Dia (1996: 31) linked households' livelihood assets, in terms of human, natural and financial capital, to the institutional capacity of formal and informal ways of operation and the transaction costs of collective action. These livelihood assets have further been linked to the physical capital available in an area, which is said to influence the cost of transforming available raw materials into processed ones. Both household livelihood assets and physical capital affect local economic performance. The sustainable livelihoods framework (Figure 3.4) correlates the vulnerability context in which people operate with their livelihood assets and the way they organise or are organised to address the challenges they face.

The actual transformation of the structures and processes through which people operate and develop their livelihood strategies is often seen as a 'black box'. The current research, however, sought to identify which elements of the vulnerability context, which livelihood assets and which external factors or forces in the institutional environment stimulated people to act collectively. Which of these factors played a role in the emergence of collective action to maintain the environment, to develop socio-economic infrastructure, to organise education for children, to care for neighbours, to economise on water for irrigation or domestic supply, to add value to local produce or to arrange economic service delivery? Figure 8.1 presents the number of collective action endeavours found in each village in 2010. As Chapter 7 observed, collective action linked to the village government was approximately equal across all of the villages, as these were stipulated by legislation. The number of civil society collective action endeavours, including social and economic activities, did differ from village to village.

Figure 8.1
Number of collective action endeavours in the study villages in 2010



Source: Author

This chapter seeks to open the above-mentioned ‘black box’ and explore relationships between the various elements of the sustainable livelihoods framework using empirical data from household surveys in the eight villages. Annex B presents details of these surveys. I correlated the vulnerability context and livelihood assets with the structuring and processing of collective action, and then correlated the structuring and processing of collective action with livelihood outcomes. My intention in doing so was to demonstrate empirical links between the vulnerability context, livelihood assets, collective action and livelihood outcomes. Ultimately, I sought to determine what changes at the household level challenged people to operate collectively towards improved livelihood outcomes.

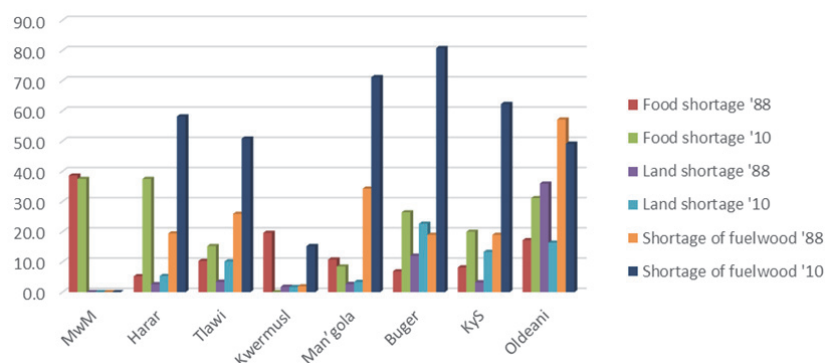
8.1 Which elements of the vulnerability context triggered collective action?

8.1.1 Vulnerability and collective action in the villages

Vulnerability in terms of shocks, trends and seasonality are difficult to quantify. Rainfall patterns, availability of water for irrigation and domestic use, soil conditions, altitude and slope all influence the vulnerability context, but their influence in this study could not be aggregated in quantitative terms. ‘Rain dances’ were conducted in the study villages in periods of drought. From that perspective, a correlation might be drawn

between drought and this form of collective action. But no direct cause-effect relationship has been proven between rain dancing collective action and rainfall. The influence of rainfall on, for instance, maize production and consequently food availability in a particular year is a given. For instance, a shock in the form of a drought struck Kwermusl in 2010, leading to food shortages, but no clear correlation with collective action could be identified. The survey data collected in this research enabled vulnerability to be expressed and partly quantified in terms of landownership and perceptions of shortages regarding land, food and resources like pasture and fuelwood, but no trend could be identified in the relationship between findings on these and collective action (Figure 8.2).

Figure 8.2
Percentage of households reporting shortages



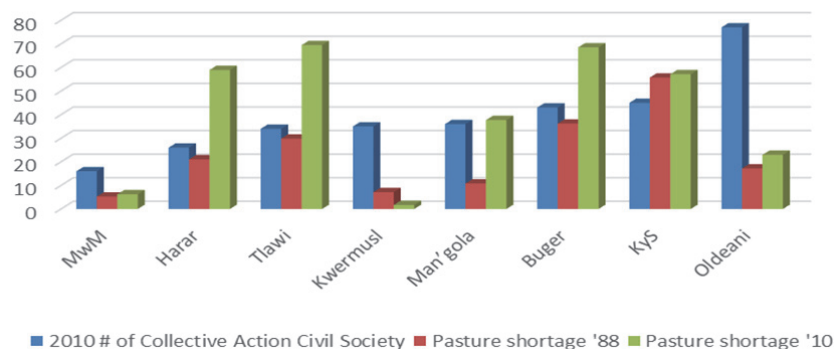
Source: Author

Apart from the difficulty of quantitatively linking the vulnerability context with collective action, the actual 'value' of the indicators used did not have a univocal meaning in the eight villages sampled. For example, food shortage among the Hadzabe in Mongo wa Moono, where one depends on hunting and gathering, could not be compared to that that in the villages depending mainly on food crops, or those depending mainly on cash crops. In 1988, a food shortage affecting the Hadzabe in Mongo wa Moono threatened to worsen as farmers and pastoralists invaded the area. Agricultural and pastoral activities reduced the natural fodder that the Hadzabe depended on and repelled wildlife. Collective action among

the Hadzabe enabled them to lobby for a land title to their area to protect their food sources, which since then have remained stable.

Land scarcity as reported by hunters and gatherers, by pastoralists, by rainfed and irrigated farmers or by labourers differs in terms of magnitude. For hunters and gatherers 4 hectares is hardly sufficient to subsist, while half a hectare may be enough for an irrigated farmer to survive. Among the labourers in Oldeani, land scarcity was one of the factors that spurred them to seek alternative income sources. Another factor was their available time, as the work on the estates, although seasonal, did not allow the workers to leave. They collectively undertook small business enterprises to earn additional income. The characteristics of the land that was available challenged people to cooperate as well, although in different ways. In Kwermusl, for example, slopes are steep and erosion prevention must be tackled collectively, as in other areas. The gentler slopes of Kambi ya Simba enabled farmers to collectively hire combine harvesters to cultivate large areas.

Figure 8.3
Percentage of households with insufficient pasture in relation to collective action



Source: Author

Data on fuelwood scarcity and availability of hurricane lamps in Oldeani, which had electricity, could not be compared with similar data from elsewhere where there was no electricity. Irrespective of perceived fuelwood shortages, all villages – except Harar and Mongo wa Moono –

ran village tree nurseries in 1988. Except in Kambi ya Simba, these had all been privatised by 2010. However, the Kambi ya Simba tree nurseries were established to produce seedlings to plant to prevent erosion. Under *ujamaa*, tree nurseries were run collectively under the auspices of the village government. Raising seedlings later became a private business. Nowadays villagers plan for their own fuelwood needs, buying fuelwood when needed.

Pasture scarcity had vastly worsened in Harar, Tlawi, Mang'ola and Buger (Figure 8.3). In Mang'ola the average number of livestock per household had declined (see Figure 8.11) but the population had expanded rapidly (Table 8.1).

Consequently, the net livestock population actually grew tremendously in absolute terms (470%). Villagers had shifted to zero grazing dairy farming techniques. In Tlawi, the total number of livestock remained rather stable, but because of changing village boundaries pasture area had diminished, so despite a drop in cattle ownership per household and a shift to dairy farming using zero grazing techniques, households still reported insufficient pasture availability. In Harar and Buger, too, pasture was insufficient, despite a major reduction in the livestock herd. Pasture scarcity rose in Kambi ya Simba and Oldeani, despite an enormous reduction in livestock numbers linked to a shift to zero grazing farming techniques. In Kambi ya Simba, a collective awareness had dawned early on, in 1988, that destocking was needed. By 2010, this had led to a reduction in livestock numbers to 55% of the 1988 figure. In Oldeani, the livestock population had dropped to just 11% of the 1988 figure in absolute terms. In Kwermusl the average livestock population per household and the availability of pasture were stable. This could be explained by the traditional environmental management practices of the *aya* on the slopes.

The *aya*, or communal environmental management group, was the only collective action endeavour identified among the Iraqw people to address the vulnerability context directly (Thornton, 1980). In Mongo wa Moono pasture was not seen to be a problem, as hunters and gatherers hardly possess livestock. The pastoralists who occupied the area in 1988 had ample space for their livestock, though nowadays they graze their livestock mainly outside the district.

Regarding water provision, population growth challenged households to either divert surface water closer to homes or to search for additional water sources. In either case villagers worked together to dig shallow

wells (Kwermusl), trenches (Oldeani, Mongo wa Moono) or channels (Kambi ya Simba, Mang'ola, Tlawi), or to collect money to hire contractors to do the work with heavy equipment (Buger, Harar) or to lay water pipes. The need for a reliable water supply thus challenged rural settlements to cooperate, but the form of collective action that arose varied from place to place.

8.1.2 Conclusion

Whatever the vulnerability context, the type of livelihood pursued by the people concerned influenced the collective action that emerged.

Hunters and gatherers lobbied collectively for a communal land title to safeguard their way of life in a specific area in the Yaeda Valley. The Hadzabe were given sufficient lands to guarantee that a selected number of households could continue their way of life. Outside food sharing after a major hunt, they continued to operate mainly individually (Woodburn, 1981).

Pastoralists moved their herds when the environment no longer sufficed to feed their cattle. Shortages of pasture thus did not motivate pastoralists to safeguard specific areas to maintain a certain grazing capacity; they simply shifted elsewhere, travelling throughout the country and abroad to find pasture for their livestock. Collective action to safeguard pasture, in this case, represents a 'tragedy of the commons' (Hardin, 1968). This means that for pastoralists, shortages of pasture did not lead to collective governance to safeguard existing resources on the basis of a particular agreed grazing capacity. In the distant past this happened throughout Mbulu and Karatu districts, when the agriculturalists began invading the area. In the more recent past, this was threatened in Mongo wa Moono and Harar, where collective efforts had to be undertaken to secure the respective livelihoods of the hunters and gathers and agriculturalists.

Farmers that kept some livestock exhibited concern for their environment. Such farmers were less able to move and consequently invested more in the environment to reduce the negative effects of the vulnerability context. Farmers cooperated to carry out environmental measures for safeguarding slopes through the *aya*; they raised seedlings for erosion control and for fuelwood; and they collaborated to close hilly areas to grazing to prevent erosion. In 1988, tree nurseries were managed under

supervision of the *aya*, *kitongoji* or village government. Also related to seedling production, fuelwood shortages grew everywhere in the study area except in Oldeani, which was connected to the national electricity grid. As noted, tree seedlings were raised collectively in 1988, though by 2010 such ventures had been privatised virtually everywhere. In Kambi ya Simba nurseries were still being managed collectively to raise seedlings for erosion prevention.

To access water, farmers cooperated to dig earthen channels and distribute water for irrigation. In addition, neighbours cooperated to dig wells for domestic water supply. In joint action involving many households, trenches were dug over long distances to access water sources for domestic water supply. The greater the scarcity of water, and the wider the area was in which people made use of the scarce resource, the more the collective action concerned was institutionalised, as demonstrated in Tlawi, Kambi ya Simba, Oldeani and Mang'ola.

Safeguarding the local environment, protecting natural resources and ensuring access to water were all collective actions to address food, land, fuelwood or water shortages. Depending on the livelihoods villagers pursued, these all reflected elements of the vulnerability context which challenged households to decide and act collectively. The vulnerability context varied from place to place and consequently so too did the types of collective action that emerged. Safeguarding the hunter and gatherer way of life in Mongo wa Moono was a one-off collective activity, sufficing for the time being. Erosion control to safeguard agricultural land was a continuous activity among neighbours. Water management for irrigation and domestic use was a continuous activity, though growing expertise was required to minimise water losses and keep up with expanding demand.

8.2 What livelihood assets correlate with collective action?

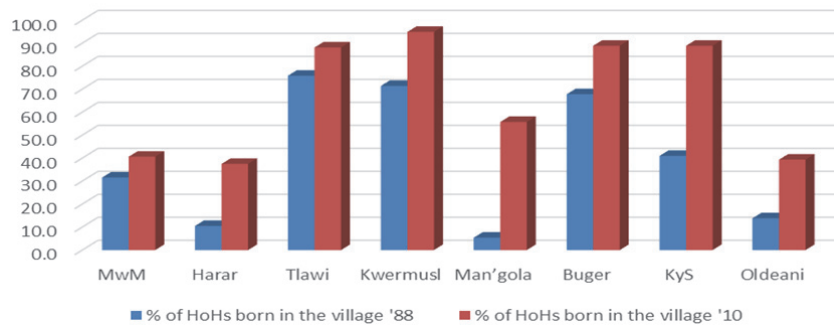
Collective action is part of the 'structuring and processing' defined in the sustainable livelihoods framework. Social motivation stimulates people to cooperate (Tyler, 2011). To gain insight into which specific assets enhance collective action, I asked whether particular livelihood assets correlated with collective action.

8.2.1 Cultural capital and collective action in the villages

The literature describes culture in many ways, including ‘the total way of life of people’, ‘being learned’, ‘being shared’, ‘based on symbols’, ‘related to behavioural patterns’ and ‘ethnicity’ (Geertz, 1973; Hatch, 1993; O’Neil, 2012). Some define *cultural capital* as relating to norms, values and attitudes that influence behaviour. Cultural capital is thus linked to the forms of knowledge, skills, education and advantages that people have in society. Bourdieu (1986: 17) described cultural capital in the form of its ‘*embodied state*’, its ‘*objectified state*’ and its ‘*institutionalised state*’. In the research area ‘*the embodied state*’ refers to the more informal (traditional) forms of collective action, while ‘*the institutionalised state*’ refers to the more formal forms of collective action. I do not refer to Bourdieu’s ‘*objectified state*’ as cultural capital in the form of collectively manufactured goods (pictures, books, etc.) was not identified in current research. Cultural capital determines the rules for engaging human and social capital (Chobi, 2010), which differ depending on the kinds of livelihoods pursued. As there is no uniform description and as culture comprises the whole of society, in this research, I defined and quantified *culture* in terms of a ‘common understanding of shared locality, being born within the same area’. This, I am aware, is a very limited operationalisation of cultural capital. ‘Culture’ and ‘collective action’ are related, as ‘trust’ is the basis for collective action (Tyler, 2011), and trust develops when people live together for a long time. In the case of the Iraqw people, this was expressed in the functioning of the council of elders. Mang’ola, Oldeani and Harar were rather recently settled villages (Figure 8.4), while people in Mongo wa Moono had not yet settled at all.

‘Trust’ as a necessary condition for collective action was more likely to exist if people had interacted closely with one another since birth. Among the Iraqw people, the household was the most important kinship unit, while the community was mainly formed on the basis of locality rather than kinship (Thornton, 1980; Snyder, 2005). In the past, decision-making within Iraqw communities took place mainly in the councils of elders, which at the end of the study period took decisions in reference to ritual matters only.

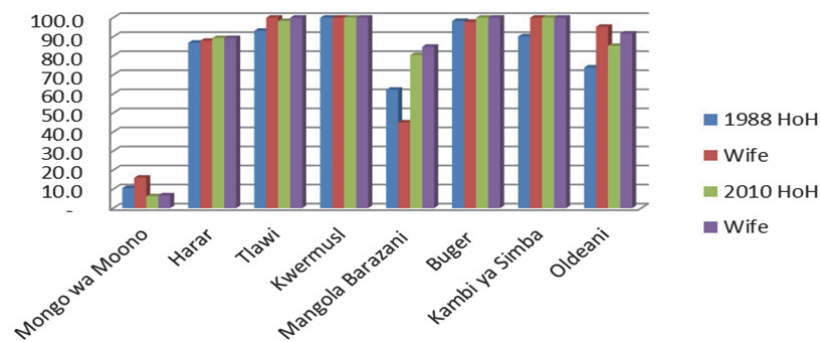
Figure 8.4
Percentage of heads of household born in the village



Source: Author

Most of the population of Kwermusl, Tlawi and Buger was born in or around the village in both the early and the later survey years. In Kambi ya Simba less than half of the household heads were born in or around the village in 1988, but that percentage had risen to almost 90% by 2010.

Figure 8.5
Percentage of heads of households and their wives who were Mwiraqw



Source: Author

In all villages, except Mongo wa Moono, the Mwiraqw¹ culture was dominant (Figure 8.5). As noted, their collective decision-making traditionally operated through their councils of elders. Councils of elders,

both men's and women's, existed in all of the villages except Oldeani. The councils were concerned with the local environment and socio-economic service delivery. As the societies studied were rather closed, the same people who participated in the council generally participated in local government structures as well, making judgements regarding the collective development of the area based on prevailing norms and values. While in Oldeani no such councils were found, Mang'ola had only a male council of elders, which met only occasionally.

Oldeani, Mang'ola and Harar were rather recent rural settlements with predominantly Iraqw populations. In 1988, less than 20% of household heads were born in or around these villages. In Oldeani, besides the relatively low percentage of heads of household born in the village (below 40%) or even in the district in 2010, the heads of household resided here seasonally when the estates needed their labour. They lived on the estates temporarily and dealt with the estate owners through their labour union. Their families lived in accommodations on the estates. Outside of the labour season the heads of household worked or tried to find work somewhere else.

In Mang'ola less than 10% of the heads of household were born in the village in 1988, though that percentage had risen to some 50% in 2010. Mang'ola had a male council of elders, and when necessary the women joined together for 'rain dancing'. However, there was no government-related village assembly; all decisions were taken by the village government. Irrigated farmers operated collectively as far as water distribution and the environment were concerned. These joint activities, as described earlier, started among neighbours but by the end of the research period operated under village government control.

In Harar, another rural settlement, more than 50% of heads of household were still born outside the district in 2010. Up to the time of this writing the village government had not yet succeeded in the necessary collective action to provide functioning socio-economic infrastructure. On environmental issues, the village continued to follow traditional means of decision-making through the council of elders, which for example, forbade cutting certain types of tree.

Mongo wa Moono was very different, as it operated according to the Hadzabe culture. Families moved from place to place. The majority of residents were born within the Yaeda Chini Valley and operated mainly individually. As hunters and gatherers, the Hadzabe did not invest in the

future, except to make spears and bows and arrows, which could be perceived as part of their cultural capital. There was no reason for them to be involved in collective action except food sharing. Culturally, amongst themselves they did not set common goals to achieve. If a member disagreed with others within the group, the disputant just moved on. Nonetheless, when their hunter and gather lifestyle was jeopardised by encroachers, namely pastoralists and agriculturalists, they did operate collectively to protect their lands.

In conclusion, cultural capital among the Iraqw people cannot be said to correlate with the number of collective action initiatives within the Iraqw villages. It related only to the way collective action was undertaken. In the villages with a high percentage of heads of household born locally (Kwermusl, Tlawi, Bugar and Kambi ya Simba), decision-making took place on the basis of consensus. In villages where the majority of household heads were born elsewhere (Harar, Mang'ola and Oldeani), decision-making took place mainly on the basis of majority rule. Finally, among the Hadzabe (Mongo wa Moono) a disagreement with others led the disputant to depart from the camp. No arbitration was sought, but instead another camp within the Hadzabe area. The only traditional form of collective action among the Hadzabe was food sharing after a major hunt.

8.2.2 Human capital and collective action in the villages

Human capital can be expressed in population growth, household size and the educational level of the population, with an emphasis on the educational level of heads of household and community leaders. Poteete and Ostrom (2004) linked group size and heterogeneity to collective action. As noted, the study villages were rather homogeneous from a *Mwiraqwa* cultural perspective, with Mang'ola being the most diverse. Mongo wa Moono was predominantly Hadzabe. Therefore, heterogeneity is understood here as specialisation in specific skills or trades. The larger the group involved, the more specialisation is likely to take place and more diverse institutional arrangements are apt to arise.

Population

The population within the combined area of Mbulu and Karatu districts more than doubled, from 253,646 in 1988 to 550,455 in 2012 (NBS fig-

ures). The average annual growth was 3.3%.² According to 1988 and 2012 census figures, the number of households more than doubled during that period as well. However, there were major differences in the growth figures between the various villages, with Kambi ya Simba closest to the average figures (Table 8.1).

Table 8.1
Population figures per village over time

Village	1988		2010		Population growth
	Population	No. of households	Population	No. of households	
Mongo wa Moono	2,166	380	3,958	761	83%
Harar	1,625	250	1,312	180	-21%
Tlawi	2,698	380	1,886	261	-31%
Kwermusl	2,362	369	3,442	478	46%
Mang'ola Barazani	1,046	249	8,523	1,859	715%
Buger	2,573	402	4,850	630	88%
Kambi ya Simba	2,600	400	5,463	1,042	110%
Oldeani	1,987	432	8,114	1,518	308%

Source: National Bureau of Statistics (2002, 2012)

One reason for the different population growth figures between the villages was their continually changing administrative boundaries. Harar and Tlawi show negative growth only because the villages were recently subjected to an administrative division. In 2009, Tlawi was divided into three villages: Guneneda (321 households), Garanger (341 households) and Tlawi (261 households). The population of Tlawi's original area grew to roughly 6,550 people, corresponding to a population growth of 142% instead of the formally recorded negative growth (-21%). In 2009 Harar was subdivided into two villages, with similar repercussions for the population growth figures. Kwermusl, too, was administratively split into two villages, but its population growth was still positive, though far below the average. Village division was proposed by local politicians and endorsed at the higher local government level. It was sometimes explained as an attempt to bring service delivery closer to the people; and other times justified as a way of ensuring more representation of politicians from a certain party in the higher-level council. In Mbulu District, villages and wards were readily split as long as the population figures met

the formal criteria. In Karatu District, where the opposition came into power in 1995, such splits did not occur, even though population figures meant that they met the criteria to do so.

Population growth was below average in the small rural villages of Harar, Tlawi, Kwermusl, Mongo wa Moono and Buger, as particularly here youngsters left after completing secondary education. Simultaneously, there was insufficient arable land available for most youngsters to earn a living for themselves locally.

Administrative adjustments were found in Oldeani as well, but from a different perspective. In 2009 the villages of Oldeani ward, Oldeani village being one of them, merged into one village called Oldeani, which explains Oldeani's high population growth figure of 308%.

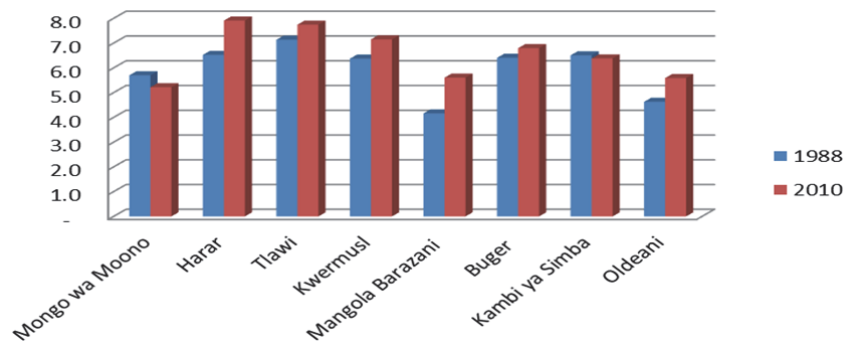
Mang'ola registered tremendous population growth: 715% from 1988 to 2010. In 1988, hardly anyone was born in Mang'ola itself, as the area was still open for pastoralism. In 2010, just over half of the heads of household had been born there. People in search of arable land or employment began settling in Mang'ola, as resources there enabled them to make a living from irrigated agriculture.

Mongo wa Moono was not yet a village in 1988. It was not even registered as a neighbourhood, as it was considered part of Yaeda Chini. By the end of the study period Mongo wa Moono was a village in its own right.

The consequence of population growth was that additional socio-economic services were required, as service levels were justified based on standard population indicators. In general, then, more collective action was needed to arrange for the construction of the necessary infrastructure. In most Mbulu District villages, population growth was followed by villages, wards and divisions splitting up into new ones, leading to the need to form new local governments and the related committees. These new local governments had to start afresh and gain experience. After a split, the existing infrastructure continued to function in the administrative boundaries where it was located, while new infrastructure needed to be built in the newly established village. Quite often, such new construction took place without the support of the other half of the original village population. In Karatu District villages, population growth did not result in villages splitting up, though socio-economic infrastructure did need to be constructed through additional collective action. Schools

grew bigger and became more attractive. The same local government continued to oversee more socio-economic service delivery and gained more experience accordingly, while the whole population contributed.

Figure 8.6
Average household size per village



Source: Author

Household size

The link between household size and collective action can be found in the physical contribution to collective action per household (*nguvu kazi*). The larger the household, the more it could contribute to the various types of collective action. However, as generally only one person per household was required to contribute the question arises of whether in the current research a correlation can be found between household size and collective action. The average household size grew over time in all villages except Mongo wa Moono. The exception of Mongo wa Moono is explained by the fact that in 1988 the more settled population of Yaeda Chini also took part of the research, while in 2010 the emphasis was on the Hadzabe only. The comparatively small average household size in Mang'ola in 1988 is a result of the rather large number of single men attracted to the area by the development of irrigation infrastructure. By 2010, much of this male population had found work elsewhere. Similarly, the average age of household heads in Harar in 1988 was some 10 years younger than the average age in 2010, with the household size in

1988 on average being much smaller than in 2010. In Oldeani in 1988 female-headed households remained behind on the coffee estates, while in 2010 husbands operated their other enterprises more easily from Oldeani as well. Household size hardly changed in Kambi ya Simba. No correlation was observed between household size and collective action (Figure 8.6). However, considering the culturally homogenous Harar, Tlawi, Kwermusl, Buger, Kambi ya Simba and Oldeani (see Figure 8.5), the average household size shows an inverse relationship to the number of collective action endeavours, contradicting my hypothesis. Mang'ola and Mongo wa Moono were left out of this comparison, as their populations were culturally more diverse.

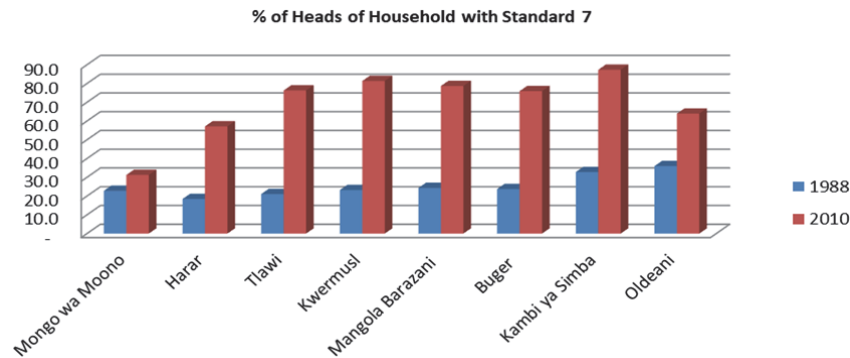
Educational level of household heads

A correlation was found between human capital as reflected in the educational level (standard seven and above) of household heads and village leaders and village collective action (Figure 8.7 in conjunction with Figure 8.1). It was the job of household heads, in their capacity as committee members and village leaders, to oversee school management. The ability with which they implemented these responsibilities reflected their own level of education and experience. There was thus a virtuous cycle found in the development process, with more experienced and better educated parents more equipped to steer the education of their children to a higher level. As discussed in section 7.2.4, the relatively high level of education among PTA members in Kambi ya Simba, Kwermusl and one of the Mang'ola schools led to their specific interest in improving the quality of the school they were responsible for.

Up to the end of the study period, households in Mongo wa Moono hardly invested in their children's formal schooling. In this village, thus, the average educational level of household heads and village leaders was lowest. Indeed, the level of education of the population in Mongo wa Moono hardly changed over the 25 years covered in this research (Annex B).

The rather low level of education among those settling in Harar, alongside the relatively late development of primary school infrastructure there and the lack of secondary school infrastructure, contributed to this village's low level of education.

Figure 8.7
Percentage of educated heads of household



Source: Author

Multiple secondary schools were established in the research area after 1994. Nonetheless, the majority of secondary school leavers did not return to their home villages. Instead they sought further education and employment elsewhere. Only Kambi ya Simba appeared to offer employment for secondary school leavers within the village. The comparatively high level of education in Oldeani in 1988 and its rather low level of education in 2010 were explained by the coffee estates' demand for unskilled and cheap labour. Labourers could be attracted from outside the village, so qualification levels and pay remained low. By the end of the study period, the more educated Oldeani residents were seeking employment elsewhere, with husbands often leaving wives behind on the estate compound. Farming in Oldeani was hardly possible outside the coffee estates, as no space was left for labourers to cultivate a *shamba*. Kambi ya Simba developed a high educational level over time, alongside a relatively high level of collective action. In Mang'ola, the level of education and collective action were both comparatively high at the end of the study period. Collective action in Kwermusl, Tlawi and Buger had risen in line with the educational level of the heads of household.

The average educational level of village leaders was slightly higher than that of heads of household who were not village leaders, according to data from the focus group sessions. In 2010, the leadership of all villages was educated to at minimum standard seven, except in Buger,

Tlawi and Mongo wa Moono where, respectively, 89%, 88% and 50% had at least a standard seven education.

In terms of human capital, a clear correlation was found between the educational level of heads of household and collective action. This could be explained by the more educated households' greater understanding of and capacity to follow through on the agreements and checks and balances necessary to institutionalise collective action or to cope with institutionalisation from outside. This coincides fully with Ostrom's (2003) conditions for collective action in terms of available information; common understanding; sharing of general and reciprocity norms; stability of the group; working and living in the same area; use of collective choice rules to minimise transaction costs; and accurate monitoring.

8.2.3 Natural capital and collective action in the villages

Natural capital is defined here in terms of land, crops and livestock availability, although livestock availability pertained more to the past than to the present day. These assets represent financial capital as well. The question is whether the availability of certain natural resources led to collective action.

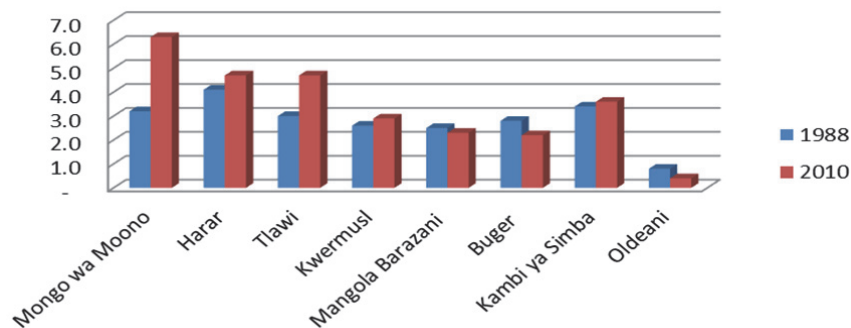
Arable land, pasture, trees and water were key assets in relation to households' natural capital in the villages sampled. Except in Oldeani, over 90% of the households owned land on the basis of customary rights, and this percentage remained stable over time. The average land-holding was about 1.2 hectares per household. In the early 1990s Mbulu District counted roughly 175,000 hectares of cropland and 375,000 hectares of grazing land (Mngube, 1998). The only slightly diminishing average household land size, with the more than doubling of the population, meant that land use for crop cultivation expanded at the expense of land for communal grazing or pasture. Land availability was not the only element of natural capital, however, as the land sizes required for livelihoods differed between hunters, pastoralists, rainfed farmers, irrigated farmers and labourers on the coffee estates.

Under *ujamaa* land was cultivated collectively, but no village *shamba* yielded more per hectare than the villagers' individual production. In 2010, only Kambi ya Simba still cultivated *shamba* wheat, on 46 hectares. Only 432 bags were harvested, though an average farmer could easily produce 25 bags per hectare. In Buger the collective farmland was used

to construct the secondary school. In Mang'ola some 7 hectares was rented out.

Collective action to access land was found in Mongo wa Moono, where hunters and gatherers needed more land to survive maintaining their traditional way of life, though they had the largest average land size per household. In Oldeani, too, collective action to access land was observed. In this case labourers sought fairer distribution of the existing lands among everyone. They had the smallest holdings per household of all the villages studied. They felt the need for more land for cultivation, in addition to working their seasonal jobs on the estates (Figure 8.8). In these two cases of collective action, landownership was far from the national average landholding of 1.2 hectares per household. However, in the sample as a whole no correlation could be drawn between land size per household and collective action.

Figure 8.8
Average land size per household



Source: Author

Certain characteristics of natural capital may stimulate a combined approach to cultivation. The soils and weather conditions of Kambi ya Simba prompted farmers to produce barley for the breweries, using collective input supply and harvesting equipment. Collective input supply was organised in Mang'ola, too, for example, for the purchase of onion seed and guidance on research. Similar input supply activities were also

observed in the other villages, for example, for maize seed and fertiliser, except in Mongo wa Moono.

Natural capital was not linked to collective action among the Hadzabe in Mongo wa Moono, except in times of food shortage, as discussed under vulnerability context. Nonetheless, when natural stocks of berries, roots, game and water were under threat, residents did move to lobby higher levels of government to safeguard their resources.

All villages had some type of collective decision-making concerning preservation of natural tree species. In the hilly areas of Kwermusl, Tlawi, Buger and Kambi ya Simba there was a ban against tree cutting on the slopes. Preventing erosion was the motive behind collective action here. In these villages, residents were aware that individual action would not suffice. Tree nursery development and tree planting to provide for fuelwood needs could easily be done individually for one's own benefit. Collective action was not needed to ensure this kind of tree planting. Although collective tree planting was encouraged under *ujamaa* in the 1980s, checks and balances to ensure a fair distribution of collectively planted trees proved cumbersome and did not work.

In Kambi ya Simba, Tlawi, Mang'ola and Oldeani, access to water for irrigation or domestic supply required collective action. Furrows or channels had to be dug and infrastructure constructed, after which the distribution system had to be managed. The greater the number of water users, the more cooperation was required to distribute the water as efficiently as possible. Public awareness of scarcity, in this case of water, could lead to collective action to distribute the scarce resource as efficiently as possible.

In 1988, collective awareness of the diminishing availability of pasture led to destocking in Kwermusl, Tlawi, Kambi ya Simba and Oldeani, and eventually in Tlawi, Kambi ya Simba and Oldeani. Such awareness penetrated Harar, Buger and Mang'ola only in 2010. Actual decisions on destocking and adoption of zero grazing practices remained the preserve of individual households, but farmers in Tlawi, Oldeani and Mang'ola took collective action to invite government and nongovernmental support in the form of technical advice. Collective action in Tlawi included provision of a fair distribution of heifers to 'new' members and a collective insurance scheme in case animals fell sick and the veterinary officer needed to be called out and paid for. In Oldeani, collective action included assistance among members in construction of barns (*banda*) and

to access hay, jointly setting the milk price and accessing artificial insemination. In Mang'ola collective action included cooperation to access support for construction of biogas plants at individual homesteads.

Collective action in the form of joint input supply (land, water, *mbegu mbora*) for exploitation of natural resources was more beneficial to farmers than arranging for inputs individually. Safeguarding resources through erosion control was another example of collective planning and supervision, found in Kwermusl and Kambi ya Simba. Construction of irrigation systems and management of water distribution were geographically determined and taken up as collective responsibilities. As natural resources were the basis for village residents' individual survival and economic gain, people needed to invest individually. Individually they decided, for example, whether collective supply of seeds, fertiliser and agrochemicals to exploit their natural resources was more beneficial than organising everything individually. Experience gained collectively, through joint efforts, enabled individuals to optimise the benefits of their natural capital and minimise risks and consequently individual costs.

8.2.4 Physical capital and collective action in the villages

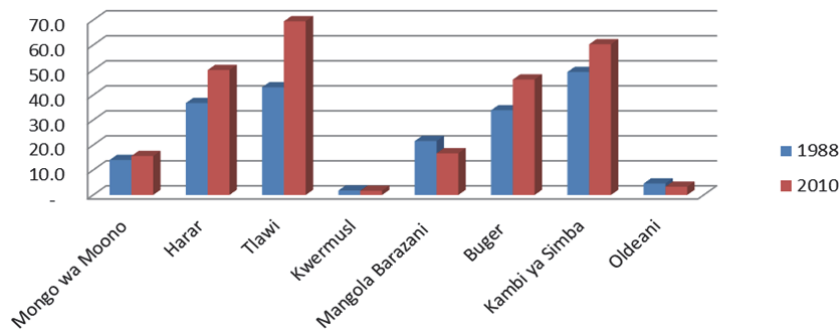
Physical capital comprises both producer and consumer goods owned individually by households and public goods in terms of socio-economic infrastructure. In this research I hypothesised that the former would be less correlated to collective action than the latter.

Production-related physical capital was defined as the availability of or access to ox-drawn carts and ploughs, tractors and bicycles. This section discusses the link between these assets and collective action. Consumption-related physical capital was defined as households' ownership of corrugated iron sheets (improved roofs), radios, hurricane lamps and mobile phones. These are addressed later in this chapter, when the link between collective action and livelihood outcomes is examined. Chapter 7 discussed the generation of physical capital like roads, schools, health centres and agricultural storage facilities (*godowns*). The actual availability of such infrastructure is addressed here.

Statistical data concerning physical capital does not fully explain the variation found between the villages in collective action, when selected assets are taken by themselves. Ownership of production-related physical capital must thus be otherwise explained. For instance, in Harar and

Mang'ola ox-drawn ploughs were partly replaced by tractors to cultivate larger areas. In Oldeani, there was little need for ox-drawn ploughs, as residents had very little access to their own land; all land was occupied by the coffee estates. In Kwermusl, the hilly topography precluded the use of ox or tractor ploughing. The Hadzabe did not cultivate at all, and therefore had no need for ox-drawn ploughs. Increasing ownership of ox-drawn ploughs was found in Tlawi, Buger and Kambi ya Simba, following the rising trend in collective action. However, no cause–effect relationship was observed (Figure 8.9). There were no examples of collective ownership of ox-drawn ploughs. The hiring of ox-drawn ploughs, which in 1988 was done by 20% of the households in the entire research area, was still negligible in 2010. Collective ownership of such equipment was hardly feasible, as everybody cultivated at the same time, depending on the rainfall. Growing wealth had enabled households to purchase their own agricultural equipment, so they could cultivate independently without help from others. No correlation between ox-drawn plough ownership and collective action was identified.

Figure 8.9
Percentage of households owning ox-drawn ploughs



Source: Author

No examples of collective ownership of ox-drawn carts was observed either. Ox-drawn carts could be hired from neighbours. The percentage of households owning an ox-drawn cart doubled during the study period, from 8% in 1988 to 16% in 2010. Like with ox-drawn ploughs, use of ox-drawn carts remained negligible in places like Kwermusl and Oldeani.

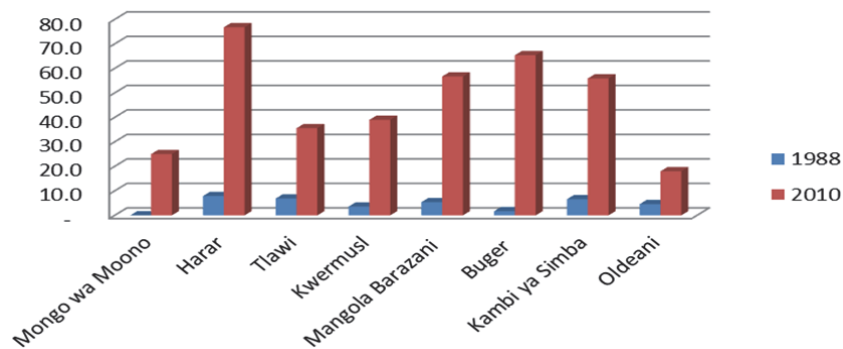
The slopes of Kwermusl were too steep for ox-drawn equipment. Households in Oldeani hardly had access to cultivation land, so there were few bulky loads to be transported locally. Ownership of ox-drawn carts grew fastest in Mang'ola, followed by Kambi ya Simba, Tlawi and Buger. Here farmers used the carts to transport crops, water and cattle fodder to their homesteads. In 2010, more than 40% of households in Kambi ya Simba owned an ox-drawn cart. Growth in the number of tractors in Harar led to a reduction in the number of ox-drawn carts there. No correlation between ox-drawn cart ownership and collective action was found, although in the following section a link with the households' financial capital was observed.

The proportion of households that owned a tractor rose slightly within the research area, from 2% to 3%. In Kwermusl, Buger and Mongo wa Moono no use of tractors was mentioned among the sample households over the entire research period. In Tlawi, Mang'ola and Harar tractors were used in 2010, while this was not the case in 1988. In Oldeani and Kambi ya Simba, tractor ownership remained rather stable, at 1.5% and 10%, respectively. Owners rented their tractors out to others. Within the study area, use of combine harvesters was observed only in Kambi ya Simba, where about 11% of the households used such machines both in 1988 and in 2010. Farmers in Kambi ya Simba had a long-term partnership with Kilimanjaro Breweries to grow barley; they collectively made use of the combine harvesters supplied by and hired from the brewery.

Like the ox-drawn cart, bicycles could be used to transport inputs or agricultural produce. For this reason, these are classified here under production-related physical capital. In 1988, very few bicycles were available, while from the early 1990s onwards Chinese and other bicycles became easily available and affordable. Throughout the sample area bicycle ownership rapidly increased. The share of households with at least one bicycle rose from 4% in 1988 to 47% in 2010. Ownership of bicycles depended on both the income level and the geography of an area. Flat areas favoured bicycle use more than hilly areas. People in the rather flat area of Harar with no access to other means of transport gave high priority to bicycle ownership to commute to Haydom for basic services. People in Mang'ola, which is flat as well, also placed high priority on bicycle ownership. Though the area is flat, many residents of Mongo wa Moono still could not afford to buy a bicycle at the end of the study period. Bicycle ownership was widespread in Buger and in Kambi ya Sim-

ba, despite the hilliness of the area. However, people in the hilly areas of Kwermusl, Tlawi and Oldeani showed less interest. Public transport availability and steepness of the terrain influenced ownership of bicycles, as did levels of income. No examples of collective ownership were observed. No correlation was found between bicycle ownership and collective action (Figure 8.10 in conjunction with Figure 8.1).

Figure 8.10
Percentage of households owning a bicycle



Source: Author

No clear relationship was found between collective action and individual households' ownership of physical assets like tractors, ox-drawn equipment and bicycles. Nonetheless, Kambi ya Simba scored highest in both, while Mongo wa Moono scored lowest in both. In 2010, Kambi ya Simba scored highest in ownership of tractors, ox-drawn carts, radios, mobile phones and corrugated iron sheets. Tlawi scored highest in ownership of ox-drawn ploughs, with Kambi ya Simba scoring second. Kwermusl scored highest in ownership of hurricane lamps, with Kambi ya Simba second again. Harar scored highest in ownership of bicycles with Buger second, while Kambi ya Simba together with Mang'ola scored third.

Ownership of radios, hurricane lamps and mobile phones in 2010 was correlated with collection action, but this is discussed in section 8.4 under livelihood outcomes. These assets, alongside corrugated iron sheets, are defined as consumer items.

Physical capital in terms of socio-economic infrastructure correlates fully with collective action, as nearly all socio-economic infrastructure at the village level was constructed collectively. Part of its functioning and maintenance depended on collective action as well, as discussed in Chapter 7. Table 8.2 presents the availability of physical infrastructure.

Table 8.2
Collectively established socio-economic infrastructure per village

Socio-economic Infrastructure	MwM		Harar		Tlawi		Kwermusl		Man'gola		Buger		KyS		Oldeani	
	1988	2010	1988	2010	1988	2010	1988	2010	1988	2010	1988	2010	1988	2010	1988	2010
Access Road	?	?	?	?	1	1	1	1	1	1	1	1	1	1	1	1
Primary school			?	1	2	2	1	1	1	3	1	2	1	2	3	5
Secondary school						1		1		2		1		1		1
Health centre					1	1	1	1		1			1	1	1	1
Godown											1	1	1	2		
Maize mill					1		1				1		1			
Piped water supply / borehole	?	?				1				1				1	?	1
Irrigation scheme					1	1			1	1			1	1		

Note: Question marks indicate ambiguity about how collective action was organised. For example, in Mongo wa Moono people provided labour in exchange for food. Boreholes and piped water schemes here were established with external support and were not yet being managed locally. Harar accepted its poor road conditions as a given, and no action was taken. The piped water system in Oldeani was established by the Mbulu District Council.

Source: Author

The question now is whether collectively owned infrastructure triggered collective action other than to make use of the infrastructure for the purposes for which it was built. Cause–effect relationships were thus sought between the available infrastructure and collective action. It was obvious that improved village accessibility encouraged all kinds of communication between individuals and groups. For instance, improved roads facilitated sport interactions at the ward and division level, as transport became affordable throughout the district. Interactions between religious leaders followed improvement of the road to Buger. Road improvement challenged the people of Buger to collaborate to hire lorries to transport their agricultural and animal produce to market, in order to reduce transport costs. At the end of the study period, the cattle dip in Buger was operated collectively, although initially it was constructed with government support.³ In 2010, people in the study area travelled much more than in 1988, and the improved condition of access roads was certainly one of the reasons. However, no empirical evidence can be

pinpointed for this conclusion. Other reasons for increased mobility, such as greater financial capital, could be identified as well, but here too, no empirical evidence explicitly supports such a conclusion.

No empirical evidence was found to indicate that the existence of school infrastructure led to additional collective action among schools, though parents took up responsibilities to supervise the quality of education, albeit with differing degrees of effectiveness. Similarly, water users and farmers operated their water infrastructure collectively. Outside collective input supply, for example, for onion cultivation in Mang'ola, no empirical evidence was found linking such infrastructure to collective processing or marketing of agricultural produce. Trials in collective transport failed due to insufficient quality control.

In the productive sector, maize mills in Tlawi, Kwermusl, Buger and Kambi ya Simba that initially provided for collective use were later privatised.

8.2.5 Financial capital and collective action in the villages

Villagers held financial capital in cash, in bank deposits and in liquid assets such as livestock. The question asked here was whether a correlation could be found between household financial capital and collective action in the villages.

Within rural Iraqw communities the household was traditionally the principal economic unit. Household livelihoods depended on cultivation of own fields and herding of own livestock. Relatives and neighbours assisted each other in peak cultivation periods. Although this was still observed at the end of the study period, paid labour had become more common. Traditionally, both agricultural crops and livestock were sold to raise cash, and informal and formal cooperation provided a way to economise on marketing and transport costs. There was also some evidence of attempts to economise on transaction and transformation costs through collective action, or to gain access to additional financial capital through collective action.

Where money was available and good relationships existed, villagers could sometimes borrow funds from kin or neighbours without formal interest. Few households had access to commercial bank loans. After the announcement of Tanzania's Land Amendment Act of 2004 rural smallholders gained more, but still limited, access to ordinary bank loans using

their customary land rights as collateral. Access was limited because the land had to be surveyed by the District Lands Office (Ardhi),⁴ which charged a fee for the work. Furthermore, Ardhi had inadequate capacity (knowledge, equipment, transport) to have all lands surveyed and linked to national coordinates. For an individual smallholder with customary rights of ownership to a 1.2-hectare plot, the surveying was a major hurdle. After the land was surveyed the farmer would be awarded a right of occupancy, which had to be endorsed by the village executive officer (VEO) and district magistrate. Only then was the farmer able to access a loan, related to the potential agricultural production of the plot. In reality, such loans were based on the quantity that had been harvested the year before.

As discussed in Chapter 7, nearly every village had organised informal village community banks or savings and internal lending communities. These were informal in the sense that villagers themselves operated their 'checks and balances'. In this way, people who had little capital themselves could gain access to more capital for specific investments at certain times. Except in Mongo wa Moono, such savings and credit schemes operated with little variation, with weekly contributions constituting the total amount of money that could be borrowed.

Larger groups with regular incomes could access more substantial sums by forming savings and credit cooperative societies. In Kambi ya Simba these larger amounts enabled villagers to send children to attend higher education.⁵ In Mang'ola such loans were used for agricultural inputs, like fertiliser and agrochemicals.⁶ In Oldeani, these groups organised inputs for maize and bean cultivation.⁷ The savings and credit cooperative societies were more formal in the sense that their accounts were audited by an external official from a commercial bank or a district cooperative officer. This enabled them to access bank loans, which could then be distributed among members. Groups organised into the semi-formal savings and credit cooperative societies could obtain relatively large amounts of credit at a reasonable cost.

Livestock in the past served as a financial buffer for households without access to banking facilities. When money was needed, livestock was simply sold at the *mnaada* (market). By the end of the study period, livestock was kept mainly as an economic activity, with decisions on sales reflecting husbandry considerations, such as optimum weight. Among farmer households there was also more understanding of the links be-

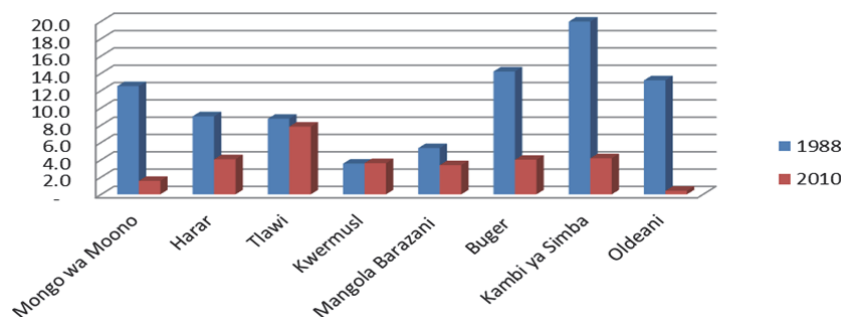
tween pasture availability, optimum animal weight and the price obtained for mature livestock. That is, livestock sold at its optimum weight made grazing space available for its offspring, which consequently led to more income. The function of livestock as financial capital to be used when money was needed therefore waned.

The share of households that owned cattle increased slightly, from 47% in 1988 to 52% in 2010. However, the average number of cattle decreased, from 11 to 4 heads per household. Among the households with cattle, the average herd size diminished from 24 in 1988 to 7 in 2010. Over time natural growth was mentioned as a reason for growth in herd size, while destocking, zero grazing and animal diseases were noted as reasons for diminishing herd size. In Kwermusl, the average number of livestock owned remained reasonable, in relation to the carrying capacity of the land and the mixed farming system that developed there over time. Here livestock was kept mainly for own consumption, or not kept at all (Snyder, 2005). In Tlawi, a slight change was observed over the research period. By the end of the study period, more households owned fewer cattle on average, though in view of environmental constraints, livestock numbers remained high. Mang'ola had developed into a rural settlement focused on irrigated farming. In 1988, pastoralists with large herds had occupied the area, but by the end of the study period most residents were agriculturalists with just a few heads of cattle in a more mixed farming system. In Harar, Buger, Kambi ya Simba and Oldeani, large herds had been taken out of the area, as initially open spaces were brought under agricultural cultivation by the growing population. Pastoralists herded cattle in Mongo wa Moono, in the past. By the end of the research period, the land was occupied by the Hadzabe, who owned very little livestock. In Mongo wa Moono boundaries had changed, which meant that the pastoralists who took part in the 1988 survey were excluded from the 2010 research. The 2010 focus was on the hunters and gatherers, excluding the pastoralists and consequently any remnants of their livestock herds that remained (Figure 8.11).

Livestock ownership did lead to collective action in the operation of cattle dips (Buger) and organisation of markets (nearly everywhere). As mentioned, I did not observe collective action related to traditional herding. No collective rule-setting, for example, regarding grazing capacity and standards, was found. In Karatu District, areas had been closed off to livestock grazing, and in Mongo wa Moono pastoralists had been

forced to leave. However, nowhere were households forced to reduce their livestock. Households either decided for themselves to reduce their number of livestock, or they moved their livestock elsewhere.

Figure 8.11
Average number of cattle per household



Source: Author

Financial capital in terms of livestock ownership shrunk in Harar, Buger, Kambi ya Simba and Oldeani. Collective action and destocking were linked to both environmental concerns and changes in modes of production. In some cases, villages collectively agreed to reduce their numbers of livestock as an environmental protection measure, since such measures would be ineffective if some households reduced while other households expanded their herds. Collective decision-making to reduce livestock numbers as an environmental measure took place in the village assemblies, with the decision enforced by the village government (public action). Decisions on reducing Zebu livestock, replacing them with zero grazing dairy stock, were made by individual households, as well as groups of farmers. Groups sometimes collectively applied for and received support to start dairy farming. Particularly, groups of women obtained support for veterinary services, biogas construction and price setting, as observed, respectively, in Tlawi, Mang'ola and Oldeani.

Trade in livestock has long taken place at the monthly markets (*mnaada*) scheduled by higher local government agencies throughout the district. Every ward has its own *mnaada* on a different day, and local government collects a small percentage tax on the sales. In addition to these

monthly markets, villages like Oldeani, Mang'ola and Kwermusl organised their own weekly or monthly markets. Farmers in Buger, furthermore, organised collective transport to carry their livestock to the *mnaada* jointly, but all livestock sales were individual. Although initiated as livestock markets, the *mnaada* served other trade purposes as well. The women of Harar sold their handcrafted charcoal burners at the Haydom *mnaada*, and the women of Mama Issara (which includes Kwermusl) sold mats (*mikeke*) at the Mbulu *mnaada* and sometimes even in Arusha.

One clear link found between financial capital and collective action was the cost reductions joint action achieved. Thus, collective action led to lower costs for transportation and marketing of livestock (Buger), dairy products (Tlawi, Mang'ola, Oldeani, Kambi ya Simba), charcoal burners (Harar) and mats (Kwermusl). In Mongo wa Moono, some income was gained collectively in petty handicraft production. Hadzabe women sold trinkets (*utamaduni*) to tourists who visited the area. These visits were arranged through community contracts with the tourist industry to bring visitors to the area. Local Hadzabe also acted as tour and hunting guides. These activities made relatively large contributions to Hadzabe earnings, as they had very few other income sources. Additional research is required to calculate the added value of collective action for the individual households related to these different activities.

As livestock is no longer considered a major component of households' financial capital, discussions of livestock should instead focus on households' livelihood strategies. Households sought to allocate their labour to livelihood activities, one of which was livestock rearing, to earn sufficient income. The collective development and implementation of livelihood strategies is discussed further in section 8.3.

8.2.6 Conclusion

Cultural capital, with being born in the area serving as a proxy for trust, was found to be linked to collective action, but the link was not a univocal one. Trust has often been cited as a condition for cooperation (Tyler, 2011). Being born in the same area may kindle trust, but it does not guarantee trust. Other indicators play a role as well, one of them being the kinds of livelihoods people pursue. Within communities, norms are often shared. The hunters and gatherers in the study area who moved around in search only of daily sustenance, not investing in their future

well-being, did not need to act collectively, though they did sometimes share food. Agriculturalists who had occupied land for generations cared for their lands collectively to ward off environmental threats, like erosion and overgrazing. Villagers realised that they could not address such issues individually. Collectively they took decisions by consensus to prevent environmental degradation.

In the more recently settled areas, where people from different corners met, decision-making took place by majority rule. Beyond social motivations, decision-making was maintained by instrumental drivers as well. Thus, local government regulation (i.e., public action) gradually replaced collective action in which people followed their own rules. This does not mean that smaller groups and specific interests could not lead to socially motivated collective action in the newly established settlements. Not being born in Oldeani did not mean that residents did not cooperate on specific issues. However, those joint activities were more interest driven and less shaped by culture. Cash crop farmers sought to economise on production costs and opted for collective input supply that they nonetheless considered trustworthy.

Human capital in terms of population growth brought an expanding need for socio-economic infrastructure, which in the study villages was established through collective action. Population growth in Karatu District villages took place within given administrative boundaries and challenged residents to address complicated problems collectively. In Mbulu District, villages were split up as soon as a certain population figure was reached, leading to the need to start afresh in tackling old issues collectively. Although there is no univocal explanation for why collective action in one society performs better than in another, the rather uniform level of experience or education among the members of the collective action helps the group to envision exploiting potential and develop understandable technical, financial and administrative checks and balances institutionalised in such a way as to ensure trust and safeguard quality; the more shared experience and/or the higher the level of education among the members, the higher the collective performance and the better the results achieved. This research found a correlation between human capital, in terms of 2010 educational levels, and collective action in the villages. This was explained by the increasing complexity of 'institutionalisation' and 'checks and balances', which subsequently required educated, or at least understanding, members. Although village leaders in

Kambi ya Simba indicated that some secondary school leavers could gain employment in the village, most secondary school leavers had to leave to find employment elsewhere. In sum, universal primary education, experience and tailor-made capacity building were found to be antecedents for acting collectively in the villages.

No correlation was found between natural capital, as indicated by land size, and collective action. Scarcity of land and the need to maintain land did stimulate collective action. Erosion control and closure of areas to communal grazing were some of the examples found in which collective action was needed for success. Indeed, environmental management often demanded cooperation, and taking care of the environment was not seldom a joint responsibility. In this sense, collective maintenance of the slopes was related to characteristics of land size, clearly defined boundaries, low level of mobility, clarity about the benefits and predictability of benefits. Agrawal et al. (2001: 1,659) presented these features as conditions for collective action in resource management. Collective exploitation of natural capital in the form of joint production initiated under *ujamaa* did not succeed. Individually people performed better. Only in input supply did collective action produce benefit, in the form of an improved bargaining position with suppliers to the benefit of all. Such was done through cooperatives. But the processing and marketing of agricultural products through cooperatives proved untenable. In the sale of farm products, too, villagers felt they could gain more from individual action. Natural capital in terms of water for irrigation or domestic supply required collective action: to distribute water among users and to maintain the system to sustain its availability. Here too, universal primary education, experience and tailor-made capacity building can be considered preconditions for acting collectively.

Physical capital was defined as households' producer and consumer goods and the collectively available socio-economic infrastructure. No clear relationship was found between collective action and physical capital in terms of ox-drawn ploughs and carts, tractors, combine harvesters and bicycles, except in Kambi ya Simba, where combine harvesters were collectively hired and used. A correlation was found between collective action and consumer items (corrugated iron sheets, radios, mobile phones and hurricane lamps), which will be discussed later. The only link found between collective action and socio-economic infrastructure (schools, health dispensary, water supply, roads, agricultural storage and

irrigation infrastructure) was that nearly all village socio-economic infrastructure was constructed and maintained collectively. This is further discussed in relation to social capital in section 8.3. Contributions to collective action, mainly unskilled work and money, were predominantly institutionalised along the administrative boundaries of the neighbourhood (*kitongoji*), or for larger projects, like construction of a secondary school, along the administrative boundaries at the ward level.

Availability of financial capital, primarily cash, through savings and credit schemes was correlated with collective action. Cost reductions achieved through collective transport were observed as well. Financial capital in terms of livestock was not correlated with collective action. However, livestock sales were facilitated through the *mnaada*, which enabled individual farmers to transform their animals to cash. In some of the villages, *mnaada* were organised collectively by lower local government, which also stepped in at times when the services of higher local government did not suffice for local needs.

8.3 Livelihood strategies and collective action

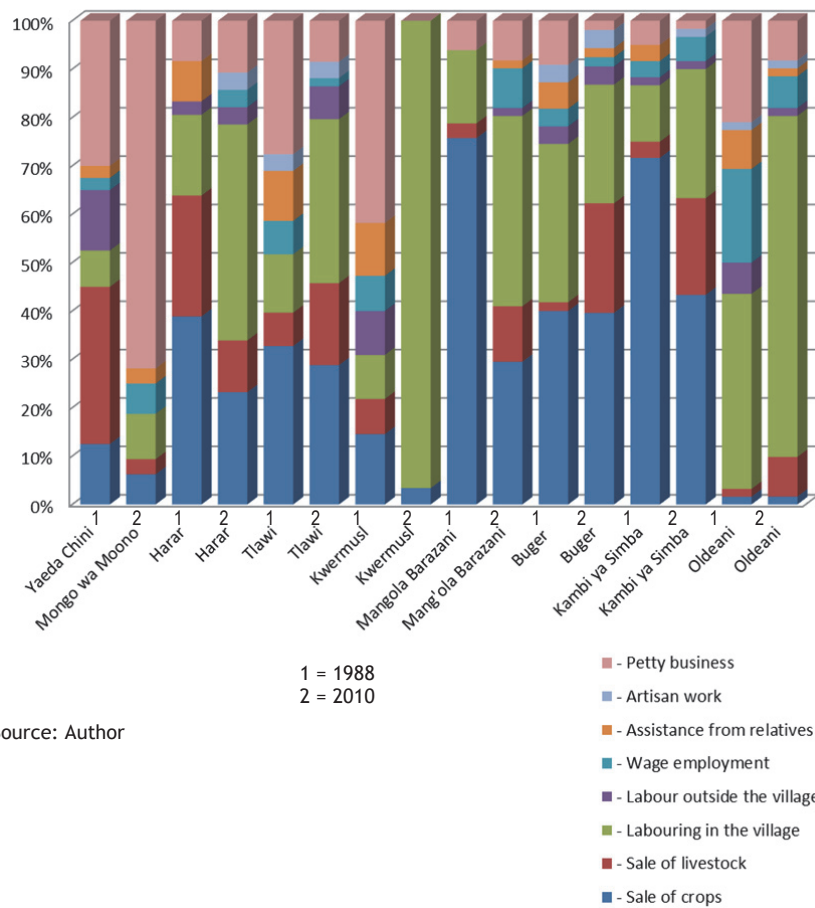
Households' livelihood strategies changed over the research period, and these changes influenced livelihood outcomes. I sought to determine whether households' major source of income formed part of a collective livelihood strategy. Figure 8.12 presents the various livelihood strategies through which households earned their main income.

In 1988, the Hadzabe in Mongo wa Moono earned little income, though it came from various sources. Registration of the village and initiation of contracts with the tourism industry led to local men being hired as game scouts, while women made trinkets for sale to tourists. Thus, petty business became the major source of what little income they earned. This petty business was the direct result of the tourism contracts.

Despite reduced livestock numbers, livestock played a larger, though still not big, role in household earnings in 2010 compared to 1988. Increased earnings from livestock in Tlawi, Buger, Kambi ya Simba, Mang'ola and Oldeani related in part to increased dairy production.⁸ Other factors that played a role were collective arrangements for veterinary services and produce sales and the rise of the *mnaada* which enabled households to sell their livestock at its optimum weight. In Harar and Mongo wa Moono, income from livestock production fell, as the pastor-

alists moved away from the area. In Kwermusl, earnings from livestock fell because the growing population here used livestock mainly for own consumption.

Figure 8.12
Percentage of households with indicated source as main income, 1988-2010



In Kwermusl petty business was a major income source in 1988, as many villagers walked from Kwermusl to Mbulu town to trade on a near daily basis. In 2010, such trade still took place, but was combined with

work in the village, with the emergence of public and private transport playing a supportive role. In this village, people cultivated fields for their own consumption and sold surpluses in Mbulu town.

Most households in Harar, Mang'ola and Kambi ya Simba earned a smaller share of income from agriculture at the end of the study period. But this development could not be linked to collective action. In Oldeani, Tlawi and Buger, household income from agriculture remained rather stable. In Oldeani, however, income from agriculture was negligible, as ordinary households had little access to land. Oldeani households earned their main income from labouring for estate employers, though the largest number of collective actions was found in this village in the latter survey year. Income from such activities was low, however. In Tlawi, a stable 30% of households indicated earning their main household income from irrigated agriculture. In Buger, a stable 40% of households indicated earning the major part of their income from sales of agricultural products. In 1988, agricultural production contributed a major share of household income in Kambi ya Simba, Mang'ola and Harar. In 2010, though agriculture still contributed substantially, earnings from casual labour, formal employment and other enterprises had risen. In 2010 only in Kambi ya Simba and Buger did respondents indicate that crop sales contributed more to their total income than labour.

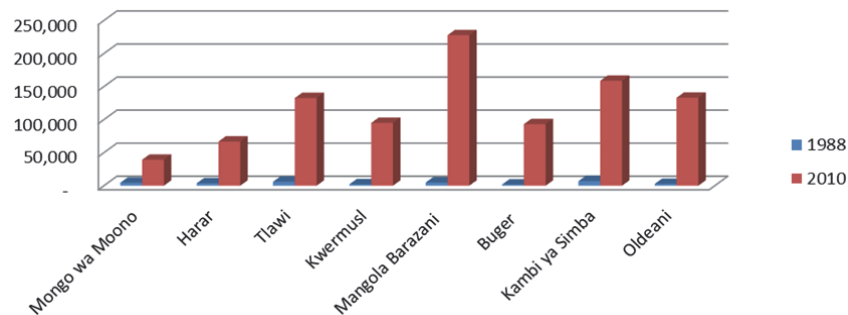
In 2010, labour contributed a larger share of the household income than in 1988. In the past, neighbours helped cultivate each other's land as a mutual service free of charge, remunerated with just a good drum of local beer at the end of the day. By 2010, people were hired and paid to cultivate others' lands or to carry water when needed. In Kwermusl, agricultural production was mainly for home consumption, and households earned their income through all kinds of labour and businesses in the area, including Mbulu town.

Payment for labour thus replaced mutual assistance among households in productive activities. Collective action was observed in communal transport to reduce transport costs. This applied mainly to non-perishable products sold at fixed market prices. It was not observed for the sale of perishable products.

Most households in the research area had no regular source of income. Neither did they maintain any form of financial administration. This made it difficult to calculate annual incomes. To provide an indication of income as a proxy for livelihood strategy outcomes, households

were requested in the 1988 and 2010 surveys to list their expenditures for a four-week period in July and August. In absolute amounts, households spent on average 30 times more in 2010 than in 1988, while in Tanzania as a whole the consumer price index (CPI) rose from 7.50 to 150.76. In selected categories, average household expenditures during the four weeks rose from 4,057 Tanzanian shillings in 1988 to 124,626 shillings in 2010. Considering inflation, this represents an increment of 50%. While little variation was found between the Mbulu and Karatu areas in 1988, in 2010 households in Karatu District spent on average 75% more than households in Mbulu District. In Mbulu District, Mongo wa Moono respondents spent the least during the four weeks, roughly 40,000 shillings, while Tlawi respondents spent the most, at 133,000 shillings. In Karatu District, Buger respondents spent the least, 93,000 shillings, with Mang'ola respondents spending the most, at 228,000 shillings (Figure 8.13).

Figure 8.13
Four-week household expenditure overview

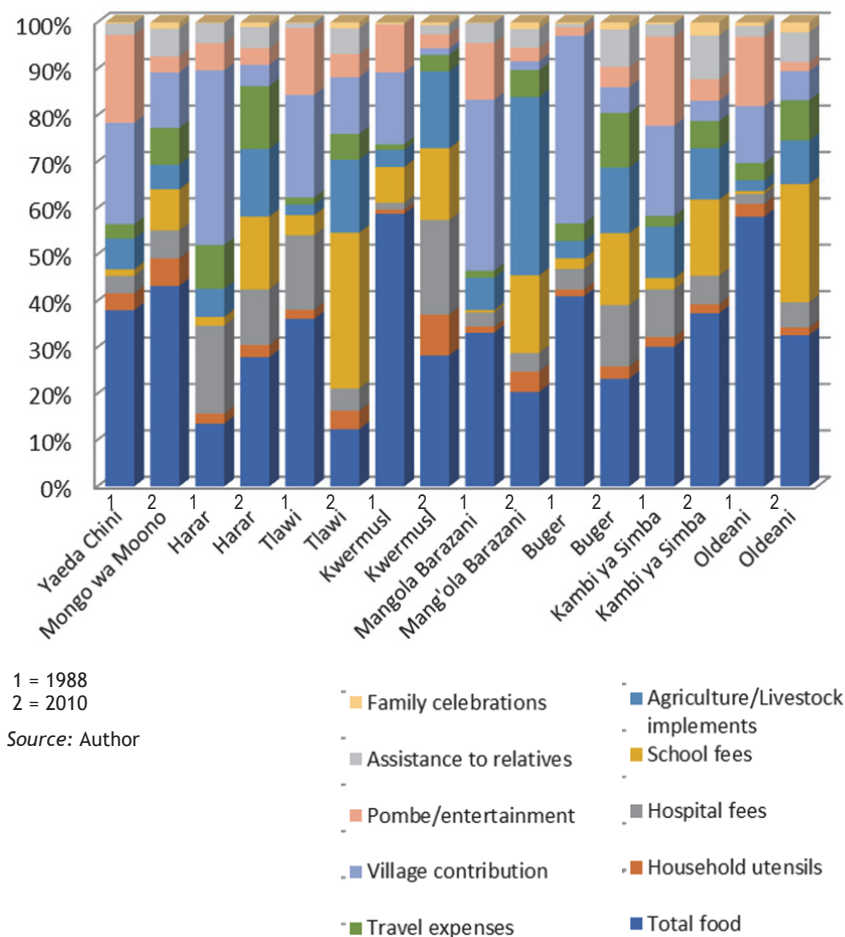


Source: Author

Because households contributed to collective action in cash and in kind and because in 1988 a development levy had to be paid by every household, the expenditure overview could be linked to expenditure on collective action in the village. However, the financial capital indicated in the four-week expenditure overview did not correlate to the collective action trend in 2010. No univocal trend could be identified. Nevertheless, in Mongo wa Moono 19% of the households contributed to the vil-

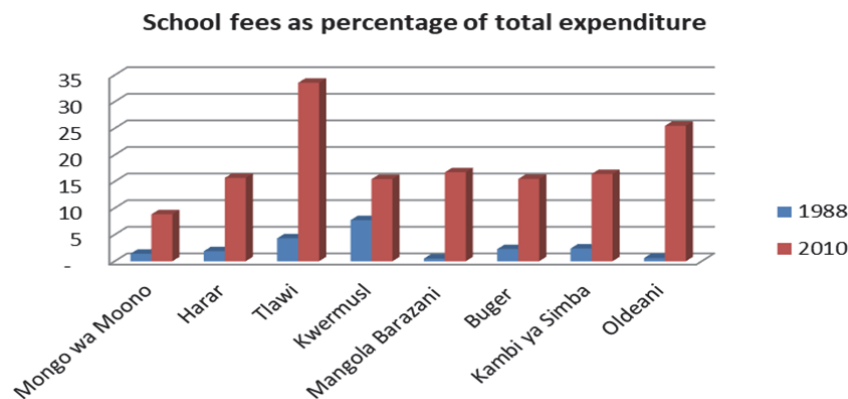
lage; in Harar 36% of the households contributed, compared to 97% of the households in Kwermusl. Over the entire research area, an average of 64% of the households contributed. Again, no univocal trend could be found. In Tlawi, for example, 69% of the households contributed 30% of the total contributed in the research area, despite the fact that the village leaders complained that it was not enough, as by that time a major piped water supply project had been proposed.

Figure 8.14
Household expenditure in various categories
as a percentage of total expenditure



Although the four-week expenditures could not be correlated with collective action, and although the absolute figures differed from village to village, a general trend could be discerned of diminishing household contributions to the village government as a percentage of total household expenditure. This applied to every village surveyed (Figure 8.14). The general trend of diminishing village contributions could be explained by the abolishment of the development levy that every household had to pay in the 1980s. Government found other ways to tax people, and services such as education, health care and water supply were paid for by users instead. In the 1980s the development levy was a flat amount which all had to pay, irrespective of their income, while the current tax regime relates to income earned by the tax payer.

Figure 8.15
Average household school fee expenditure



Source: Author

A similar descending overall trend was found for household expenditure on *pombe* (a fermented drink) and entertainment, both items linked to remuneration for collective cultivation. In 1988 such expenditure was relatively high in comparison to other expenditure, while in 2010 such expenditure was relatively low. In all villages, households spent more on school fees, procurement of agriculture and livestock inputs and implements, travel, financial assistance to relatives and family celebrations as a

percentage of the total household expenditure in the given period (see also expenditure overviews per village in Annex B).

No conclusions can be drawn regarding the rise of school fee expenditures over the given time span as in 1988 education was largely offered for free.

In addition to general contributions in cash and in kind for construction of classrooms and housing for teachers, parents contributed collectively, for example, to employ additional teachers, to provide lunch for the pupils, to employ food preparation staff and to employ guards. In that sense, parents were collectively responsible for the funding and supervision of quality service delivery.

While government initially contributed building materials for primary school construction (Omari et al., 1983: 65), in the mid-1990s the communities concerned were given responsibility for covering the costs of school construction themselves.

A link was observed between school fee expenditures and availability of secondary schools. No secondary school was available in Mongo wa Moono and Harar. Secondary schools were available early on in Kambi ya Simba and Kwermusl, and more recently in Mang'ola (two of them), Tlawi, Buger and Oldeani. In Mang'ola and Tlawi, construction of secondary schools coincided with construction of additional primary school infrastructure, requiring high household contributions during the research period.

Household expenditure on education was lowest in Mongo wa Moono and Harar. Primary education started late in these two villages. In Mongo wa Moono it had not yet gotten under way at the end of the study period, while in Harar it began in 1978, more than 20 years after primary schools were established in the other villages in the sample. In these other villages, primary education was established in the 1950s or earlier. Neither Mongo wa Moono nor Harar had secondary education as of the end of the study period.

In conclusion, many forms of collective action were identified, but few of these targeted raising participants' incomes. Some examples were found of the collective sale of products: *utamaduni* (Mongo wa Moono), charcoal burners (Harar) and mats (Kwermusl). However, although these sales were collective, the producers individually determined the price. Farmers stopped selling their agricultural produce through the primary

societies when membership was no longer imposed. The Cooperative Act (2003) and the related reforms enabled members of cooperatives to take full control in an equitable way. The cooperatives that were active in processing and sales, for example, of dairy products, did so on the basis of clear membership regulations, including collective supervision of quality and checks and balances. Even in Oldeani, the income earned through collective action was small in relation to income from labour on the estates.

Collective action to reduce input costs was observed in some agricultural activities and animal husbandry. Collective hiring of combine harvesters and collective transport of produce to the market was also found. In this latter case the actual selling of produce remained in the hands of the owner.

No clear link was found between household expenditures and collective action. In the past, a development levy was fixed and had to be paid by everybody. In 2010, most contributions to development initiatives were in cash or in kind, mainly for construction of socio-economic infrastructure. This was usually followed by specific tariffs for use of the services concerned. The changing role of government in relation to cooperative development and the construction and operation of socio-economic infrastructure and service delivery hampered data collection on collective action. However, governmental changes forced local communities to build their own capacity to cope with such changes.

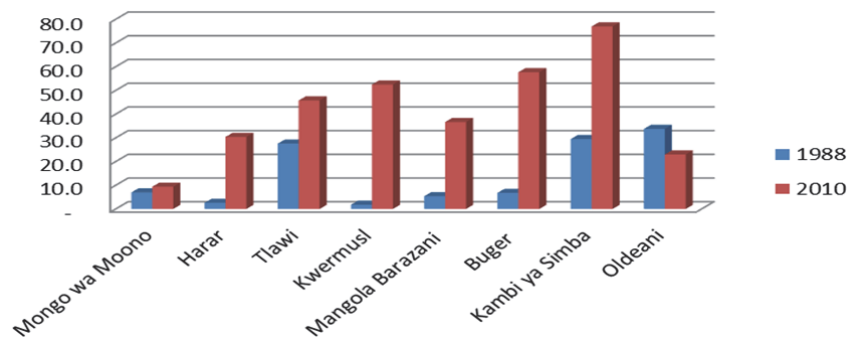
8.4 Collective action and livelihood outcomes

This research defined livelihood outcomes in terms of 'more income', 'increased well-being', 'reduced vulnerability', 'improved food security' and 'more sustainable use of the natural resource base'. More income was quantified by growth in expenditures. Increased well-being was defined in terms of material well-being and physical capital and quantified accordingly. Reduced vulnerability, improved food security and a more sustainable use of the natural resource base were quantified in terms of agricultural food production and a perception of scarcity of food and energy. Fuelwood shortage was taken as an indicator of that last.

A correlation was found between collective action and income and well-being. Villages with little collective action, particularly Mongo wa Moono and Harar, had households with a low average household in-

come and a relatively low level of ownership of individual and collective physical infrastructure. The villages with more collective action, that is, Kambi ya Simba, Oldeani, Mang'ola and Buger, had relatively higher levels of income and greater well-being in terms of available physical infrastructure (see table 8.2). However, there was no unambiguous relationship across all of the study villages, as other influences played roles as well. In a similar way, no direct correlation could be found between collective action and bicycle use in hilly places like Kwermusi, Tlawi and Oldeani or in places without regular public transportation, like Buger.

Figure 8.17
Percentage of households with corrugated iron sheet roofing



Source: Author

The percentage of households with corrugated iron sheet roofing grew over the study period in all villages (Figure 8.17). However, here too other influences were also at work. Therefore, empirically no univocal conclusion can be drawn. In 1988, Oldeani counted a relatively high share of houses with corrugated iron sheet roofing, as many people lived in accommodations supplied by the coffee estates. The negative growth of corrugated iron sheet roofed houses in Oldeani is explained by changes in Oldeani's administrative boundaries between 1988 and 2010. In 2010, a larger area was covered, including more families farther away from the coffee estates and living in houses they constructed themselves.

Tlawi counted a relative high percentage of 'improved roofs' in 1988, because people in Tlawi were adept in baking clay roof tiles. Competence

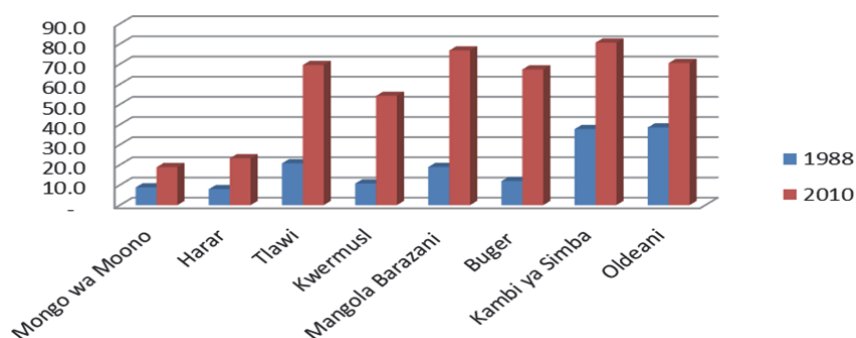
in and equipment for making roofing tiles was introduced by the missionaries. In the late 1990s, people started buying corrugated iron sheets, as the equipment for making the roof tiles was no longer operational and by then iron sheeting had become an affordable option.

In Mongo wa Moono, people tended to live in temporary houses, as they moved from place to place. In all of the other villages, a gradual growth in houses with corrugated iron sheet roofing was observed. This growth followed the collective action trend, but was not linked.

In summary, no direct link was found between ownership of corrugated iron sheet roofing and collective action. The examples of bicycle ownership and houses with corrugated iron sheet roofing demonstrate that some of the statistical data cannot be analysed straightforwardly to draw conclusions concerning a link between collective action and livelihood outcomes. Moreover, these data show that differences between villages must be analysed qualitatively and in historical perspective as well.

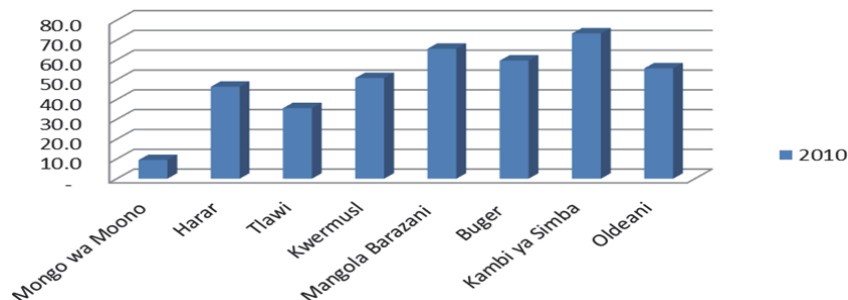
Higher incomes and increased well-being were evident in the 2010 ownership of consumer items, particularly radios and mobile phones. Moreover, a tenuous correlation was found between collective action and increased well-being (Figures 8.18 and 8.19). But this was not very clear.

Figure 8.18
Percentage of households that owned a radio



Source: Author

Figure 8.19
Percentage of households that owned a mobile phone



Source: Author

The availability of mobile phones at village level grew from nothing in 1988 to a rather high figure in 2010. Kambi ya Simba led with 73% of the households having access to a mobile phone. This meant that those households could access, for example, current market prices for agricultural crops provided by the Marketing Management Information System (MAMIS) of the National Networks of Farmers' Groups in Tanzania (MVIWATA). Less access to mobile phones was found in the other villages. In Mongo wa Moono, only a few households (those of government-linked village leaders) had access to a mobile phone. From the data regarding ownership of a clock or watch, no conclusions could be drawn, as this was confounded with possession of mobile phones, which contain a clock.

There was a link between collective action and reduced vulnerability insofar as erosion control, fuelwood availability and pasture shortages were concerned. There was also a link between collective action and reduced vulnerability associated with access to potable water. It was mainly through collective action that households gained access to a reliable water supply. The more people made use of the same source, the more structure was required to ensure fair accessibility and benefit to all users, which is the subject of Chapter 9.

In all villages, except in Kwermusl, maize production per hectare had doubled, though a drought in 2010 caused a poor maize harvest there that year. The major reason for improved productivity was the supply of agricultural inputs through extension programmes including improved

seeds and fertiliser. Programmes of the Food and Agriculture Organization of the United Nations (FAO), Global 2000, Kilimo Kwanza and *mbegu mbora* have been key in this regard. Although extension programmes addressed farmers collectively, and although a number of farmer groups had organised to obtain improved seeds and fertiliser from suppliers in a timely way, the statistical data show no correlation between collective action and improved food security.

Statistically, no conclusions can be drawn from our data concerning collective action and livelihood outcomes in terms of income, well-being and reduced vulnerability. Low levels of collective action in Mongo wa Moono and Harar did coincide with low household expenditure and low levels of ownership of consumer items like corrugated iron sheet roofing, radios, mobile phones and hurricane lamps. Yet, many factors influenced these livelihood outcomes. An area that warrants further investigation is what agency is required and how do people structure implementation of their strategies to improve their livelihood.

8.5 Conclusion

This chapter empirically investigated the link between households' vulnerability context, their livelihood assets, their collective action and their livelihood outcomes in each of the eight villages surveyed. In reference to the kinds of livelihoods villagers pursued, the scarcities perceived challenged them to collaborate, as individually they were unable to achieve what they could attain collectively. However, the hunters and gatherers did not invest in their future and therefore had little need for collective action. Their only concern was to safeguard their way of life. They did this collectively, by lobbying for land rights to ensure preservation of their livelihood. Socio-economic development here, in terms of education, health care and water supply, was introduced from outside and was just getting off the ground at the end of the study period. It remains to be seen how the Hadzabe will perform in supervising service delivery collectively.

The way farmers perceived their vulnerability context led them to undertake various collective actions. Environmental management, erosion control and access to water were addressed collectively. Depending on each village's vulnerability context, a cause-effect relationship with collective action was found, although statistically no correlation could be

identified. Yet, a cause-and-effect relationship has been posited between livelihood assets in terms of trust (cultural capital), education (human capital) and collective action. Trust is a precondition for collective action (Tyler, 2011), while experience and knowledge have been linked to the further institutionalisation of such action.

Three distinct forms of collective decision-making were found in relation to villagers' cultural capital: (i) by consensus or defection among the Hadzabe; (ii) by consensus among the traditional *Wairaqw*;⁹ and (iii) by majority rule through local government structures in the more recently established rural settlements. That last form represents public action.

Experience and knowledge prompted villagers to structure their collective action in an imitable or publicly accountable way, which is just another way of effectuating trust. In the study villages, collective action operated in a continuously changing institutional environment, and experience and knowledge were required to cope with this changing environment. The low educational level in Mongo wa Moono and Harar was correlated with a low level of collective action in those villages. Generally, the level of education was higher in the other villages, as was the level of collective action, though there was no direct evidence of their correlation. The only clear correlation found was the keener interest of the higher educated PTAs in educational quality improvement. Indeed, capacity in terms of experience and education was posited as a precondition for understanding the institutionalisation necessary to supervise forms of collective action.

No clear correlation was found between the other livelihood assets and collective action. Collective action was found to be linked to livelihood outcomes to some extent, though the cause-effect relationship here could not be traced using the existing data, as a number of other factors played a role as well. The findings do indicate that collective action led to improved socio-economic infrastructure and related service delivery. Empirically I argued that collective action led to reduced vulnerability as well.

The success of collective action, as a household livelihood strategy, largely depends on its institutionalisation, which depends in turn on the continuous transformation of its bottom-up and top-down structuring and processing and how people understand and deal with its transformation. It also depends on how such transformations are defined and introduced and the extent to which the community and its leaders can

internalise external opportunities. Do people understand how they might address environmental or socio-economic challenges collectively? While understanding, do they have the capacity to implement the proposed changes collectively? What actual time is required for people to understand and implement such changes collectively? This research found that the average level of education or experience determined the functioning of various forms of collective action. Similarly, the higher the educational level or experience, the more exchanges of views takes place among those in the same field (Garud et al., 2010). The rising average level of education and experience of heads of household and the institutionalisation of exchanges of views over time are basic features of an ongoing development process. Experience and education influence the way trust is institutionalised and monitored in order to assure contributors that the benefits of collective action in cash and in kind will be fairly shared.

As argued by Rodriguez-Pose (2009), it is the right mix of effective institutions that matters, rather than whether there are too many or too few, as argued in the theory of institutional thickness (Beer & Lester, 2015). Over time in Mbulu District there has been a trend towards splitting of villages into smaller ones as soon as population figures allow. A consequence has been construction of many new schools. In Karatu District, growing village populations have produced a larger community contributing to existing and new infrastructure, while enabling other socio-economic services to operate more effectively as well. I observed no evidence that splitting up villages contributed to more collective action, but I did note that the split up of villages produced delays in implementation and a lower quality of collective action, as less people were available to contribute to the infrastructure needed.

Collective action addresses different challenges, particularly, those related to the vulnerability context and those related to livelihood strategies. The former may be displaced by public action or regulation and the latter may fragment into smaller components initially, as livelihood strategies require an increasing division of labour. Kambi ya Simba, Buger, Oldeani and Mang'ola accommodated several types of entrepreneurial collective action generated endogenously. Establishment of agricultural storage facilities (*godowns*), village community banks and collective transport of non-perishable products to the market were effectively linked to livelihood strategies. Similarly, channel committees were linked to the River Water Basin Authority, and water user groups were linked to the

water user association after the institutionalisation of such collective action. That institutionalisation of collective action is the subject of Chapter 9.

Notes

- ¹ Mwiraqw is the possessive pronoun in reference to the Iraqw people (in Swahili).
- ² The average annual population growth rate of Tanzania is about 2.9%.
- ³ Focus group discussion Buger villager leaders, 28th of September 2012.
- ⁴ Karatu District Profile (2011) indicates that all 49 village boundaries have been surveyed of which 9 received a Village Certificate and 23 individual villagers have been issued with customary land title.
- ⁵ Focus group discussion SACCOS leaders, 27th of September 2012.
- ⁶ Focus group discussion SACCOS leaders, 10th of May 2012.
- ⁷ Focus group discussion SACCOS leaders, 26th of September 2012.
- ⁸ Focus group discussions Ayalabe dairy group and Gongali women, 16th of April 2013.
- ⁹ Instead of Iraqw people one uses the term 'Wairaqw'.

9

Institutional change of collective action

Tanzania's history of collective action is unique in the world, as the visionary view of its first president Julius Nyerere produced a top-down institutionalisation of collective action based on distinctive African extended family principles (Cornelli, 2012: 265). As a consequence of the Arusha Declaration (1967), socio-economic development was encouraged in the late 1960s through both the villagisation process and the establishment of cooperatives. The extended family principles by themselves proved insufficient to enable villagers to plan and implement joint socio-economic service delivery. Government – under leadership of the ruling party – sent teams of experts to help villagers draw up joint economic development plans. Villagers were challenged to use those experts to plan (Nyerere, 1973: 157). However, few effective plans materialised, as the top-down management capacity was insufficient to ensure that the available resources were effectively and efficiently managed, though this was a key condition for collective action to work (Ngowi, 2009: 263).

In the years following Nyerere's presentation of his vision, Tanzania implemented multiple institutional changes, spanning *ujamaa*, centralisation, deconcentration, decentralisation and delegation of governance responsibilities. It operated under a one-party regime and then switched to a multi-party democratic system. It introduced changes in the productive sector through various revisions of cooperative policies. It also changed its regulations concerning service delivery. For example, at one time rural water supply was mandated as a government service which had to be offered free of charge to all. Later, implementation of rural water supply projects was left to international agencies, with no government involvement (Therkildsen, 1988). Then responsibility for water supply was delegated to local actors. The government obstructed private-sector operations in rural areas at some points in Tanzania's history. Then it moved to enable private-sector activities. Legislation on local government was

enacted and responsibilities at the village level were defined (URT, 1982). Yet these, too, were revised several times (see Table 6.1). It took a long time for grassroots leaders to be sufficiently educated to fulfil their responsibilities and adequately monitor the implementation of their decision-making and have checks and balances established and understood. Misappropriation of resources and inadequate action has often been the consequence of this (Heilman & Ndumbaro, 2002). Capacity to manage collective action was – and often still is – inadequate to cope with the necessary institutionalisation of collective action. The institutional requirements to enhance development of livelihood assets, spanning human, social, physical and financial capital and natural resources, in the context of communities' cultural capital, bring transforming structures and processes into play.

People reflect on changes in the outside world and the way such changes impact on their livelihood. *Human capital* is key in local development processes (Chambers & Conway, 1991). Exogenous drivers of change (Ackerman & Anderson, 2002) spur people to organise themselves (Agrawal, 2001; Campbell, 2007). Local human resource capacity is a primary factor in people's ability to institutionalise collective action in a way that allows participants to optimally benefit from exogenously imposed changes. People structure and restructure their social, political and governance relationships to optimise their livelihood outcomes.

Through structuring and processing – as indicated in the sustainable livelihoods framework – people address their vulnerability context and implement livelihood strategies to enhance their livelihood outcomes. This structuring and processing encompass various forms of collective action institutionalised in local, national or international governance frameworks. Facilitation of change, agreement on measures to be taken and implementation of ideas are areas where people cooperate and institutionalise their action bottom-up, while being subject to given, top-down external influences.

The foundation of collective action is trust, reflected in tacit agreements. However, non-transparency in decision-making, inadequate accountability, mistrust, mismanagement and inefficient use of joint resources challenge people to institutionalise their communications and operations in more formalised ways (Ostrom, 2010). Structuring generates predictability, stability and cost/time reductions (Hodgson, 2006). Development starts with people analysing and understanding their

changing environment. People's vulnerability context challenges them to seek insight into how they might safeguard their interests according to an internalised narrative or rationale. Insight is gained through endogenous learning from past experiences, by capacity development and in the timely creation of complementary institutions to steer local economic development (see Helmsing, 2013).

In reference to Campbell's (2007) classification of internal and external causal arguments to explain ongoing institutionalisation, I address the institutionalisation of collective action as two kinds of processes: first as an internal process among members of a certain collective action initiative in a given context; and second as a process of and between collective action initiatives in regard to the external world. Both of these are bottom-up induced institutionalisation processes operating within the context of top-down or externally induced institutionalisation processes. The first type can be informal or formal. This type of institutionalisation takes place through its own bottom-up development process of rule setting or through the adoption of externally developed regulations, in line with intended changes and perceptions and in reference to Agrawal's enabling conditions, introduced in Chapter 3. This type of institutionalisation was the subject of Chapter 7. It was empirically correlated with households' livelihood assets and human capital in Chapter 8. The second type of institutionalisation takes place as a bottom-up process among partners, also through the collective adoption of general or externally set regulations. In this type of institutionalisation, cooperation across multiple partners is needed to achieve and sustain a proposed change. Various examples can be given: provision of land titles to facilitate agricultural, pastoral or wildlife management and access to mortgages or bank loans for investments; domestic water user organisations' collaboration with collective organisations for irrigation, livestock or industry within vast river basin watershed areas; cooperation among PTAs and between school committees and other educational organisations to uplift educational quality; cooperation among primary societies or between primary societies and agricultural processors or marketing organisations for collective quality control, transport and export; cooperation among micro-finance organisations, cooperatives and cooperative or commercial banks; and cooperation among lobby and advocacy organisations working at various levels of society. The current chapter zooms in on such collective action involving multiple partners and the

associated institutional context. The structuring and processing, as defined in Chambers' (1999) sustainable livelihoods framework, as well as Agrawal's (2001) conditions and Ostrom's (2010: 810-812) description of the prevailing rules, require institutionalised trust and quality control beyond that possible with a 'standard seven' educational level (Van Dijk & Timothy, 2013). Indeed, while the bottom-up institutionalisation process uses local human capital, which nowadays has about a standard seven level of education, its related top-down institutionalisation process depends on much more highly educated professionals. This bodes poorly for the implementation and understanding of institutionalised checks and balances, quality control mechanisms and other governance frameworks.

In production processes, institutionalisation of collective action generally aims to enable people to generate income efficiently and to fairly distribute the benefits of joint efforts. For these, Ostrom (2010) defined pay-off rules for the building of confidence. Implementation of these rules requires indisputable expertise to assure quality. Following Ostrom's (ibid.) institutional analysis and development framework, the further analysis links the institutionalisation process to the prevailing education level¹ of the key actors. Starting with an analysis of collective resource development, this chapter proceeds to analyse the cooperation and coordination found in the study villages among actors involved in socio-economic service delivery and in lobby and advocacy.

9.1 Institutionalisation to address collective challenges emanating from a vulnerability context

The perceived vulnerability context challenges people to act collectively in the context of the prevailing national and international institutional framework. Collective action requires common goals to be set, property rights acquired to resources, trust in each other, authority exercised according to transparent procedures, and experience and knowledge gained concerning the action to be taken. In addition, it requires participants to agree on each's involvement, how other institutions will be dealt with, and how benefits from external opportunities will be approached. It also requires a common understanding of how local, national and international institutions relate to one another (Campbell, 2007). The current research identified a number of characteristics of the vulnerability context considered important for the institutionalisation of collective action

regarding formal landownership, erosion control and rural water supply. These are addressed below.

9.1.1 Collective action for formalised landownership

Over time, landownership was institutionalised in various ways (table 9.1). The institutionalisation of households' livelihoods reflected their specific land uses, varying from hunters and gatherers to pastoralists and agriculturalists. Among these latter, after independence councils of elders or a village assembly had the authority to issue land titles based on customary rights. This – initial – collective responsibility was later formalised and vested in the Village Land Council, as set out in the Village Land Act of 1999 (Wily, 2003). Individual farmer households, irrespective of their educational level, had access to about 1.2 hectares for agricultural cultivation.

During *ujamaa* the village government set aside land for collective farming (the village *shamba*). All households sent a representative to assist in *shamba* cultivation. The *Ujamaa* Village Act of 1975 set out regulations governing village investments and accountability. Besides collective decision-making, villagers were compelled to produce collectively to generate collective income, though this turned out to be rather unsuccessful (see annex B).

In 2010 few village *shamba* still existed.² In the research area, Kambiya Simba cultivated only wheat on its village *shamba*, but it produced much less per hectare than the village average. In none of the villages had the institutionalisation of this type of collective action resulted in an efficient operation. However, in some villages, it had yielded some income for the village government or facilitated socio-economic development. In Mang'ola, part of the communal land had been set aside for collective research to produce onion seed. In Buger, the village *shamba* was used to construct a secondary school, with the remaining 4 hectares rented out to individual farmers.

Table 9.1
*Educational level of stakeholders in institutionalisation
of rural landownership*

Institution*	Stakeholders in rural landownership	Educational level of stakeholder
Customary rights** ↗	Farmer versus the council of elders or village government leaders	Standard 7 versus traditional or standard 7 education
<i>Ujamaa Shamba</i> ↓	Village government leaders versus households	Standard 7
Pastoral use 'governing the commons' ↗	Pastoralists amongst themselves versus the council of elders or village government leaders	Standard 7 versus traditional or standard 7 education
Hunting and gathering ↔	Hunters and gatherers versus intruding farmers and pastoralists	Traditional education versus standard 7
Investment ↗	Farmers/entrepreneurs (with or without a business plan) versus village community banks and savings and internal lending communities	Standard 7
Property rights, land title, cadastre ↓	Farmers versus agents of the regional or national government, land act, cadastre and lands office, alongside legal officers and lawyers	Standard 7 versus university or other higher education graduates
Investment ↓	Farmers/entrepreneurs (with or without a business plan) versus business officers (for licensing)	Standard 7 versus university graduates
Loans, collateral,*** mortgage ↓	Farmers versus commercial and cooperative banks and bank managers	Standard 7 versus university graduates
Land dispute ↗ ↓	Farmers versus farmers in consultation with agents of the regional and national government, land act, cadastre and lands office, alongside legal officers and lawyers	Standard 7 versus university or other higher education graduates
Wildlife management association ↓	Hunters and gatherers, farmers and pastoralists versus agents of the regional and national government and tour operators	Traditional or standard 7 education versus university or other higher education graduates

Note: The institutes depicted here are mutually interlinked, as institutions of customary rights are instrumental in provision of property rights, which can be used as collateral which is instrumental to gain access to a mortgage or loan for investment. However, each link in the chain is dependent on very different actors;

*↗ = bottom-up; ↓ = top-down; ** Village Land Act (1999): A customary right of occupancy is in every respect of equal status and effect to a granted right of occupancy ' (VLA IV.A.18.1:

*** Sanga (2009): Assessing the Impact of Customary Land Rights, ITC;

Source: Author

In Mbulu and Karatu districts, small pasture areas around the homesteads were managed and shared among neighbouring households on the slopes. Non-cultivated land was left for pastoral use on the basis of the 'governing the commons' approach (Ostrom, 1990). Thus, large communal grazing areas outside the settled zones were left without collective regulation and management (Borjeson, 2004: 47). Pastoralists' way of life depended on common property rights (Looloitai, 2014: 48) which were virtually nowhere registered. Although in the past pastoralists had moved throughout Mbulu and Karatu districts, during the period of the current research few pastoralists were still as mobile, confining their limited movement mainly around Mongo wa Moono and Harar. However, these last pastoralists, too, were leaving the area, as gradually grazing land was being registered for other purposes. By the end of the research period, most communal grazing had shifted to unsettled areas in the forest or in neighbouring wildlife areas or national reserves. Some areas had been closed for grazing for some time to stop erosion. Some areas had been designated for hunters and gatherers to enable them to survive. The intrusion of others onto the lands of hunters and gatherers forced them to act collectively to safeguard their livelihood. This required knowledge of the Land Act, as discussed below.

Construction of houses, barns and cow sheds; the planting of trees for fuelwood, fruits or timber; and the establishment of contour lines to prevent erosion are examples that required 'ownership' of land. Initially, customary rights to land could be given by the council of elders, though this authority was shifted first to the village government and finally to the Lands Department. In rural areas 'customary ownership' was sufficient to get a loan from a bank, provided that the investment was such that the loan could be repaid within the given timeframe.³ Despite its institutionalisation and the legal opportunity few farmers were able to access such loans (Sanga, 2009). Primary obstacles were the need to pay for a license and inadequate capacity to prepare the compulsory business plan to access funds. There was a large distance between ordinary farmers and commercial bank managers, while micro-financing institutions like village community banks and savings and internal lending communities were unable to issue loans sufficiently large to make a difference. Institutionalisation of rural landownership through acquiring a customary land title and consequently using it as collateral for a loan or mortgage thus remained a rather cumbersome process (Fairley, 2012). Farmers,

who generally had a standard seven educational level, needed to deal with university graduates and understand complicated – mainly top-down prescribed – contract rules and regulations, like those in the Public Procurement Act (2004, 2011).

In case of land disputes within the village, up to 2005 the village government had the authority to settle the case. This was normally done under the supervision of the village assembly. After 2005, however, all land disputes had to be settled at the regional court. This required ordinary farmers to deal with highly educated, and expensive, lawyers.⁴ Local leaders were called to testify in court. Evidence had to be obtained, often by inviting technical experts from the District Lands Office. They had to measure the disputed borders using global positioning system (GPS) equipment. This meant that ordinary villagers needed to arrange and pay for the expertise. The institutional changes set out in the Land Amendment Act (2004) for dealing with land disputes thus required major changes in farmers' capacity, in terms of both knowledge and finance, and customary property rights now had to be proven in court.

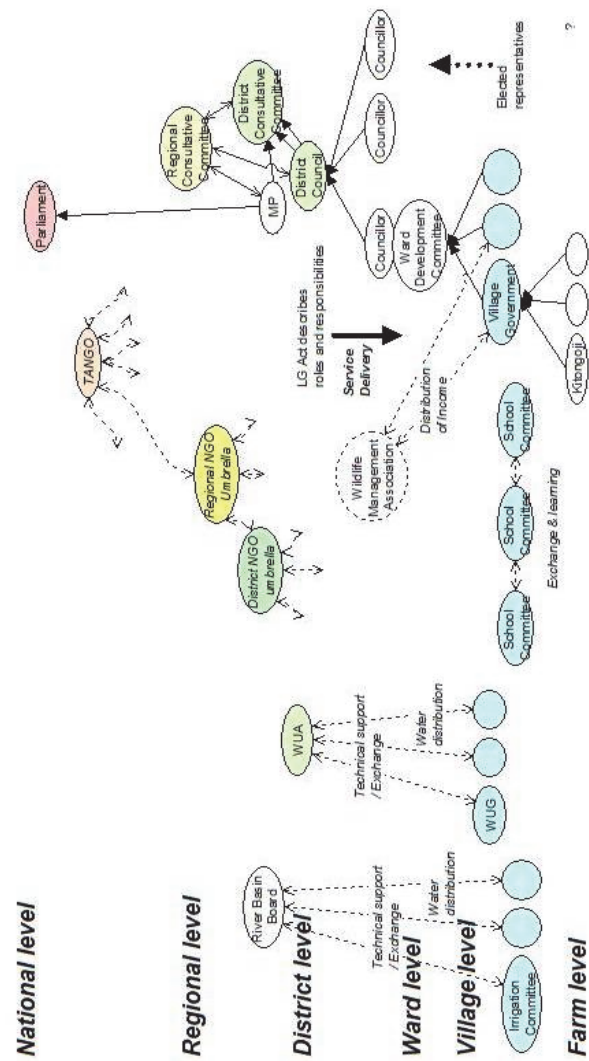
In more urban areas, customary rights no longer sufficed, and people had to start the process of obtaining their land title. This was a cumbersome undertaking. Land officers had to be invited to measure the land and link it to the national cadastre. In rural areas, it was only recently that the lands officers were equipped with adequate instruments (such as GPS devices) to link rural plots to the national cadastre. In 2010, Karatu District had surveyed all of its 49 village boundaries, but only 9 villages had received their certificate at the time of this writing. In rural areas, 23 villagers had been issued a customary land title. In Karatu town and the urban centre of Njia Panda some 300 title deeds had been prepared and issued to land developers (KDC, 2011).

Depending on the livelihoods people pursued, villagers challenged one another to act collectively to safeguard specific aspects of their resources. In the research area, hunters and gatherers were challenged to act collectively to lobby for a communal title deed to safeguard their way of life. The collective title deed was necessary to prevent agriculturalists and pastoralists from invading the area. The collective action materialised through the lobbying of local leaders in conjunction with a member of parliament, in concert with the – at that time – newly established village government.

Attempts to convince the Hadzabe people to settle have failed (Ndagala, 1985). They have continued to live in small camps on the basis of consensus and to operate individually and sometimes in pairs. Among the Hadzabe themselves all institutionalisation is informal. Experiments, for example, to get the Hadzabe involved in 'commercial' beekeeping and link them to the market have so far failed, as such business is foreign to the Hadzabe way of life. However, from the perspective of wildlife management the Hadzabe, through their village administration, have managed to establish a cooperation agreement with tourist companies for visiting tourists to pay fees. These fees now provide a meagre income for the community.⁵ The village government has intermediated between the tourist industry and individual Hadzabe involved as guides and game scouts. The cooperation with the tourism industry was formalised in an agreement between the wildlife department, tourist operators and the village government as discussed below.

Wildlife management associations (WMAs) operate as a buffer between game reserves and ordinary villagers (De Boer, 2013). They are governed by complex associations in which ward and village leaders are represented, in addition to the business community concerned. WMAs receive resources from commercial travel agents to safeguard an area so that wildlife continues to live there without being overly disturbed by agricultural and livestock activities (Figure 9.1). The WMAs have agreements with a number of related villages and distribute the funds received from the tour operators and others among the villages concerned. The distribution key for the funds among the villages and within the villages over those deserving compensation has not yet been clearly documented so far. The actual mandate of the village representation in the WMAs and their feedback position towards the respective village assemblies is not well documented either. The institutionalisation of WMAs rests partly on local government structures with their functioning regulated by the Local Government Act. But as procedures differ depending on the actual wildlife zone, the WMAs operate rather independently across different wards, districts or even regions. Each has its own sources of income, from the wildlife and tourism sector, and their own accounting procedures and financial checks and balances outside the ordinary government

Figure 9.1
Institutionalisation of local government-related collective action at various levels



Source: Author

structure. Within the research area, Mongo wa Moono was the only village in which a WMA was operational. Outside the research area a number of WMAs were observed operating in areas bordering national parks and game reserves.

Public–private partnerships often operate outside ordinary local governance structures and are difficult for ordinary citizens to monitor (USAID, 2013). This is despite the need for local skills and capacity development to enable local communities to participate in the global tourism market (De Boer, 2013). Distribution of income across villages and among individual households that lose their agriculture or livestock income is not covered by the Local Government Finance Act. This means that there is little community and public control of the financial flows, and communities have little to say over the uses of their land (*ibid.*: 179). The challenge therefore is that besides the collective understanding of the agreements among the various stakeholders, for which legal expertise is required, actual socio-economic cost-benefit analyses must be determined for – or by – all stakeholders. Particularly, they must be determined for – or by – the village community concerned. The community may otherwise be left unaware of the potential benefits, without the information needed to ensure a win-win situation. Financial and governance expertise is required to monitor and audit the checks and balances of the financial flows between the tourism industry and local government representatives. The average educational level of the village leaders in the research area argues against their capacity to do so (*ibid.*: 181–186).

9.1.2 Collective action to control erosion

Community members share a common understanding of how resources are shared and cared for, depending on their livelihood and specific use of the resources available. Agriculturalists collectively act to prevent erosion of slopes. The institutionalisation of erosion control is conducted informally by households that cultivate along the same slope (table 9.2). Such control is area based, among neighbours (*aya*), as practised in Kwermusl, Buger and Kambi ya Simba (Thornton, 1980). At the end of the research period, it was conducted under supervision of the neighbourhood (*kitongoji*). The community has culturally rooted knowledge of the environment, which is vital for the sustainable use of land resources (Nawe et al., 2014: 28).

Table 9.2
Educational level of stakeholders in institutionalising erosion control

Institution*	Stakeholders in erosion control	Educational level of stakeholders
Erosion control ↗	Farmers versus farmers, <i>aya</i> and councils of elders	Standard 7 and traditional education
Erosion control ↓	Farmers versus council of elders or village government leaders, alongside extension officers and government by-laws	Standard 7 and traditional education versus traditional education, standard 7 and higher education graduates
Tree nurseries and fuel-wood development ↗	Farmers versus farmers or private enterprises	Standard 7 and traditional education

Note: The institutes depicted here are mutually interlinked, as the *aya* erosion control activities are linked to government agreed and maintained erosion control measures; * ↗ = bottom-up; ↓ = top-down

Source: Author

During colonial days erosion control measures were introduced, but they were undermined by lack of enforcement (URT-VPO, 1999). In the late 1980s, soil surveys were conducted by the National Soil Survey (NSS, 1989-90), which advised a specific way of ploughing the slopes along contours. Farmers were educated and challenged to cultivate along the contour lines. In regard to terracing, village governments may have been consulted and agreed, and farmers may have been trained by extension officers, but individual farmers were nonetheless responsible for constructing the terraces themselves using their own resources and based on their own capacity (Mngube, 1998: 10). Informal institutionalisation to achieve collective erosion control was practised through mutual exchanges between neighbouring farmers. They learned from each other, and ostracism was sometimes applied if a farmer did not use the prescribed measures. Although in the late 1980s tree nursery development took place under village management, during the late 1990s and early 2000s, the raising of trees was privatised. Farmers raised seedlings for themselves and for sale. Fuelwood tree seedlings were raised everywhere. By 2010 only in Kambi ya Simba were seedlings still raised communally at the *kitongoji* level. This collective action aimed to give farmers access to seedlings for planting along the contours and in gullies to fight erosion.

In other villages seedlings were raised privately, while in Mongo wa Moono they did not plant trees.

In Karatu District a few areas had been closed for grazing for some time. Such decisions were taken and followed up among several villages. I consider this to be formalised enforcement of erosion control rules. Although village governments agreed, and public control was established, people themselves had to be convinced to cease grazing their cattle in the area. Hence, in some places, farmers managed to control soil erosion by planting trees, cultivating along contours and introducing zero grazing (Ngana, 2003: 1038). Elsewhere, however, inappropriate farming methods, for example, in the highlands of Buger and Kambi ya Simba, and high concentrations of livestock in the dry season have continued to cause severe erosion and siltation of the rivers and lakes (AWF, 2003: 7). In line with traditional embedded social control, neighbours looked to one another and questioned each other informally. This I consider to be informal enforcement to ensure that the agricultural practices used safeguard the environment insofar as cultivation is concerned. It was the village government, or several neighbouring village governments together, that decided to close certain areas to cattle grazing, to prevent erosion, to avoid interference with hunters and gatherers and to leave wildlife undisturbed. This action I define as formal enforcement. The gradual change from traditional livestock herding to zero grazing was the result of livestock keepers' individual understandings of the economic benefits of zero grazing, as opposed to the dire environmental and economic consequences of traditional cattle rearing, which would lead to insufficient grazing land availability in the neighbourhood. Except in the closing off of some areas to livestock, no institutionalised collective action was observed to streamline traditional livestock rearing. No measures had been instituted to regulate, for example, an acceptable number of heads of cattle per square kilometre in reference to an area's carrying capacity. The 'tragedy of the commons' thus remained the predominant governance style among pastoralists.

9.1.3 Collective action in rural water supply and irrigation

Communities traditionally acted collectively when a well needed to be dug for water or water had to be conveyed to a certain place and one individual could not manage it alone. Customary rights gave everybody the freedom to use common water sources. As long as farmers were rea-

sonable in taking water from open sources or jointly digging a well in a riverbed, little to no institutionalisation took place. People used their common sense and depended on their experience (Table 9.3).

The Water Utilisation Act (1974) gave rights of access to water for all. However, up to the early 1990s people could not organise paid water supply, as water was mandated as a free good. Villages were not entitled to operate a banking account and collect money for water. This meant that they could not act themselves; they remained dependent on higher and sometimes international authorities to establish rural water supply infrastructure. Existing water schemes had been established by government or international agencies, but were hardly maintained. Although many funding agencies supported the rural water sector, up to the late 1980s nearly every region had its own specific donor-imposed institutional framework, related to a donor-specific technological approach, sometimes bypassing government and local water institutions (Therkildsen, 1988: 95). At that time, capacity building focused on those who worked for the international agencies, actually bypassing local communities and their leaders. Consequently, there was no collective 'on the job learning' of local communities in conjunction with projects to enhance village water supply. Before 1989, the Mbulu District Council did not even employ a certified water engineer.

The Tanzania Water Policy (1991) intended to streamline approaches to rural water supply. It enabled village governments to request water rights, establish water supply infrastructure and operate water supply schemes. From 1990 onwards, village water supply and sanitation committees were formed and applied for water rights (MDC, 1990). At around that same time, water sources were inventoried as part of development of a regional water master plan. Village governments understood that upon construction of water supply infrastructure, institutionalisation had to take place, to ensure operations and maintenance. Village water committees were then set up to manage distribution of water and to collect money from the users to pay for operation and maintenance.

Table 9.3
*Educational level of stakeholders in institutionalisation
of rural water supply*

Institution*	Stakeholders in rural water supply	Educational level of stakeholders
Water free of charge from a lake, river/riverbed or spring ↗	Farmers and water users	Standard 7 and traditional education
Water infrastructure Water master plan Water rights ↓	Engineers, surveyors, contractors, lawyers, village government, water user group leaders, and ward, district and regional water departments	Higher education graduates, professionals** and standard 7
Shallow well construction ↓	Farmers and water users versus contractors, village government and water user group leaders	Standard 7 and vocational training
Borehole construction ↓	Farmers and water users versus engineers and contractors, village government and water user group leaders	Standard 7 and higher education graduates
Gravity water supply construction ↓	Farmers and water users versus engineers, contractors, village governments, ward coordinators and water user group leaders	Standard 7 and higher education graduates
Water user group, operation and maintenance ↗	Water user group leaders versus mechanics and engineers, water users, district water engineers and the District Community Development Office	Standard 7, vocational training and higher education graduates
Water user group enforcement ↗	Water user group leaders versus water users and other water user group leaders, alongside the District Community Development Office	Standard 7 and higher education graduates
Water user group administration ↗	Water user group leaders versus water users, District Community Development Office, commercial banks	Standard 7 and higher education graduates
Water distribution, purification, quality control ↗↓	Village governments, ward coordinators, water user group leaders, water user association leaders, irrigation committees, regional water authorities and river water basin boards	Standard 7 and higher education graduates
Irrigation infrastructure construction ↓	Village governments, ward coordinators, water user group leaders, irrigation committees, regional water authority and river water basin board	Standard 7 and higher education graduates

Note: The institutes depicted here are mutually interlinked, as institutions of customary water rights are linked to water master plans, procurement, public ownership, distribution of water, operation and maintenance and administration. However, each link in the chain is dependent on very different actors; *↗ = bottom-up; ↓ = top-down; ** Public Procurement Act (2004, 2011)

Source: Author

Engineering knowledge was required to survey whether water was available and whether water could be pumped up or conveyed by gravity systems to the places where people wanted to access it. Village governments or village water committee managers not only had to collect funds to pay for the infrastructure construction by contractors or engineers, but also for the operation and maintenance of the system afterwards. Contractors and engineers had vocational or higher educations. Mechanical and engineering knowledge had to be continually procured for both construction and maintenance (Mandara, 2014). The village operators needed vocational training. Knowledge – normally greater than standard seven level – was required for the village leaders to design and understand contracts between village governments and contractors and surveying organisations, even when higher authorities were available to play an intermediary role. By the end of the research period, villages like Kambi ya Simba, Oldeani and Mang'ola had been able to organise themselves and establish water committees, sometimes even in conjunction with neighbouring villages. Villagers paid for their domestic water supply. Water points were supervised by monitors, who also collected payments (about 10 Tanzanian shillings per 20 litre bucket). The money collected was handed over to the water user group management.⁶

Even though the rural water schemes improved and were run by local management, the free rider problem was hardly addressed. Neither was management able to cope with the ongoing population growth. Mechanisms to expand the systems in line with population expansion were not institutionalised among the initially cooperating villages. The administrative management of payments for water use and accounting for financial operations was with the village water committees (or water user group or association, see Figure 9.1). Members of these committees generally had a standard seven level of education. Village leaders and leaders of water infrastructure boards were mandated to ensure accountability and financial 'checks and balances'. Besides managing and maintaining the existing water supply system in the village, these water committees, groups and associations were held responsible for purification and quality control, and for sustaining the water system in the face of a growing population – or even expanding the system in such a way that all households could benefit. Gradually, availability and payment for safe and clean water was to be harmonised for which broad institutionalisation and major investments would be required.

Water use conflicts have long been observed in the region (AWF, 2003). In the early 1990s, people in the villages of Rhotia, Kilimatembo and Rhotia Kainam (Karatu District) collected 25% of the investment costs and dug over 18 kilometres of trenches to lay pipes for water supply from the source to a water tank in the village. However, at that point the donor (the Dutch government) raised concerns that elephants in the Lake Manyara area might suffer from the water withdrawals. The Dutch investigated the issue, which took up to 1994, eventually disproving any link between the domestic water supply pursued by the villages and water supply for the elephants. However, by then the villagers' labour investments had faded away and the water scheme was never accomplished. Villagers were demoralised, and loath to take further initiative.⁷ The top-down institutional framework, in this case, undermined local initiative. To date the overarching river basin offices seem ill equipped to issue adequate permits for villages to operate hand pumps or boreholes. For instance, the Internal Drainage Basin Office (IDBO), which covers much of the Mbulu and Karatu area, has insufficient resources to investigate local applications. Shahidi wa Maji (2016) identified several villages in Mbulu District that had applied for a permit to use water over the previous five years and never received an IDBO visit or permit. This shows that bottom-up, people and villages have organised themselves, but top-down institutionalisation has hampered the bottom-up functioning. National institutional capacity has been insufficient to facilitate collective action to operate. Although in Harar the community paid collectively for research on borehole digging, it had not yet taken place.⁸ In Tlawi, village leaders indicated they had requested Mbulu District Council support, but had received no response.⁹ In Kwermusl, where local initiatives were not constrained by national institutionalisation, operation and maintenance of the village's one shallow well had been informally institutionalised, while everybody still has access to open sources.

In the case of irrigation water distribution there was a genuine need to cooperate, as every day (or in every indicated period) all farmers along a channel had the right and need for water to irrigate their crops. Along a branch channel, along the main channel, along the side river, along the main river, all the way up to the source, cooperation was a 'must'. As long as such distribution occurred within village boundaries, it was mainly under the social control of the villagers. If distribution of water had to be organised across villages within one or more wards, the free rider

problem (Ostrom, 2000) became dominant. This was even more evident when distribution had to be organised in an area spanning various administrative boundaries. Top-down, Tanzania's river basin authorities supervised the overall course of the river (see Figure 9.1). Bottom-up institutionalisation of the distribution of irrigation water remained in the process of being documented and maintained.

The construction of irrigation schemes started nearly everywhere as a 'natural' process in which – in the past – interested farmers started diverting water from a main source in certain periods to irrigate own fields to ensure adequate water for crops. Gradually more farmers got interested and joined hands to dig channels to ensure that the water reached other lands as well. This is what happened in Mang'ola. However, when government and external funding intervened to construct irrigation infrastructure to facilitate expansion and connectivity among various villages – as has happened since the late 1980s – without the farmers concerned being consulted, the farmers have felt no responsibility for the system; nor did they have the capacity to maintain and operate it (Martens, 1989: 91-93).

Within the boundaries of one village, collective governance to distribute water was managed within a social context or within a clan with few complications, as shown in Kambi ya Simba.¹⁰ Where distribution involved multiple villages, adequate institutionalisation was required to prevent conflicts, such as between Tlawi and Silaloda.¹¹ Farmers from upstream to downstream had to cooperate to ensure fair distribution. Yet, it was a major challenge for farmers from different villages to cooperate effectively to steer water distribution fairly. Such cross-village cooperation required purposeful establishment. Furthermore, the boundaries of the Ward Development Committee (WDC) institutional level did not always coincide with those of the irrigation scheme. Consequently, there were no institutional cadres in which the irrigation scheme could operate and in which WDCs could cooperate with one another. Normally, WDC representatives communicated through the district council only, or at a higher level through the regional consultative committee. One option where irrigation scheme boundaries did not coincide with WDC administrative boundaries was installation of additional institutional arrangements through, for example, river basin authorities. In the case of Mang'ola, roughly 60 years after first irrigation works started water distribution was institutionalised up to the level of the Board of the Internal

Drainage Basin (IDBO), which started operations in October 2004. However, farmers (water users) were not yet fully paying for its functioning.¹²

After alignment of the channels or construction of concrete intakes, usually done through government or external funding, management of water distribution invariably became more complicated. Groups of farmers, initially operating collectively, had to cooperate with others to ensure fair distribution and adequate environmental management. Additional operation and maintenance costs were involved, to which farmers needed to contribute. Technical expertise and more professional supervision were required. Cooperation among various collective actions thus became a public responsibility, which – in Mbulu and Karatu districts – became operational through the IDBO. Independent water management needed to be institutionalised and checks and balances incorporated among the beneficiaries or their direct representatives. Although traditional water distribution was relatively easily managed by the farmers involved, a greater challenge arose when limited water resources had to be distributed in the most effective and efficient way possible to eliminate wastage. This required engineering insights and adequate management capacity beyond the average standard seven educational level.

To manage water distribution among villages and to tackle free riders, legal action was also required. This, too, needed to be supported by adequate technical and legal advice, beyond the average village capacity. To have an irrigation scheme aligned with concrete intakes the irrigation committee had to supervise contract deliberations and implementation and calculate long-term benefits for individual farmers and the community at large.

9.1.4 Conclusion

Using sustainable livelihoods framework terminology, I discussed the ongoing structuring and processing of land and water use and erosion control to achieve more sustainable use of the natural resource base, improved food security and a reduced vulnerability in the eight study villages.

Traditionally land and water have been distributed informally or on the basis of 'survival of the fittest'. Access to land and water was arranged collectively at the clan or neighbourhood level. During the 1990s

discussions began concerning title deeds for villages and related water rights. Regional water master plans were drafted with the support of the aid industry.

Up to 2005, landownership was institutionalised based on customary rights and authorised locally, first by councils of elders and later by the village government concerned. Authority to issue land titles was then taken over by central government, undermining one of Agrawal's conditions for collective action. Thereafter, village governments lost their authority over local land disputes. Local leaders were called upon merely to testify in court, while land officers, usually from the district level, were called in to give presumed professional advice. Villagers and local leaders hardly had the resources to visit regional headquarters, and were certainly constrained in mustering the judicial knowledge required to defend a case. Land officers, for their part, lacked the resources to visit rural areas and measure individual plots, unless the plot owner covered all costs of travelling and measurement, or unless social or political pressure unlocked resources. The ongoing institutional changes, without the necessary accompanying capacity building, undermined the functioning of traditional collective action to address landownership issues, though without putting a viable alternate in place.

Kwermusl, Buger and Kambi ya Simba are linked to the Lake Manara sub-basin. Harar, Mongo wa Moono, Mang'ola and Oldeani are linked to the Lake Eyasi sub-basin. Tlawi is linked to Lake Tlawi sub-basin, which hardly ever has an outlet to Lake Eyasi. All three fell under the jurisdiction of the IDBO that covered parts of Dodoma, Singida, Tabora, Shinyanga and Arusha regions as well. Local water distribution was governed by social control, while water distribution across localities was governed by agreements between communities. Water supply through boreholes, pumps and related piped infrastructure required expert knowledge to survey, construct, operate and maintain. Those tasks were therefore important parts of such agreements. Integrated water resource management was overseen by the IDBO board which had representatives of local governments and the regional authorities concerned. However, for a community to ensure it obtained rights to its own water supply, it needed to acquire rights from the river basin authority. Here too the officials in the research area lacked the resources needed to investigate the eligibility of water rights claims. For example, they lacked access to any transportation.

Thus, top-down institutionalisation of collective action to issue water rights was not accompanied by either local capacity building to pay for the services required or the necessary government capacity to perform the indicated services. Getting a land title or water rights proved a cumbersome exercise for ordinary individuals and rural village governments to achieve. The ongoing institutionalisation of land and water resources in the study villages was not accompanied by effective capacity building or resource allocation to the target groups (farmers, villagers, village leaders) or to government 'supervisors'.

Beyond Agrawal's conditions for collective action to succeed and Ostrom's rule setting for collective action institutionalisation, I conclude that it is also necessary to investigate the structuring and processing of endogenous collective action, as they also help determine whether exogenously introduced institutionalisation can succeed. We need to delve into how trust and learning by doing are incorporated in institutionalisation processes. Moreover, before exogenously introduced institutionalisation takes place, potential capacity gaps need to be investigated. Although not everything can be foreseen, much can be learned by examining the consequences of changing relationships (Campbell, 2007: 20). For collective action to be institutionalised, stakeholders must first be capacitated to deal with the tasks they are given. Such capacitation has to take place beforehand and trace, from the bottom up, ability to understand and deal with the exogenously set rules. It also needs to address the top-down rule setting chain, to facilitate its implementation and even enforcement of the rules.

9.2 Institutionalisation of collective action in socio-economic infrastructure and service development

In each of the study villages, infrastructural development started with the cutting out of access roads, the building of a primary school with teacher's houses, a political party office and sometimes the construction of a church, a mosque, a health dispensary, a secondary school, a *godown*, a water supply system or irrigation infrastructure.

Mongo wa Moono was the last village to clear an access road, which it did collectively in 1985. The access road from Kwermusl was constructed in the 1970s. At the end of the study period, construction of secondary, or feeder roads, was still being done collectively under coordination

of the *kitongoji* chairperson in nearly all of the study villages. Maintenance of the feeder roads was done on annual basis. Representatives of all the concerned households participated in this manual work. Construction of other major roads took place under the engineering supervision of various layers of government. The focus here is on collective action to construct social infrastructure like schools and health dispensaries and economic infrastructure like *godowns* and the related socio-economic service delivery. The actual digging of water supply and irrigation systems and the related water distribution were discussed above. It suffices to reiterate here that the construction of concrete intakes and sluice gates and alignment of canals took place under engineering supervision as well.

9.2.1 Collective action in education development

Traditional and household upbringing is determined culturally. Circumcision for both boys and girls is part of this, but it takes place within the household or family and is not considered a collective activity (Snyder, 2005: 65).

The construction of primary schools is a community affair. In the early days, schools like those in Tlawi, Kwermusl and Kambi ya Simba were constructed collectively under coordination of the mission workers. In those early days, such collective action was institutionalised informally. Later in the study period, schools were established collectively under coordination of the village government, which appointed a school committee or PTA (Table 9.4). The linkage between parents, the PTA, the village government and the Department of Education was institutionalised by law in the National Education Act (1978), which also facilitated the PTAs' fulfilment of their mandate. Through their involvement in the PTA, parents played a major role in integrating education into the life of communities, ensuring self-reliance and promoting schools as a centre for education. In addition, the school committees were made responsible for school management, development planning, discipline and school finances (Education Act, 1995). The effective fulfilment of those roles depends inter alia on the educational level of the stakeholders, as discussed in Chapter 7.

Table 9.4
Educational level of stakeholders in institutionalising primary education

Institution*	Stakeholders in primary education	Educational level of stakeholder
Traditional education ↗	Traditional leaders versus parents and population in general	Standard 7
Household upbringing ↗	Parents versus children	Standard 7
Village government ↓	Village government leaders versus parents and population in general	Standard 7
School construction and construction of teachers' houses ↗↓	Village government leaders and parents versus contractors and district council officials ¹³	Standard 7 versus vocational training and higher education graduates
PTA supervision of school maintenance, discipline, finances, etc. ↗	Parent representatives versus parents, teachers and school management	Standard 7 teacher training college graduates
School management ↓	Management versus teachers, pupils and their parents	teacher training college graduates, standard 7
Exchanges among PTAs ↗↓	Parent representatives and school management amongst themselves	Standard 7 and teacher training college graduates
Target of universal primary education ↓	Teachers versus pupils	teacher training college graduates
Teacher resource centre ¹⁴ ↓	Academics and teachers amongst themselves	University and teacher training college graduates
Teacher training college ↓	Academics and teachers versus potential teachers (= minimal form 4)	University and teacher training college graduates, form 4 level
Curriculum development ↓	Academics and teachers versus education administrators	University and teacher training college graduates
Education Management ↓	Education administrators versus school management	University graduates and teacher training college graduates

Note: The institutes depicted here are mutually interlinked, as institutions of traditional education contribute to household upbringing, which contributes to village government, to parent-teacher associations (PTAs), school management, primary education quality, the department of education, curriculum development, and teacher training college;

* ↗ = bottom-up; ↓ = top-down

Source: Author

Construction of a school required all households to collect building materials, to fabricate burned bricks and to participate in actual construction. It required an agreement between the village government, a contractor, technical staff from the district council and potential suppliers to have the building materials and labourers available in a timely way at the building site. Informal institutionalisation at the village level went hand in hand with the establishment of formal agreements describing technical and financial 'checks and balances'. The actual timing of construction of primary schools differed from place to place (see Table 7.1). Although education was mentioned in 1988 as a major issue (MDC, 1989), it took village leaders of Mongo wa Moono up to 2009 to organise the community to start construction of the first few classrooms. Though the primary school in Harar was constructed in 1978, as of this writing construction of teachers' housing remained lacking. In both villages the average educational level of the heads of household was much lower than elsewhere (see Chapter 8).

After school construction, a PTA was formed to oversee school management, maintenance, further development planning, school discipline and finances. In general, the PTAs had difficulties in understanding and following procurement procedures and supervising contract implementation (Van Dijk & Timothy, 2013). Yet, this was part of their daily work, as they were responsible for construction, expansion and maintenance. When insufficient teachers were sent by the ministry, the PTA had the authority to employ additional teaching staff. It was also authorised to employ cooks, security staff and others as necessary. Through the village government it had the authority to collect additional money from parents to raise the educational standard of the school. PTAs concentrated their activities on their own school. Chapter 7 described how the PTAs in the various villages saw their responsibilities. These differences in vision meant that the quality of education differed from place to place. Despite the stipulations of the Education Act (1995), in Mongo wa Moono the primary school taught nothing relevant to survival in the Yaeda Valley. That meant parents saw little value in sending their children to school.¹⁵ The PTA did not have the capacity to fulfil its responsibilities. Other PTAs, like in Harar, were unable to convince parents to contribute to raise the educational level of their school. Some PTAs, like those in Kambi ya Simba, Kwermusl and Mang'ola, with on average a higher level of education, emphasised the need to make additional staff available, to

purchase textbooks and conduct additional maintenance. In the villages where parents, and by extension, school committee members, had a higher level of education on average there was more concern with the quality of education, compared to villages where the average education level of parents was lower.

The institutionalisation of bottom-up learning among PTAs was not observed during the study period. Outside of Oldeani,¹⁶ which in 1988 had the highest level of education among the study villages, no experiences were documented in which PTAs learned from each other. The study revealed no cases, for example, of exchanging 'best practices' in the running of schools, improving teaching or in extra-curricular activities (figure 9.1). Neither were examples found where the Department of Education took the initiative to help PTAs exchange best practices.

Considering the correlation between the heads of household's level of education and collective action in the villages, as discussed in Chapter 8, I conclude that the higher the educational level was of the heads of household, the better they fulfilled their role as supervisors of education performance in the village. Outside of the general support given by the government bureaucracy, it was the capacity of the parents themselves that enabled them to be a good counterpart for school management, and for the education sector as a whole.

School management and parents together ran the schools, while the teachers focused on the teaching. The educational sector, in terms of curricula development and the quality of training at teachers' training colleges, in conjunction with the availability of teaching material such as textbooks, enabled teachers to provide the necessary tuition for pupils to learn history; to read, write and calculate profit and loss; and to use a hand hoe, an ox-drawn plough and, nowadays, the internet. These skills together enable villagers to access MVIWATA's crop data bank (MAMIS) using a mobile phone and to work together for the betterment of all.

Since 1995, it has become common practice for every ward to establish its own secondary school. The construction of a secondary school requires a level of cooperation across the villages concerned. The Ward Development Committee (WDC) coordinates such cooperation. A joint assembly of all inhabitants of the participating villages has to be held to approve the construction proposals and appoint the members of a construction committee. In Kwermusl, the majority decided to have the sec-

ondary school in a certain place, but then a minority lobbied to higher government officials convincing them to supply government funds to prepare an area for construction elsewhere. Although site selection for a new school is easily done through village government allocation of an area on the basis of customary rights, which are assumed to be indisputable by higher authorities, the case of Kwermusl demonstrated that despite such decision, higher government leaders could overrule local processes, specifically, decisions made by the village government or WDC. This realisation slackened collective action. However, the construction committee in this case, including a number of villagers with an above average education, worked to counter such 'overruling'. They understood government procedures and insisted that they be followed. Yet, it took the WDC and village governments quite some time to correct the wrongful intervention of the higher officials. Finally, they continued construction of the secondary school in the area the WDC had chosen.¹⁷

9.2.2 Collective action in agricultural storage facility (*godown*) construction

Collective farming took place on the village *shamba*. Yet, collective action in agricultural production through such *ujamaa* farming did not result in economic benefits for individual farmers. Although collective production on *ujamaa* farms was continued for social reasons, Schweigman (2001) concluded that there were no economic reasons for people to cultivate the *ujamaa* or village farm together.

In 1982 primary societies were reintroduced under party (CCM) control (Table 9.5). Collective marketing took place through the primary society, and there was a genuine interest at primary society and village level to construct *godowns* to safeguard the storage of agricultural production while waiting for higher market prices. Mbulu District got support from FAO, which procured and transported the building materials to the site. The District Community Development Office (DCDO) monitored the construction. A district-level technical building brigade constructed *godowns* in a number of selected villages.

From 1988 onward, the district council decided to take over implementation of the *godown* construction programme. The council's new approach was to have the primary society, in conjunction with the village governments concerned, apply for support. The council's actual priority

setting and size of the proposed *godown* was based on the agricultural production figures of the primary society concerned. *Godowns* were constructed according to a standard design, as established under FAO. When the district council began implementing the *godown* construction programme itself, the council's lack of experience became evident. It initially did not know what to do to procure building materials according to the government tender procedures (MDC, 1989: 29). DCDO staff became responsible for timely procurement and transportation of building materials to the building sites, to enable the contractor to start work.

Table 9.5
*Educational level of stakeholders in institutionalisation
of agricultural storage facilities (godowns)*

Institution*	Stakeholders in godown construction	Educational level of stakeholders
Agricultural production ↗	Farmers and extension workers	Standard 7 and higher education
Primary society ↗↓	Farmers and primary society leaders	Standard 7
<i>Godown</i> construction ↗↓	Primary society and village government leaders, farmers, households, contractors, district council officials and the DCDO**	Standard 7 and vocational training or higher education graduates
Primary society and cooperative unions ↗	Farmers and primary society leaders, cooperative union, party leaders and private traders	Standard 7

Note: In *godown* construction, the institutions depicted here are mutually interlinked, as agricultural production (farmers) is linked to the primary societies, which are linked to cooperative unions, traders, contractors, village governments and the District Community Development Office (DCDO). They all are linked to each other and, although linked, dependent on different actors; *↗ = bottom-up; ↓ = top-down; ** Public Procurement Act (2001, 2011)

Source: Author

Godown construction was coordinated locally by the leaders of the primary society in conjunction with the village government concerned. The DCDO coordinated the construction at the district level. An agreement was signed between the DCDO on behalf of the district council and village government on behalf of the primary society. The agreement affected the collection of money among the villagers to pay the contrac-

tor and the monitoring of the actual supply of burned bricks and unskilled labour for the construction. It covered the contractual arrangements between the contractor and the leaders of the primary society and village government. It covered the arrangements between the village government and the technical building brigade of the DCDO to supply building materials according to the bill of quantities. The DCDO was allowed to procure the building materials. Through the council, building materials (cement, iron bars, iron sheets and timber) and supervisory support were given to cover about 51% of the total cost. The remaining 49% of the budget was covered by the village government. This contribution was partly in cash, to pay the local contractor and to pay for transporting the building materials, and partly in kind, in fabrication of burned bricks and supply of labour for the construction (MDC, 1989: 30). The institutionalised '*pro forma* system' did not work effectively as suppliers did not supply the required building materials in a timely way (MDC, 1989: 31).

Besides education of the stakeholders, induction and experience in implementation processes and follow-up decisions proved necessary as well. Distribution of tasks and responsibilities needed to be agreed upon by leaders of the primary society, the village government, the district council and the contractor within the context of the prevailing governance framework.

Prior to 1990, Mbulu District had 40 primary societies linked to the River Valley Cooperative Union. Up to that time farmers were mandated by law to market their agricultural surplus through that union, although it was not considered as operating efficiently. Most agricultural surplus in the research villages was traded through the 25 societies in the current Karatu District: 85% in 1985-86; 78% in 1986-87; 80% in 1987-88; and 68% in 1988-89 (MDC, 1989: 32-33), as the Karatu area was more fertile than Mbulu.

After the 1991 cooperative reforms, most farmers stopped selling their agricultural products through the cooperatives (Van Dijk, 1991). Indeed, the capacity of these organisations had not been adequately developed, and farmers had been unable to implement the checks and balances necessary to ensure their efficient functioning so as to gain optimum benefit (Mushi, 2001). As primary societies were no longer able to procure surplus produce on behalf of the River Valley Cooperative Union, the district council was no longer able to collect a cess from agricul-

tural production. The council also no longer had agricultural production data, and subsequently lost a major source of locally generated income (MDC, 1991: 42). For a long time thereafter, the primary societies and the umbrella River Valley Cooperative Union hardly played a role in the trading of agricultural surpluses in Mbulu District. At the time of this writing, when farmers needed storage capacity for agricultural crops, they hired space in the *godown* and just paid for it outright (Van Dijk & Masanyiwa, 2010: 85).

9.2.3 Conclusion

This section discussed the ongoing structuring and processing of socio-economic service delivery as a livelihood strategy to achieve livelihood outcomes in terms of increased well-being in the eight study villages. Institutionalisation of collective action to construct socio-economic infrastructure was defined well by Agrawal's conditions and Ostrom's rule setting. Where, for example, the state interferes, like in the case of the Kwermusl secondary school, the output of collective action is delayed. Or, where implementation procedures change without accompanying capacity building of the stakeholders concerned, like in *godown* construction, the output of collective action is hampered as well.

Construction requires interest and initiative within the population concerned regarding the eligibility norms for local government to be considered for infrastructure support. For example, a particular number of households had to be reached before construction of a primary school would be considered. For construction of a secondary school, being a ward was required. To construct a *godown*, a certain level of agricultural production was required. All this infrastructure, however, was implemented through collective action.

A committee established or endorsed by the village government was part of the requirements. Construction of either a school, a health dispensary or a *godown* had to follow a set design and bill of quantities established by district technical departments. The same departments facilitated, or failed to facilitate, the contractual arrangements with a builder. If they felt it was necessary, the committee leaders requested advice from the technical departments in hiring a contractor. If they felt comfortable with the task, they could do the contractual arrangements themselves. Depending on the kind of contract chosen, the committees were respon-

sible for ensuring the timely availability of building materials and labour, which could be organised in part locally under supervision of the committee and in part through external supply.

As soon as school (or health dispensary) construction was accomplished, professionals (teachers or health staff) needed to be applied for and provided by the parent ministry. Supervision of the quality of management remained with the committee members, however, on behalf of the parents and village government. Supervision of service delivery quality subsequently depended on the involvement, contribution and quality of the committee members involved. Villages with, on average, a higher level of education were more concerned with the quality of education than villages where the average educational level of parents was lower. Although collective action to provide social service delivery was firmly institutionalised, I conclude that such institutionalisation required different capacities of its members than those required for construction. It required additional insight into the determinants of education quality, which demands a certain level of education among the committee members concerned. Institutionalisation of the capacity building necessary to oversee management in order to achieve quality education was, however, not observed.

Similarly, when *godowns* were constructed, it was the primary society leadership that conducted the trading of members' agricultural surplus. However, when membership was compulsory and its leadership party-controlled, management did not operate efficiently and effectively, leading members to opt out as soon as that was allowed. Trust as condition for collective action was not institutionalised, as transparent administrative procedures and technical and financial checks and balances were lacking. The capacity of members proved insufficient to organise checks and balances, to guarantee quality, to oversee collection and marketing of crops and to deal adequately with partners like the cooperative union (ANSAF, 2012). Maintenance of the buildings is still conducted collectively, but the actual trading of agricultural crops is done mainly by the individual farmers, as collectively farmers lose the capacity to control quality and implement the necessary checks and balances. Lack of clarity about a fair distribution of the benefits (pay-off rules) in reference to production and marketing affects collective action as well, as discussed below.

9.3 Collective action in income generation

9.3.1 Collective action for income generation

In addition to the sharing of natural resources, Ostrom (2010) emphasised rule setting in reference to the production and processing of resources. The more people may benefit individually from collective action the more rules need to be described and agreed upon to safeguard fair distribution of gains. In reference to collective action to manage economic services, Ostrom (ibid.) identified boundary rules, position rules, information rules, authority rules, aggregation rules, scoping rules and pay-off rules. Those last, in particular, guide the distribution of benefits and costs among members and actors in various positions.

Farmers, individually or as a group, register themselves for different reasons. Individually they may register to obtain a title deed or to get a license to secure a loan. Collectively they may register to access government or donor funds for economic activities, for which registration is accomplished through the government office of the cooperative or trade officer (Table 9.6).

In all villages except Mongo wa Moono farmers joined hands to access improved agriculture, particularly seeds (*mbegu mbora*). The quality of the modern inputs supplied depended on the supplier,¹⁸ while the individual farmers could decide to purchase inputs or not. Farmers in Kambi ya Simba had a long-lasting relationship with Tanzania Breweries to receive improved barley seeds and support in harvesting through hired combine harvesters, alongside guaranteed purchase of the produce.¹⁹ Quality depended here on the customer that supplied the input, and the pay-off rules were well defined in advance.

In all of the study villages except Mongo wa Moono, farmers had registered themselves in micro-finance village community banks, savings and internal lending communities and/or savings and credit cooperative societies. Through these facilities, they could access loans for investment or social care. Although each village community bank (or savings and internal lending community) functioned independently, they all operated in a similar prescribed way. Except their regular contributions and adherence to operational rules of the village community bank (or savings and

Table 9.6
*Educational level of stakeholders in institutionalisation
of income generation*

Institution*	Stakeholders in income-generating activities	Educational level of stakeholders
Registration of farmer groups ↗	Farmers and farmer leaders versus the District Community Development Office, the District Cooperative Office, village government leaders, councillors and traders	Standard 7 and college graduates
Village community bank or savings and internal lending community ↗	Farmers, coaches and capacity builders	Standard 7 and technically trained staff
Investment ↗	Farmers/entrepreneurs (with or without a business plan) versus village community bank or savings and internal lending community members	Standard 7
Agricultural production ↗	Farmers versus primary society, cooperative and/or village leaders	Standard 7
Cooperatives and savings and credit cooperative societies ↗ ↓	Farmers versus cooperative leaders	Standard 7 and cooperative training
Agricultural processing ↗	Farmers (vocationally trained) versus product-related technology salespersons	farmer, artisan or sales vocational training
Local market ↗	Farmers versus farmers and population in general, local businesspeople	Standard 7
National and international market and quality control ↓	Farmers versus national and perhaps European quality requirements and standards (e.g., EU export regulations), Tanzania Bureau of Standards, businesspeople	Standard 7, quality assurance training, standards bureau specialists

Note: Institutions of farmer groups are linked to agricultural processing, which are linked to local, national and international markets. Although the institutions depicted here are mutually interlinked, they are dependent on very different actors; *↗ = bottom-up; ↓ = top-down

Source: Author

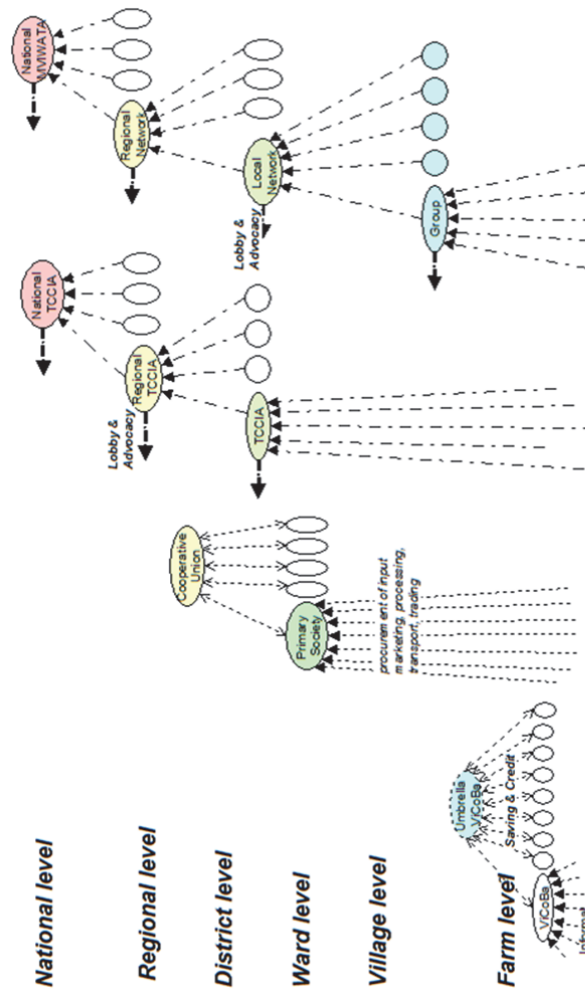
credit cooperative society), there were no restrictions on membership. Members cooperated on the basis of trust. Members of a village community bank (or savings and internal lending community) did share a similar social background. Their educational level was close to the village average of standard seven. All members received a similar training in the

organisation's operational process and checks and balances. Through the village community bank (or savings and internal lending community), members could gain access to small loans for social and economic activities. However, the loans were insufficient for any major investments, and for a substantial business to take off. The capital collected by these organisations was, in that regard, minor and no link had yet been formalised to an umbrella organisation or commercial bank. Only in Kambi ya Simba had village community banks made progress towards cooperation, although no agreement had yet materialised at the time of this writing (Figure 9.2). Village community banks amongst themselves did not have the capacity to institutionalise cooperation, to borrow from each other and safeguard repayment of collaborative loans in a timely way. The institutionalisation of such an umbrella function had yet to be worked out.

The functioning of micro-finance savings and credit cooperative societies²⁰ was slightly different, as key elements of their constitutions were taken from the law, and they were also subject to public audit. Membership here was partly restricted to those who belonged to a certain professional group, and thus had a more regular source of income (e.g., teachers, civil servants, estate labourers, dairy farmers or farmers that grew a specific crop like onions). Or, like in Kambi ya Simba, they all belonged to the Lutheran church. The combination of an above average educational level of members, top-down institutionalisation, professional training in profit and loss accounting and access to commercial loans with professional supervision of checks and balances, resulted in adequate financial resource availability to initiate viable commercial activities.

The Tanzania Chamber of Commerce, Industry and Agriculture savings and credit cooperative society in Mbulu District opened its doors in 2010 for chamber of commerce members only. As these cooperative societies were semi-formal, they had access to commercial bank loans, which meant that members had a better chance of accessing larger loans to do real business. The educational level of members was close to the average of the particular professional group. In case of teachers, for example, that would be teacher training college, while for civil servants it could be a bachelor's degree. The educational level of, for example, the onion-growing farmers may differ more. But here members were similar to one another in their experience in water distribution, drying onions and getting the onions to market.

Figure 9.2
Institutionalisation of collective membership action at various levels



Note: TCCIA = Tanzania Chamber of Commerce, Industry and Agriculture.
Source: Author

Institutionalisation of the primary society as a grassroots organisation for collective action has alternated between bottom-up and top-down (Van Cranenburgh, 1990; Wambura, 2010). The pre-colonial bottom-up functioning served as an outline for top-down institutionalisation. This, however, could not be maintained, as it lacked an internal drive from members to act collectively to secure inputs or to market their production. Primary societies at that time were not established to compete on the market (Mushi, 2001). The imposed membership between the 1970s and late 1980s, made farmers hesitant to act collectively afterwards. This resulted in the roughly 6,100 cooperatives in 1990 initially being reduced to 2,200 by 1994. However, after the government's demonstrated recognition of internationally established cooperative principles and values, in 2008 Tanzania counted 8,551 registered cooperatives (Banturaki, 2012). In 2010, among the research villages, only Buger and Kambi ya Simba had a primary society. At least one savings and credit cooperative society was operating in all villages except Mongo wa Moono. Leaders of savings and credit cooperative societies in both Mang'ola²¹ and Oldeani²² indicated that their education played a role in enabling them to carry out their tasks, to understand their rights and know what to expect from the district cooperative officer. Further institutionalisation of savings and credit cooperative societies will require strong membership control, and effective cooperative education of both members and leaders to ensure that 'checks and balances' are sustained (Bwana & Mwakujonga, 2013).

Farmers in Mang'ola joined hands to access inputs such as improved onion seed, maize seed and fertiliser at reduced cost. Economies of scale facilitated collective action to bargain with suppliers. Farmers joined to conduct agricultural research in cooperation with seed suppliers and the agricultural extension officer (*bwana shamba*). In all these actions Ostrom's pay-off rules are in clear evidence. However, the collective selling of perishable products like onions proved difficult, as bottom-up local capacity was inadequate to guarantee quality and institutionalise a quality hallmark, which jeopardised collective marketing.²³

The Hadzabe collected honey for their own consumption (Annex B). Beekeepers of Mongo wa Moono received improved bee hives and were trained to attract bees to the hives. However, they were unable to cooperate to find a market to sell their honey collectively. Beekeepers of Buger did transport their honey to the market collectively.

If a group wants to sell its produce on local, national or international markets, it can register itself through, for example, the Tanzania Bureau of Standards. Such registration, however, requires group leaders to deal with agents of the standards bureau or other quality assurance specialists.

Collective selling of perishable products is different from collective selling of non-perishable products. Sale of improved clay stoves from Harar, or of mats (*mikeke*) from Kwermusl, was done collectively with full confidence. The various joint ventures in Oldeani operated in a similar way. Delays in collective sales of non-perishable products were unlikely to affect product quality or market price, as was the case with perishable crops. For collective sales of perishable products, clear institutionalised quality control is needed.

9.3.2 Conclusion

Using the terminology of the sustainable livelihoods framework, this section discussed the ongoing structuring and processing of implementing livelihood strategies for generating income among households in the eight villages under study.

Concentration of specific agricultural production in certain areas (e.g., barley in Kambi ya Simba, onions in Mang'ola and sunflowers around Haydom) facilitated linking up with the market, but it did not automatically result in collective action and its institutionalisation. Concentration of barley production, area-wise, resulted in industrial interest in processing barley into beer, as the industry concerned certified barley quality in a top-down procedure. Concentration of sunflower production received similar interest, as it linked up with major industries in some parts of the country. It did not, however, benefit from quality control in the vicinity of Haydom, where sunflower pits were processed into cooking oil, which was not certified to be sold on the formal national or international market. But it could be sold by individual producers at the local market and along the road. Collective marketing of onions lacked bottom-up quality assurance, as no local capacity in this regard was institutionalised. Farmers marketed their onions individually. Collective action in milk processing among a number of mainly women in Karatu, as mentioned in Chapter 8, was firmly institutionalised to produce for the local market. In the village of Oldeani, collective action was institutionalised informally among women in the productive sector on the basis of trust,

reflecting Ostrom's rule setting, but not on the basis of, for example, scientific quality assurance. Such informal institutionalisation was inadequate to meet the requirements of, for example, the Tanzania Bureau of Standards in order to trade products in higher-segment markets (Van Dijk & Mishili, 2011: 110). Bottom-up institutionalisation of the pay-off rules in the collective marketing and trading of perishable products proved to be cumbersome in the study villages. Except in the small-scale dairy sector, the current research could identify no functioning examples.

Transparency and trust were key in the collective micro-financing operations of the village community banks and savings and internal lending communities. In these, Agrawal's conditions for collective action were institutionalised (Ostrom, 2010). As of this writing, only village community banks in Kambi ya Simba had opened a commercial banking account. Although people in Kambi ya Simba were looking into ways for their village community banks to cooperate amongst themselves at the village level, institutionalisation of such cooperation had not yet materialised.

Among the savings and credit cooperative societies, institutionalisation took place from the beginning, as otherwise they could not get loans and further government support through the cooperative officer. All savings and credit cooperative societies had banking accounts. Although established on basis of the Cooperative Act of 1991, it took until after the cooperative reforms of 2005 for members and leaders to gain sufficient education to cooperatively be able to manage savings and credit mechanisms that were imitable and transparent. In Buger, it took until 2011, while in Mang'ola it took even longer to establish a system by which savings and credit cooperative society leadership could be sufficiently in control to ensure repayment of loans on schedule. Capacity building of members proved to be a necessary condition to institutionalise trust and transparency in this case (Van Dijk et al., 2014: 24).

Primary societies operated at the village or ward level and were linked further to the River Valley Cooperative Union at the regional level. They sometimes owned the *godown*, facilitated input supply or rented out storage capacity to individual farmers. Input supply, transport of agricultural surplus and marketing were institutionalised through the River Valley Cooperative Union. Generally, however, farmers found their own way to the market, as collectively they lost the capacity to monitor and enforce the scoping and pay-off rules. In order to achieve functioning institu-

tionalisation of collective marketing for perishable crops, members and leadership need to be enabled or educated to understand and entrust checks and balances as operated by the leadership.

Farmers' specific interests were safeguarded through, for example, the MVIWATA, and those of the private sector were pursued through, for example, the Tanzania Chamber of Commerce, Industry and Agriculture. Here, the whole policy development process worked top-down but was institutionalised bottom-up. Their lobby and advocacy roles are discussed below.

9.4 Collective action for lobbying and advocacy

9.4.1 Institutionalising collective lobbying and advocacy

MVIWATA was established in 1993 in the conviction that 'the interest of the small-scale farmer can only be defended by the farmer him/ herself' (Van Dijk & Ngido, 2014). Although initially started in Morogoro with support of professors of the Sokoine Agricultural University (SUA), farmers from all over the country joined in organising themselves in small groups to lobby and advocate their interests at various government levels, from the local to the national. Those groups registered at the District Community Development Office (DCDO) and formulated a kind of constitution that describes their functioning (Van Dijk et al., 2014). The groups joined together in local and regional networks, together forming a national umbrella (figure 9.2). The local networks served to communicate and send representatives upwards in the organisational chain. The regional and national level networks had their own constitutions and were registered under the NGO Act (2002) either directly or through the MVIWATA at the national level. A strong bottom-up representation of members provided guidance on issues at each level where small-scale farmers' interests were at stake. Since about 2005, farmers in Mbulu and Karatu districts have joined hands as well and defended their interests locally at the district council and centrally at the district commissioner's office when necessary. Otherwise, their interests have been dealt with through their representations at the regional and national levels. Being registered, they have been able to attract funds from development partners to support small interventions like household granaries, irrigation, beekeeping and tree planting. The educational level of

MVIWATA members was close to the village average of standard seven (Table 9.7).

Table 9.7
Educational level of stakeholders in institutionalisation of lobbying and advocacy

Institution*	Stakeholder in lobbying and advocacy	Education level of stakeholder
Registration of farmer groups ↗	Farmers and farmer leaders versus the District Community Development Office (DCDP), the District Cooperative Office, village government leaders, district councillors and traders,	Standard 7 and college graduates
Lobbying and advocacy of local networks ↗	Farmer representatives versus government representatives	Standard 7 and academics
Lobbying and advocacy of mid-level networks ↗	Farmer representatives versus MVIWATA management and government representatives	Standard 7 and academics
Lobbying and advocacy of MVIWATA (national) ↗	Farmer representatives versus MVIWATA management and government representatives	Standard 7 and academics
Service delivery by MVIWATA (national) ↓	MVIWATA management, project implementation agents and development partners versus farmers	Academics and standard 7

Note: The institutions depicted here are mutually interlinked. Farmer groups, local networks of farmer groups, middle-level networks, MVIWATA (national), MVIWATA management and service delivery, while connected to each other, are dependent on very different actors; *↗ = bottom-up; ↓ = top-down

Source: Author

Farmers were confronted with government regulations which, according to them, were not conducive to their enterprise. They faced the fixing of prices that were not market conform. They were confronted with regulations compelling them to grow a specific crop, or to abstain from exporting another crop. They discussed the pricing of crops, for example, with government representatives when prices were considered to be set too low. They raised the issue of the quality of seeds when the quality on offer was poor.²⁴ In all of these instances, the farmers organised themselves to raise their voice at the levels of government concerned in order to be heard (Van Dijk et al., 2014: 35).

On many occasions, the discussions held were between standard seven farmer representatives and university graduate government or commercial agents, or between the powerless and the powerful. Working together, meeting each other and sending the best representative to lobby their case has thus been of utmost importance. Key also have been transparent management of meetings and securing funds, accounting for them and ensuring checks and balances, as representatives must be trustworthy to colleague members. The management of such lobby and advocacy work involves communication with government organisations and with lobby and advocacy organisations internally. For many of these interactions, too it is necessary for standard seven leaders to communicate with university graduates.

The institutionalisation of collective action for lobbying and advocacy requires expertise, understanding and dealing with government and export regulations. Simultaneously the functioning of such expertise has to be accounted for and understood by its constituency. The consequence of the MVIWATA network's lobby and advocacy practices was that the network was requested to implement service delivery activities on behalf of development partners, which for the participating and governing farmers generated another level of understanding of how implementation is accounted for (Van Dijk et al., 2014: 44).

The Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA) was established at the national level in 1988. In the research area, the district level TCCIA branch did not function until after 2005. Every entrepreneur was eligible to become a TCCIA member. In the research area, the lowest TCCIA branch operated at the district level (Figure 9.2). In both districts it only gained respect among (potential) members when the local representatives proved their ability to represent the business community's interests. In Karatu this came when the TCCIA was able to convince the district council to reconsider its reintroduction of a business levy; in Mbulu it came with the follow-up of complaints concerning corrupt TRA officers.²⁵ Since then, the number of members has steadily grown, as business people see the results of collective lobby and advocacy. In both districts, TCCIA members operated a savings and credit cooperative society. In Karatu District, the TCCIA operated as agent for BRELA, a vehicle insurance company, and as an agent to issue 'certificates of origin' for certain export crops. In Mbulu District, the TCCIA did not have these functions. Besides lobby and advocacy, it

functioned largely as a networking organisation to share information. TCCIA members, and their leaders, were generally educated to above the standard seven level.

In addition to the above-mentioned community-based organisations and CSOs, many NGOs were formed by groups of individuals for specific reasons. Some related to lobby and advocacy activities, while others operated mainly in social service delivery. They together formed an umbrella organisation to safeguard their interests and function as an interlocutor between government and civil society, mainly at the district level. At the national level, the Tanzania Association of NGOs (TANGO) represented all NGOs in Tanzania (Figure 9.1). However, in Mbulu District there was no one umbrella organisation representing all NGOs; rather, the district had three NGO umbrella organisations: the Mbulu NGO network (MbuNGOnet), the Mbulu Network for Civil Society Organisations (MNCO) and *Mtandao wa Malesi, Makuzi ya Watoto Wadogo* Tanzania (TECDEN). That last operated throughout the Manyara Region, including 10 NGOs in Mbulu District, all focused on capacity building for child rights (Van Dijk & Masanyiwa, 2010). Nonetheless, these umbrella organisations had been unable to coordinate their members or to build member capacity. A capacity building function of these three umbrella organisations had mainly been encouraged by external capacity building support partners. Foreign donors emphasised that, as multiple NGOs focused on the same issue (e.g., HIV/AIDS, gender and environment), cooperation was required to get access to capacity building and other support funds. In a similar way, local government and the central government at the district level were eager to discuss district matters with one NGO or CSO representative instead of dealing with many (often opposing) views. Dietz and Zanen (2009: 159) discussed the top-down influence of the donor community, particularly as donors emphasised social instead of economic development in Mbulu District, neglecting local producer's interest. In 2010 alone, 33 HIV/AIDS NGOs were found in Mbulu District. Most operated in Mbulu Mjini, with only a few active in rural areas. Yaeda Chini/Mongo wa Moono was second, accommodating the services of 12 NGOs in the field of 'forgotten people', wildlife environment, management, health and HIV/AIDS (Van Dijk & Masanyiwa, 2010: 97).

9.4.2 Conclusion

MVIWATA, TCCIA and the NGO umbrellas developed outside of government influence to safeguard members' interests. These were mainly active insofar as public decision-making was concerned. In addition, they built the capacity of their members to safeguard their interests themselves at their own level. The institutionalisation of these organisations started top-down, with only MVIWATA reaching up from the local farmer's level. Among these lobby and advocacy organisations MVIWATA was the only umbrella organisation that had member meetings in the research villages. TCCIA and the NGO umbrellas met and operated from the district level upwards. MVIWATA implemented projects at the local and district level, though these were supply-driven on the basis of external support. From the village level upwards, there was structured representation to higher level decision-making bodies. Besides lobbying, MVIWATA attracted funding agencies to service its members. TCCIA lobbied at the district and higher level to safeguard its members' interests in regard mainly to local government decision-making. NGOs all had their own links with their own funding agencies, which sometimes 'imposed' communication among NGOs through umbrella organisations to ensure cooperation within certain sectors.

In the terminology of the sustainable livelihoods framework, households engaged with these types of lobby organisations as a livelihood strategy, as they were seen as improving the livelihood outcome of the target group as a whole. Households thus felt they might benefit indirectly if policy-makers or decision-maker followed the directions pursued.

9.5 Challenges for institutionalisation of collective action

Civil society and private-sector organisations mainly link up with government and non-governmental administration from the village level through the ward, district and regional levels, up to the national level. Subject to Agrawal's (2001) conditions for collective action to emerge, in conjunction with the way people see themselves functioning in collective action (Campbell, 2007), participants set rules to sustain collective action (Ostrom, 2010). The institutionalisation of collective action follows similar levels of administrative hierarchy and decision-making within civil society and within private-sector organisations. As trust is the basis for

collective action (Tyler, 2011), informal and formal institutionalisation are on a par with each other. Institutionalisation of collective action concerns the rules and regulations agreed upon, determining the basis on which participants interact with each other and with other organisations. It concerns consensus on and description of objectives, membership, responsibilities, representation, decision-making processes, sources of income, accountability, financial control, enforcement of certain behaviour, and what needs to be done when the collective action may come to an end.

Collective action started from a given vulnerability context, like in the research area, for example, on slopes cultivated by a certain *aya* or in a river basin. Institutionalisation of collective action took place within a geographic area, and involved acknowledgement of mutual dependency and the need for sustainable use of natural resources. Dependency on a given vulnerability context defined membership by default. Small groups of people organised themselves, as defined by the 23 conditions of Agrawal, beyond the mutual trust needed to achieve common goals. Such 'members by default' operated together, as individually they could not achieve their goals. They needed each other. They prescribed a certain behaviour for use of their resources in a sustainable, or at least common, way. In informal collective action, ostracism could be the sanction for non-compliance. Groups institutionalised their mutual trust in rules and regulations that were open, transparent and could be monitored for accountability to fellow participants. A major challenge here was joint learning and gaining experience collectively.

Lower local government was responsible for dealing with the vulnerability context within its constituency and representing citizen's concerns at various levels. The institutionalisation of linkages between citizens' concerns and lower local government, then, presented another challenge. Lower local government authorities were assumed to have access to the relevant expertise to support their decision-making. However, in practice – very often – they did not have that and could not afford to buy it in.

Higher levels of national and international government were challenged to institutionalise the collective and sustainable use of the natural resources at their own level of authority, being aware, too, of the interests of the lower local governments in their constituency. An underlying challenge here was to ensure fair representation and equal access to – and use of – the resources. Relevant expertise was required to ensure fair

and sustainable distribution of resources. Lack of such expertise in the river basins of Tlawi and Mang'ola hampered the fair distribution of water among neighbouring villages there.

Groups of farmers, that used the same water source for irrigating their crops gradually institutionalised their collective action to distribute water, yet they were also gradually confronted with institutionalised ownership of water rights. Within small areas, distribution of water was managed collectively based on good neighbourship and social control, as in Kambi ya Simba, and among direct neighbours in other villages. In larger areas, distribution of water was regulated and managed through involvement of local government representatives in wider decision-making bodies linked geographically to the river basin, as in Tlawi and Mang'ola. Consequently, water rights were issued in a top-down fashion. A major challenge here was to ensure professional capacity to distribute water fairly in the interest of all farmers concerned, while ensuring that all adhered to the rules set. Expertise became even more important when resources became more limited and had to be used more effectively and efficiently.²⁶

In relation to religious and cultural matters, institutionalisation of collective action took place independently from the government administration. In the research area, sports and cultural groups competed or operated jointly in their field of sport or cultural expression. Their financial operations were dealt with and accounted for within the groups concerned. Membership fees were key to sustain the groups' and facilitate external cooperation or, in the case of sports clubs, to fund competitions. For sports clubs, institutionalisation was also required to manage competitions. A challenge here was to develop the sports capacity within the group to defeat other groups in the competition, and even to spur local economic development.²⁷ However, this type of collective action was not central in the current research.

In relation to political matters, institutionalisation also took place independently from government administration. Nonetheless, the objective of such institutionalisation was to influence civil society to elect a certain politician or party, having them grasp power and gain control of the government administration and service delivery. A major challenge found here was to envision society and capacitate a cadre to operationalise that vision. This applies everywhere in the world. However, leaders in Mang'ola and Oldeani in particular emphasised the change that such en-

visioning brought in their village's economic outlook, as discussed in Chapter 7. Village leaders in Kwermusl emphasised that their envisioning of society had resulted in collective action to resolve the conflict concerning the secondary school construction, as discussed in Chapter 9.

The institutionalisation of collective action in financial services did not depend on the government administration either. At the local level, groups were formed and agreed amongst themselves on the costs of borrowing money. The current research examined small micro-credit groups, though it struggled to find examples of them acting collectively. A challenge facing these organisations was to generate more funds to enable individuals to invest in larger undertakings, for example, through institutional collaboration among village community banks or establishment of an 'umbrella village community bank'. For expansion and further management of financial transactions, additional capacity and agreements will be needed, alongside access to greater financial expertise. Simultaneously, access to commercial loans with 'customary owned' land as collateral remains a challenge as well, as discussed earlier in this chapter.

Larger participant groups belonging to a certain profession or with a particular political or religious background had institutionalised collective action in savings and credit cooperative societies. These gave them additional opportunities to save or to get credit. These organisations were sufficiently formalised to be eligible for loans from commercial banks. They employed professionals to ensure checks and balances, and public control was institutionalised through their parent organisations. The challenge facing these organisations was to continue serving other members even when loan repayments were late.

Collective development of other livelihood assets (human, physical and natural) may be institutionalised independently from government as well. Nonetheless, they remain closely related to public service delivery and linked with the local government administration. The legal registration of all organisations reflects a certain tie to government administration in itself. Despite ongoing cooperative and local government reforms, as discussed in Chapter 6, a challenge in the research area has been and remains the collective, simultaneous capacitation of collective action leadership. To enact reforms, resources must be found to enable local leaders to carry out the responsibilities assigned to them.

In the research area, institutionalisation in the field of social service delivery or quality assurance depended to a major extent on people's own interests and the quality of government administration. While government assured a minimum quality, people's interests sometimes enabled them to provide a bit extra when they could afford it collectively. The challenge here was balancing the two.

How successful livelihood strategies were implemented depended to a large extent on how the various stakeholders institutionalised their cooperation. For example, when a livelihood strategy embraced collective action to ensure delivery of a certain service, standards and norms had to be adhered to. Service organisations in particular sectors set quality standards and institutionalised mechanisms to assure adherence to those standards. It was nonetheless difficult for such institutionalisation to build up the trust of 'outsiders', assuring them that quality was guaranteed or at least traceable.

Village assemblies and local governments installed committees to oversee construction of socio-economic infrastructure and management of social service delivery. That construction required household contributions to projects and arrangements with contractors to realise the effort. A major challenge here was to capacitate the committee dealing with contractors in the interest of the village population, particularly in the face of the demanding Public Procurement Act. Social services like education and health were delivered by professionals employed by the parent or line ministry. But supervision of the quality of their services was the responsibility of village government-related committees. These committees often challenged both the village government and the community at large to make contributions in order to improve service delivery; and they challenged managers and implementers to operate efficiently and effectively²⁸ to enhance, for instance, the quality of education, as discussed in Chapter 7.

In a similar way, village assemblies and local governments installed water committees to oversee construction and management of domestic water supply through boreholes, shallow wells or piped water systems. Here too, as discussed in Chapter 7, the committees challenged the village government and the community at large to pay for water so as to maintain or to expand the water supply. Service delivery and payment were directly linked. At the village level, the water technician (*fundi*) was employed and paid by the water committee. If the water supply covered

a number of villages, formal elections were held to establish an independent water board. An additional challenge was to have water rights confirmed and domestic supply distributed fairly and economically.

Wildlife reserves were governed by institutionalised collective action in which village governments, wildlife authorities (central government) and the private sector (tour operators and lodges) were represented. When applicable, ward officials took part. Villages, or individual farmers, were compensated by the private sector. At the time of this writing, institutionalisation was not yet fully covered by the Local Government Act, and local communities still lacked legal, technical and financial expertise to oversee the 'checks and balances' concerned. A main challenge remaining here was to ensure fair distribution of benefits to the rank and file of the parties represented. Although mentioned in this study under successful implementation of household livelihood strategies, the example of the Hadzabe lobbying together for a collective title deed, differs from others, as the collective action it refers to was much more a reaction to 'intruders' in the area which original inhabitants had to deal with collectively. At that time, their challenge was to safeguard their way of living.

If households opted to become members of a primary society, to ensure input supply or for transportation and processing of agricultural produce, we must assume that individual access to such services was less efficient. Collectively inviting suppliers to provide agricultural inputs was observed in nearly all of the villages studied, as discussed in Chapter 7. Collectively organised mechanised harvesting was found only in Kambiya Simba. Collective transportation of agricultural produce, like in Buger, was done only to the extent that farmers remained in control of actual sales, as quality control was beyond collective capacity, as proven in Mang'ola as well. Collective marketing, like in Harar, was observed concerning non-perishable products only.

Primary societies and cooperatives became organisations that community members could elect to join. Their collective operations thus had to add value to the products processed or traded, and function to the satisfaction of members. Institutionalisation here aimed to ensure acceptable distribution of the benefits across the value chain and among members. A challenge in institutionalising collective action that involves adding value, commercial undertakings or exchanging funds is to ensure a fair distribution of profits and losses among stakeholders and mem-

bers. Transparency has to be assured, alongside quality, monitoring, financial control and insight into checks and balances. These tasks require acknowledgement of mutual dependency, appreciation of the needs of consumers and sharing of costs and benefits among stakeholders. If expertise is sought, it needs to fulfil stakeholder's expectations.

Among all these types of collective action, at any point in time actors may seek bonds to lobby or advocate for their interests. Farmers and other interest groups may lobby or advocate to safeguard their interests. In the research area, formalised groups for lobbying and advocacy operated on the basis of a membership fee or voluntary contributions in cash or kind. Informal channels were also observed, like in *Mongo wa Moono*, where local leaders lobbied through political channels. In such cases institutionalisation helps to streamline discussions. The challenge here is to reach consensus concerning issues at a given administrative or sectoral decision-making level.

Conclusion

In reference to Ostrom's (2010) rule setting for collective action, a key challenge in institutionalising collective action is for stakeholders to set their own boundaries, which means setting their own objectives and the path to achieve them. Setting boundaries depends on people's perceptions (Campbell, 2007) and capacity to learn. For this, stakeholders need access to resources, and benefits need to be distributed in a fair way. For collective action to work and be sustained, administrative, financial and technical checks and balances must be operational. Institutionalisation of collective action means capacitation of all stakeholders, so they understand and accept the distribution of obligations and benefits associated with the action. All stakeholders need to have the capacity to understand the consequences of the rules agreed. In the research area, such capacity was often lacking. A key challenge thus appears to be ensuring resource availability aligned with given responsibilities.

In all the above-mentioned forms of institutionalisation of collective action, a major challenge was building members' capacity: to understand each other (technically and culturally); to follow up each other's advice; to agree on certain approaches; to agree on and follow up action in case of negligence, misbehaviour or sabotage; to formalise trust; to collect money and account for its expenditure; to operate checks and balances (financial or technical); to design contracts and to monitor their imple-

mentation; to assure quality; to safeguard the group's interest; to learn from its doing; to cooperate with others, and supervise collective action; to understand and explain the consequences of political decision-making for a certain target group; and to understand the consequences of existing, externally imposed, institutionalisation. All these actions require specific capacity. The aims a collective seeks to achieve matter for the capacities required of its members or stakeholders. The more variety the collective action embraces and the larger the diversity of stakeholders, the more or different capacities are required to enhance institutionalisation. Collective action that develops and is institutionalised traditionally, builds on local capacity. Collective action that is institutionalised by government or external frameworks requires capacity to be established. It can, for example, be taught or gained through experience over time.

In the research area, the institutionalisation of all these forms of collective action was challenged both by stakeholders' changing perceptions and by changing governance structures. Decentralisation and centralisation of decision-making and human resource management regularly alternated over time. Government planning, implementation, monitoring and reporting structures changed accordingly, though were never fully installed. For stakeholders to deal with this continual change, institutionalisation had to be embedded in them. Bottom-up institutionalisation develops in the interest of stakeholders; top-down institutionalisation based on external frameworks requires extension services or education to get all stakeholders operating accordingly. These challenges are the driving forces of institutionalisation.

Notes

¹ I roughly differentiate three levels of education:

1. Traditional education which means that one is culturally taught by the (tribal) elders to survive in the common kind of livelihood, being agriculturalist, pastoralist, fisheries or hunter-gatherer.
2. Primary education (standard four in the 1980s, and standard seven nowadays) which generally means that besides traditional education, one is able to read, write, calculate and understands the functioning of government regulations. Skill development and vocational training is defined as part of it.
3. Higher education and university means that one knows how to operate in a formalised institutional environment.

² During the focus group discussions with the village leaders of Harar, Kwer-musl, Tlawi, Mongo wa Moono and Oldeani in 2010 it was mentioned that no village *shamba* exist any longer. The initial *shamba* of 18 acres in Buger was used for the construction of a secondary school. In Kambi ya Simba the *shamba* of 114 acres produced wheat. The *shamba* in Mang'ola of 17 acres was being rented out to private cultivators.

³ Focus group discussion NMB management Mbulu, 20th of September 2013.

⁴ During the focus group discussion of 1st February 2014 with farmers in Kwer-musl, one farmer mentioned that neighbours had invaded his land to cultivate. Such land dispute had happened in the past as well and was settled at the village government level. Now it must be settled at the Regional Court in Babati (depending on the rains and consequently the passability of the roads on between 50 and 120 km distance) while making use of lawyers at high cost. It requires the farmer to visit Babati several times, which he cannot afford without financial support from others. In addition he has to invite the District Land Officer (DLO) to measure the invaded area to have evidence for the court. The farmer has to pay for the transport of the DLO to have him measure the area.

⁵ Focus group discussion Mongo wa Moono village leaders, 27th of October 2010.

⁶ Focus group discussion Mang'ola village water committee leaders, 10th of May 2012.

Focus group discussion Kambi ya Simba village water committee leaders, 27th of September 2012.

⁷ Focus Group discussion village leaders Rhotia, 13th of January 2014.

⁸ Focus Group discussion village leaders Harar, 28th of July 2010.

⁹ Focus Group discussion village leaders Tlawi, 26th of July 2010.

¹⁰ Focus group discussion Kambi ya Simba irrigation committee, 31st of July 2014.

¹¹ Focus group discussion Tlawi irrigation group, 9th of August 2012.

¹² Focus group discussion Mang'ola WDC leaders, 16th of April 2013.

¹³ Public Procurement Act (2004, 2011).

¹⁴ MDC (1994): District Education Plan, 50; MoEC (2001): Basic Education Masterplan 2001-2005, 17; MoEC (2004): Education Sector Development Plan 2004-2009: 20.

¹⁵ Focus group discussion Mongo wa Moono village leaders dd. 7th of August 2010

¹⁶ Focus group discussion PTA Oldeani, 26th of September 2012.

¹⁷ Focus group discussion Kwer-musl village leaders, 28th of July 2014.

- ¹⁸ Focus group discussion Harar village leaders, 28th of July 2010.
- ¹⁹ Focus group discussion village leaders Kambi ya Simba, 5th of August 2010.
- ²⁰ According to Banturaki (2012), in 2008 Tanzania counted 4,445 savings and credit cooperative societies with 765,931 members out of a total of 8,551 registered cooperatives.
- ²¹ Focus group discussion Mang'ola SACCOS leaders, 10th of May 2012.
- ²² Focus group discussion Oldeani SACCOS leaders, 26th of September 2012.
- ²³ Van Dijk & Ngido (2017: 29) indicated that similar conclusions could be drawn in other parts of Tanzania, in e.g. the cotton and coffee sector. Quality assurance during input supply and quality assurance during sales are not or insufficiently institutionalised. They identified specific capacity building exercises in the cashew nut sector enabling farmers to ensure their quality only recently.
- ²⁴ Focus group discussion Mwiwata members, Kwermusl, 12th of August 2013.
- ²⁵ Focus group discussion Karatu and Mbulu TCCIA, respectively, 19th and 20th of September 2013.
- ²⁶ Beyond the scope of this research, but in a rather similar way, we are challenged to institutionalise the collective action concerning the distribution and use of (clean) air, issuing air rights, for which the authority of a global governance system is required in which the whole global population participates. It remains to be explored how the animal population and/or vegetation is represented in such a governance system.
- ²⁷ As mentioned during the focus group discussion with the leaders of the football group of Mang'ola, 10th of May 2012.
- ²⁸ As discussed during the focus group discussions with PTA Kwermusl, 4th of April 2012; PTA Mang'ola, 25th of September 2012; PTA Tlawi, 19th of April 2013; and PTA Kambi ya Sinba, 15th of August 2013.

10

Drivers of change contextualised

10.1 Identifying drivers of change

The **Hadzabe** safeguarded their way of life by ensuring their vulnerability context remained *untouched*, enabling the community to continue their hunting and gathering lifestyle. When people from the outside intruded into their area, they initially had no right to turn them away. The driver of change here was the intruder who challenged the Hadzabe's livelihood. The larger context¹ in which the Hadzabe operated forced them to act together. Only after enactment of the Village Land Act (1999) could the Hadzabe apply for a land title.² The Hadzabe lobbied collectively, which for them was a first step towards a formalised institutionalisation process. Collectively they obtained their title deed and boundaries were set. Collectively they safeguarded their way of life by preventing others from settling in their area.

Pastoralists safeguarded their way of life individually, by moving from place to place to find fresh pasture for their livestock. Simultaneously they relied on communal grazing and cared for grazing lands collectively. For them, a driver of change was the diminishing grazing area, as agriculturalists and others increasingly claimed and registered (customary) property rights on the lands they migrated over. Another driver of change was the growing livestock population, which in certain areas forced pastoralists to move further afield, or to find other ways of livestock keeping. One of those adopted was zero grazing dairy farming. Some pastoralists were forced to find new livelihoods, apart from animal husbandry. Many pastoralists migrated to other areas. For those pastoralists who remained, the growing livestock population had not yet resulted in collective action to govern grazing areas to keep the livestock population within the carrying capacity of the given space. Pasture land was not

registered, though others could obtain property rights for agricultural purposes or even, as in the case of the Hadzabe, for hunting and gathering.

Both the hunters and gatherers and the pastoralists needed rather large areas of land to maintain a *natural balance*. For both groups, natural resources were the limiting factor which challenged them to institutionalise collective action to sustain their way of life.³ As their world changed, they had to find ways of upholding their interests, which required collective action to govern *the commons*. The Hadzabe realised that their livelihood would be jeopardised if the *commons* was diminished. The individual resource units (game) were not owned by the Hadzabe, which left them outside Hardin's (1968) '*tragedy of the commons*', the way they govern their area collectively. Pastoralists, during the study period, remained within Hardin's description. They moved easily to other areas. Elsewhere, scarcity of pasture challenged pastoralists to adjust their way of life or set and maintain quotas of livestock units for a given area, in order to sustain livelihoods for a particular number of households. However, in the research area no such action was undertaken and institutionalised.

Agriculturalists like the Wairaqw safeguarded their natural resources in various ways. They formalised the boundaries of their lands either by customary law or by title deed. Limited resources, in conjunction with a greater demand and improved input supply, drove farmers to adjust their agricultural practices, to move to other areas and to switch to other means of livelihood. They often addressed their vulnerability context collectively and institutionalised their actions informally, for instance, in relation to erosion control, tree planting, water sourcing, irrigation, agricultural practices and dairy farming. These activities started individually, but evolved through tradition and self-learning. They eventually institutionalised human capital enrichment in collective action. The more people depended on their direct environment the more they resorted to collective action to safeguard the environment. Similar to benefits gained from group efforts in socio-economic infrastructure and service delivery, farmers operated collectively to access and maintain agriculture-related services. However, they still tended to operate individually when they perceived that dependence on collective action would pose a risk to their livelihoods. In addition to Agrawal's (2001) conditions and Campbell's (2007) analysis, Ostrom's (2010) rule setting and, in particular, institutionalisation of her *pay-off rules* facilitated cooperative development in the

productive sphere. However, collective production and processing of resources required *pay-off* rules to be institutionalised for members to trust that they were in control and would not be jeopardised by misbehaviour. For control, members needed to understand and have decision-making power in administrative, technical and financial checks and balances. Yet, they lacked the capacities needed to exercise that control. Collective action challenged mutual learning and therefore drove human capital to develop further. This consequently influenced collective action and its related institutional development, concluding a spiral-like reinforcement of enhanced human capital.

10.2 Influence of household-level change on local institutional development

Now we return to the question, '*How did change at the household level influence development at the local institutional and village level?*' Qualitatively I found, in line with Ackerman & Anderson (2002), a variety of change drivers.

From the current research I conclude that a **deteriorating vulnerability context** caused people to act collectively. The influx of people from outside challenged the Hadzabe in Mongo wa Moono to lobby collectively for their title deed to safeguard their lands and livelihood. Formal institutionalisation enabled the Hadzabe to address their situation.

Among the Wairaqw, traditionally *social capital* was key in environmental control through *collective maintenance of the mountain slopes* to safeguard pasture, fuelwood and agricultural cultivation to satisfy the needs of all and prevent soil erosion (Thornton, 1980). In Kwermusl, Buger and Kambi ya Simba, farmers amongst themselves endogenously acted collectively to address the effects of their own activities in endangering (or potentially endangering) their environment. Institutionalisation of such collective action was informal, with enforcement done, for example, through ostracism. Where people are not in control of their environment, but are nonetheless endangered by exogenous behaviour in their environment, local government action may be required to institute remedies, for example, by closing off an area and enforcing the action by imposing fines.

Changes in ownership of or accessibility to resources like land and water can challenge people to act collectively to maintain access. In the research area such change was caused by institutional changes in rules of

ownership and accessibility and by growing demands due to population growth. Changing water regulations (URT, 1991) spurred people to organise collectively. Although initially water was mandated to be provided for free, in Kambi ya Simba, Oldeani and Mang'ola water rights were eventually collectively obtained and residents cooperated to lobby for exogenous support and distribute water among customers who paid for it. Operation and maintenance costs were covered collectively. Collective action here took no consideration of potentially expanding demand from newcomers to the area. The need for expansion of the existing water supply systems to accommodate population growth raised questions regarding interests of the farmers involved in lobbying for exogenous support.

Limited water resources spurred people in Kambi ya Simba to institutionalise a water distribution system for cultivation purposes amongst themselves. In Tlawi and in neighbouring Silaloda, resource scarcity led villagers to institutionalise water distribution to address emerging conflicts over this resource. In Mang'ola, a huge influx of newcomers since the 1960s, the renting out of land to outsiders, and the sharing of a water source among various villages, wards and districts stimulated farmer representatives, together with village and ward representatives, to seek the necessary institutionalisation within the internal drainage basin.

In Kwermusl and Buger, people arranged their own water supply, as yet without much difficulty. No collective action had thus far emerged to safeguard water resources or to institutionalise access to water.

In Harar, people from different wards settled to cultivate the available land resources, as they could no longer obtain land in their home area. They cultivated their lands individually. The external environment here did not challenge residents to cooperate. As discussed in Chapter 7, abundant space does not inspire collective action. However, collectively villagers did agree to safeguard certain species of trees by informal agreement.

In this respect I conclude that a changing vulnerability context that threatens people's livelihoods challenges people to act collectively to reduce their vulnerability. Collectively those affected seek to gain expertise in order to understand and deal with the threat. Efforts to institutionalise such collective action then follow in accordance with Ostrom's (2010) rule setting.

In addition to the above-mentioned changing interests in water supply infrastructure and related service delivery, people developed **other livelihood strategies** to establish, expand and improve socio-economic service delivery to collectively enhance their socio-economic well-being. People structured their collective establishment, operation and maintenance of socio-economic infrastructure and supervision of the related service delivery.

In the relatively closed Mwiraqwa areas (Kwermusl, Tlawi, Buger and Kambi ya Simba) households stuck to their *shamba*, as they had long done. In respect to resource utilisation, they were eager to cooperate, as they had long depended on each other to safeguard their resources. Collective decision-making here was based on consensus, according to communities' long-established history and tradition. Their cultural capital ensured a local safety net. Community members interacted with each other and watched out for each other's trades and livelihoods. Besides the traditional cooperation structures, in peer groups (*ngoma*), slope communities (*aya*) and councils of elders, they cooperated through local government decision-making.

In the rather newly established settlements (Oldeani, Mang'ola and Harar) residents came from different origins and had different cultural backgrounds. They were less concerned with the livelihoods of those around them. But in general, they were concerned with well-functioning socio-economic service delivery. Decisions were taken by majority rule. This type of decision-making was well aligned with the local diversity in cultural and political backgrounds. The diversity among the people in Oldeani did not lead to establishment of councils of elders. Rather, a functioning village assembly sufficed. In Mang'ola, the council of elders took over the role of the village assembly in fulfilling the need for an informal exchange of views. In all other villages, the councils of elders continued to function, though informally, alongside the formal village assembly.

Within larger groups, such as a village community, collective action for establishment of socio-economic infrastructure, had to be firmly institutionalised to be effective. Such infrastructure usually required external support. Service levels were initially externally determined. By the end of the research period, service level requirements were locally formulated, though with minimum levels defined by government criteria. Besides the joint collection of local building materials, committees had to

collect funds to pay service providers and contractors. The village government or construction committees oversaw infrastructure construction. Such projects were often quite complex, and therefore institutionalisation was required to establish administrative, technical and financial procedures and checks and balances. In the case of construction of schools and *godowns*, most procedures were externally set, with bills of quantities imposing a fairly equal distribution of work among the households concerned. In the case of water supply, institutionalisation had to adhere to national quality standards. It also needed to comply with local community standards, as residents had to be able to sustain system operation and maintenance and pay for the water supplied. Institutionalisation of water supply, further, required institutionalised enforcement of rules and sanctioning of those violating them. Collective action to construct, operate and maintain socio-economic infrastructure required advanced knowledge and expertise. For construction of such infrastructure, collective action and its institutionalisation was rather straightforward, even though experience and expertise to oversee the work and the contractors involved was often deficient or lacking. To oversee contracts requires the ability to set measurable goals, to understand bills of quantities, to organise collection of contributions and to supervise checks and balances and ensure 'value for money'.

In the case of **management or supervision of social services**, additional decision-making and implementation skills were required to meet the quality standards indicated. Actual management of such services was handled mainly by professionals, generally originating from outside the villages. Overseeing the management of social service delivery was the task of community leaders, who consequently needed certain governance competencies. At the very least they needed to understand and deal with the prevailing institutional environment from both a traditional and a modern perspective. Such governance encompassed all interaction among actors from the local government, civil society and the private sector. Such governance competencies could be gained through traditional and modern interactions and from experience in attaining the goals agreed.

PTAs, for example, were responsible for collecting funds for operation and maintenance of school infrastructure. They sought to maintain set educational standards, to trigger professionals to perform optimally, in addition to collecting funds to make available the necessary learning

materials and to supply lunch to pupils. As far as education was concerned, among parents I observed a genuine interest in the quality of the schooling in their village, often in line with their own educational background. The, on average, higher educated villagers of Kambi ya Simba and Kwermusl focused relatively more on improving the quality of education results, while the, on average, lower educated villagers of Mongo wa Moono and Harar collectively did not even have their infrastructure up to standard.

Except in Mongo wa Moono, where social service delivery remained supply driven, social service delivery was institutionalised collectively in all of the villages studied. To institutionalise livelihood strategies collectively insofar as social service delivery is concerned, in addition to Ostrom's rule setting, I conclude that collective action requires institutionalisation to enhance trust. To enhance trust, all administrative, technical and financial checks and balances and related quality standards have to be institutionalised and understood by all members. Again, transparency is conditional. A similar institutionalisation is required to learn from doing in accountability structures, although here too exchanges with similar and other organisations are also at stake. Only in Oldeani, which initially had a high level of education among PTA representatives, did exchanges among PTAs exist.

In reference to people's livelihood strategies to improve their **economic well-being**, indirectly a number of different institutionalisation processes of collective action were observed. The first one was discussed above in regard to the deteriorating vulnerability context: erosion management was carried out among neighbouring farmers to address the diminishing agricultural production experienced by some individual farmers.

The second form of institutionalisation pertains to the construction of economic infrastructure, like feeder roads or *godown* facilities. This one is not very different from the institutionalisation of collective action to construct social infrastructure. Every household in a certain neighbourhood (*aya*) was represented in collective action to construct a feeder road to that area. Such cooperation was observed nearly everywhere, ultimately even in Mongo wa Moono. For *godown* construction, all households in a village had to contribute a certain number of burnt bricks or other local building materials. This was observed in Kambi ya Simba and Bugar at

the time when everybody was still a member of the primary society by default.

The third institutionalisation process addresses water distribution among irrigating farmers who made use of the same water source. This was discussed above as well. Such institutionalisation sought to ensure enough water for every member in the scheme to harvest crops optimally.

A fourth process could be linked to the second and third ones above: farmers lobbying collectively for a funding agency's support to construct irrigation infrastructure. This was observed in Tlawi, where external support was provided for an irrigation system, while participating farmers supplied local building materials.

Similar institutionalisation processes were observed on the input side. Depending on the household situation, cultivation practices and livestock holdings, farmers could attract suppliers individually or collectively. Collective action, however, led to increased bargaining power. Participants were still allowed to buy inputs individually, but it was often more advantageous to operate together, through a cooperative or primary society. One example from our study villages was barley production in Kambi ya Simba, where the buyer (a beer brewer) supplied inputs, facilitated provision of harvesting equipment and ensured an acceptable farm-gate price. Another example was the government's supply of improved agricultural inputs, *mbegu mboru*, which was observed everywhere except Mongo wa Moono. Yet another example was the government animal husbandry officers who assisted dairy farming collectives in Oldeani, Mang'ola, Buger and Tlawi. The collectively organised supply of information through MVIWATA can be mentioned as a final example of collective action in which farmers could make use of benefits individually.⁴

A sixth form of institutionalisation is that of farmers together conducting applied research to determine which seeds grow best in a given environment. This was observed in connection with onion cultivation in Mang'ola.

In all these examples, individual members of the collective could decide whether they wanted to use the specific inputs on offer. Furthermore, except some local labour, very little investment was required to participate. There was thus scant individual risk. The effect of the collective action in all of these examples was that people invested their re-

sources more efficiently than they could have done acting alone. The collective actions themselves fulfilled Agrawal's (2001) conditions and were institutionalised in the mindsets of the stakeholders (Campbell, 2007) according to rule setting as described by Ostrom (2010).

Livelihood strategies to safeguard household economic well-being directly through collective income generation require additional institutionalisation, to ensure trust among the stakeholders. Institutionalisation of **collective income generation** requires even more capacity to maintain checks and balances than the earlier mentioned examples. In those examples, participants relied on the efficiency and effectiveness of the collective action to optimise their income. This goes beyond Ostrom's (ibid.) rule setting. An example of institutionalised collective income generation is when irrigated farmers have to, or are invited to, invest financially themselves to upgrade an irrigation scheme through construction of an intake or alignment canals. This would give access to more water or enable additional farmers to access water as well. Such investment is comparable to the above-mentioned expansion of water supply schemes. In such cases, however, current water users sometimes remained on the fence in their support to expand systems beyond their own water use alone. Indeed, such investments require considerable financial transactions between farmers, the irrigation committee, the village government, contractors and district officials. Stakeholders in such collective action are dependent on others to get returns to their investment. Such institutionalisation requires members to understand the rules and be able to operate within them. In addition to Ostrom's rule setting, understandable enforcement rules enable stakeholders to take control.

When farmers could market their agricultural products only through the primary societies and regional cooperatives (e.g., the River Valley Cooperative Union), they simply followed the rules, as there was no other way. Everybody was a member by default, and institutionalisation of the collective action adhered to Ostrom's (ibid.) rule setting. However, at that time institutionalisation of the pay-off rules did not suffice to ensure members' satisfaction with the undertaking. Members were not capacitated to take control. The primary societies stopped functioning after the reforms of 1991. By then it had become clear that the administrative, technical and financial checks and balances were beyond the society managers' abilities. Moreover, farmers were better able to negotiate a good price for their produce individually. Similarly, though the farmers

of Mang'ola tried cooperation in selling their onions on the market, institutionalisation of the required quality checks at the farm gate proved beyond their abilities. They did not have that capacity. In Buger, farmers organised transport collectively to bring their agricultural and livestock products to market. Collective action worked here because the producers themselves decided whether to use the services of the collective, and they paid only for the transport they used. The collective processing and selling of dairy produce operated in small groups of similarly informed and capacitated members. Collective micro-financing activities through the village community banks or savings and internal lending communities also operated in small groups of similarly informed and capacitated members. In this latter case, although exogenously introduced, capacity building took place among members simultaneously.

Meeting the conditions of collective action (Agrawal, 2001), and setting rules for its operation (Ostrom, 2010) in line with stakeholders' perceptions (Campbell, 2007), does institutionalise trust (Tyler, 2011) and often fosters learning (Helmsing, 2013). Institutionalised collective action can facilitate stakeholders' capacities to understand, implement and enforce the rules agreed upon. Parallel to ongoing institutionalisation, stakeholders must develop the capacity to facilitate and enforce administrative, technical and financial checks and balances to achieve the quality standards agreed. Endogenously introduced institutionalisation is based on endogenous capacity. In cases where such internal capacities have not developed, collective income generation is unlikely to succeed. This was demonstrated by Mang'ola's failure in implementing quality control in onion shipments. Exogenously introduced institutionalisation needs to be accompanied by capacity building among all stakeholders to enable them to take control. This was observed, for example, in the case of the village community banks, which were collectively supported. In the early research period, income generation through the externally imposed membership of the primary societies was not accompanied by supportive capacity building of members. It therefore failed. Similarly, more recently, the externally introduced collective income generation beekeeping scheme has largely failed among the Hadzabe.

10.3 Influence of household-level change on development

A central question of my research was, *'How does change at the household level influence development at the local institutional and village level?'* Having examined the differences between the study villages, I conclude that average educational attainment was a key factor in development. In the research villages, increased average educational attainment at the household level enabled communities to expand and institutionalise their collective action from within, to address changes imposed from outside. Yet, exogenously imposed institutionalisation required an ever-growing level of experience and education among the villagers to cope with changes and rules. Institutionalisation without the accompanying capacity enhancement seems destined to fail. Thus, any institutionalisation process appears to require prior extension or training to enable stakeholders to understand and cope (Booth & Cammack, 2013). In practice such capacity building hardly takes place beforehand.

No univocal answer could be found to the question, *'What have been the drivers of local institutional change?'* In the research area, scarcity of resources in conjunction with population growth, the need to access resources and vulnerability of available resources drove people to act collectively and institutionalise their right of use within the context of a continuously changing governance environment. People's growing capacity enabled them to create institutions to address their vulnerability context and enhance their local economic development within the changing context. It enabled them to cope with exogenously induced changes. In the research area, a number of forces reinforced one another. Communities' perceptions of their vulnerability context challenged them to act collectively.

The Hadzabe's lifestyle was jeopardised by intruders, which prompted them to seek a land title collectively. In addition, as they could earn income through the tourist industry, without jeopardising individual households' livelihoods, they institutionalised collective decision-making concerning cooperation with tourism stakeholders.

Pastoralists did not yet feel the need to safeguard their pasture, but continued to roam individually with their livestock. So far, diminishing pasture resources had not challenged them to act collectively to safeguard their livelihood. But it had driven them to other areas and prompted some to adopt other livelihoods.

Farmers in the rather closed areas of Kwermusl, Tlawi, Buger and Kambi ya Simba learned from experience and gained training in terrace cultivation after the dangers of traditional cultivation practices were understood (NSS, 1989). Collectively they discussed the consequences of their agricultural practices (Mngube, 1998) and agreed in consultation to adopt contour cultivation and plant trees to address erosion. Other areas were closed for grazing. People learned that without collective responsibility individual action may not succeed in stopping environmental degradation. Even worse, individual misbehaviour may cause environmental degradation that would threaten all. Non-compliance with a desired approach – in this case for erosion control – challenged the enforcement of the institutions of collective action for the benefit of all.

Through experience and education, people developed alternative livelihood strategies and learned to make use of available water resources to irrigate their crops. Farmers dug main channels collectively, as otherwise they could not get access to water. In Kambi ya Simba, a clear – initially informal – institutional framework oversaw such work, and the subsequent water distribution along the main and side channels served farmers as collectively agreed. Ordinary population growth in conjunction with increased settlement owing to the perceived potential of irrigated land, led to demands for expansion of the scheme and more efficient distribution of the available water. Gradually, with the expansion of such schemes crossing administrative boundaries, like in Tlawi and Mang'ola, additional technical refinement and formal institutionalisation were required. Local insights, trust, learning from experience and growing management capacity were crucial to manage these schemes effectively, efficiently and sustainably. Prevention of 'free riding' and consequently diminishing farmers' risk of not having the water they needed at the time agreed, demanded enforcement of water distribution rules. The institutionalisation of cooperation among individual forms of collective action across administrative boundaries required governance competencies within and across local communities and administrative levels. Despite adherence to Ostrom's (2010) rule setting, in practice, little authority was observed between individual forms of content-specific collective action and their respective local government representatives.

When villagers felt the need for socio-economic services or new markets for their produce they acted collectively. All of the communities investigated operated collectively to construct access roads, and each

household's contribution was informally obtained and accounted for. Means of dealing with non-compliance were institutionalised. In rather closed societies such institutionalisation was informal, mainly in the form of ostracism of those that did not comply. In the more open – relatively recently settled – areas, non-compliance was fined with a certain amount as agreed through local decision-making.

From a different perspective in reference to, for example, domestic water supply, changes in national policy were a major driver of local communities' organisation of a local institutional framework: to form water committees, to open a banking account for the water supply system and to collect money for water in order to construct, maintain and, sometimes, to expand a water supply scheme. This was not allowed before the policy change. As discussed in Chapter 9, people in Mongo wa Moono and Harar did not have the capacity to maintain existing schemes or to construct new ones. In the villages of Kambi ya Simba, Mang'ola and Oldeani, where water supply schemes were being managed, capacity was nonetheless lacking to expand the systems to meet growth in demand as a consequence of even ordinary population growth. Addressing national and international water disputes, like that in the Rhotia Valley, has been beyond the local capacity, with water supply development hampered accordingly. As the communities themselves were made responsible for water distribution and for management of the related income and expenditures, capacity building needed to be institutionalised to ensure the requisite understanding of the legal aspects of water rights, the election of committee members, the decision-making process and enforcement of checks and balances.

Over time, livelihood strategies to establish social service delivery were driven by various factors. By the end of the research period, households in all of the villages had cooperated to construct primary schools, while initially primary education projects were started through external, mainly missionary, support. As the population in a certain area grew, government rules entitled them to split up administratively, to allow additional local government representation and consequently construction of an additional primary school. In the more closed societies, organisation of primary school construction took place informally and was enforced through ostracism. In the more recently established settlements, enforcement was, again, institutionalised through payment of fines or other penalties. Where community members had different backgrounds,

their collective decision-making followed a more formalised institutional framework. The growing level of education of heads of household correlated with a greater capacity to develop and understand the institutional framework that guided the prevailing collective action. The level of education of the heads of household correlated with their interest in education as well. The higher people were educated, the greater their demands for quality in the local educational system, for the pupils to advance in society. Within the national policy framework, it was local governance capacity that supervised the quality of education.

Cooperative policy up to the early 1990s did not require primary societies to serve their members. These societies' governance and management capacities were insufficient to enable them to function effectively and efficiently to generate sufficient income for members. After the cooperative policy reform of 1991, local management capacity long remained incapable of achieving competitively functioning societies. Gradually, as local management capacity grew, small cooperatives were established, mainly for input supply or for sale of non-perishable products. Local governance capacity, for example, to institutionalise quality control and checks and balances, remained key to develop trust and enable primary societies to operate effectively and efficiently in their respective value chains. These operated, however, in the context of the national institutional framework. Within this national framework, it was local governance capacity that proved key for cooperative development to take place. It was the local governance capacity that engendered trust in conjunction with the necessary enforcement of standards.

The national shift to multi-party democracy in the mid-1990s enabled local groups to express their own vision, while challenging them to organise their local management in accordance with that vision. Ostrom's (2010) rule setting in reference to collective action for managing socio-economic services and producing and processing resources applies here. National policy continually changed, from decentralisation and deconcentration to centralisation, delegation and devolution of governance responsibilities to various levels of government and non-governmental agents, with or without accompanying local capacity building. These continual policy changes challenged local initiatives to modify their collective institutional set-up accordingly. These drivers of local institutional change therefore were exogenously induced, though the success of the changes depended on local capacity to deal with them effectively and

efficiently. Garud's et al. (2010) principles for creation of development paths applies here. Traditional education and learning from experience played a key role. Nonetheless, the higher the average level of education of the heads of household was, the more the community engaged to push primary education to address all the demands of contemporary life. This produced school leavers who were better able to cope with institutional change and structure their own development process and enhance their local economic development collectively over time. Learning from the past and from others, in terms of applied education to deal with one's own environment, proved to be a fundamental element in creation of new development paths.

Within the context of a uniform governance framework, *household capitals at the community level were coordinated differently in the various villages*. The vulnerability context differed from place to place. Everywhere, however, it challenged communities to operate collectively in small groups (*aya*) to prevent erosion on slopes or to claim land or water rights to safeguard livelihoods and well-being. The structuring of collective action depended on communities' cultural backgrounds and the objectives of the action concerned. Within the villages studied, cultural background influenced decision-making structures, based on which one might defect in case of disagreement, or decide by consensus or majority rule. As far as achievement of collectively set aims was concerned, such structuring incorporated Ostrom's rule setting, in addition to mechanisms to enforce administrative, technical and financial checks and balances. Human capital therefore served as a key element to explore the vulnerability and potential of natural capital and to develop physical and financial capital to enhance local economic development, as defined in the livelihood outcomes in the sustainable livelihoods framework.

As household capitals were coordinated differently in the various villages, households' abilities to institutionalise collective action differed as well. As discussed, defection hampered the development of collective action and households' abilities to learn from each other. Collective action and its consequent institutionalisation did not take place among the Hadzabe, except in regard to their collectively claimed land title.

Taking decisions by consensus, as observed in the rather closed areas, led households to develop an ability to institutionalise their procedures of exploring each argument in order to achieve collective agreement and responsibility for maintaining what was agreed. In other words, mutual

trust was institutionalised collectively, based on mutual understanding and non-disputable access to or distribution of a natural resource. Such institutionalisation could be maintained informally.

Decision-making by majority rule enabled households to develop an ability to seek sufficient like-minded households to explore means to safeguard their interests. They developed an ability to institutionalise the achievement of aims – set by majority – and to establish the necessary administrative, technical and financial checks and balances to manage and maintain the livelihood strategies agreed.

Within the context of given national policies, all villages had a long history of collectively demonstrated interest in establishing socio-economic infrastructure. The only exception here was Mongo wa Moono, where such infrastructure was still supply driven by external support. In all of the study villages, therefore, the quality of socio-economic service delivery correlated with the governing capacity of local leaders, which was correlated with their educational level. Local interest in supervising primary education collectively correlated with local governance capacity, as expressed by the average level of education of leaders. The consequences of a lack of interest among leaders were observed in Mongo wa Moono and Harar, while the more highly educated village leaders in Kwermusl, Kambi ya Simba and Mang'ola showed clear interest in improving the quality of their children's education. In the context of unambiguous national policies, the average educational level of heads of household correlated with the functioning of socio-economic infrastructure and the quality of related service delivery, associated mainly with the institutionalisation of the collective action concerned.

When water policies were not conducive, local communities were unable to organise themselves to operate and maintain domestic water supply. When national water policy challenged communities in some villages to apply for water rights, villagers organised themselves to operate and maintain a local water supply collectively. The institutionalisation of such collective action occurred in those villages where water resource availability was conducive, people felt access to water to be a major problem and they had the capacity to lobby for support and to manage water supply operations after implementation, as observed in Kambi ya Simba, Mang'ola and Oldeani. In villages where people lacked such capacity (like in Mongo wa Moono and Harar) and where the water issue was less

dominant (like in Kwermusl), institutionalisation of such collective action did not take place.

Where *river basin board authorities* were able to fulfil their duty of issuing water rights, and where local leaders had the governing capacity, local communities organised themselves to distribute water to domestic access points. Consumers paid for what they used. Checks and balances were operational, and the water supply system was maintained sustainably. Where river basin board authorities, like the IDBO, lacked such operational capacity, local water users needed even greater capacity to obtain their rights. As discussed in Chapter 9, although villages could seek to claim their right, in practice, bottom-up institutionalisation did not suffice to get the rights (Shahidi wa Majo, 2016). Or as happened in the villages of the Rhotia Valley, bottom-up institutionalisation to construct piped water schemes was hampered by exogenous forces, which – up to the time of this writing – could not be addressed satisfactory through local institutionalisation of collective action. Within a particular national water policy framework and a certain vulnerability context, insofar as water availability is concerned, it thus appears that it is local governance capacity that drives the institutionalisation of local water supply. Such local governance capacity depends on the understanding and expertise available locally.

Regarding the primary societies, initially even though these organisations did not facilitate competitive operations, farmers had no choice other than to trade their agricultural produce collectively. When members got the freedom to choose, they traded their produce individually. Only when they felt fully in control and had institutionalised the necessary checks and balances, did they put their trust in collective action. In the case of micro-finance through village community banks and savings and internal lending communities, such cooperation took place in small groups of a maximum of 30 people – everywhere except in Mongo wa Moono. In organising input supply, cooperation was evident everywhere as well. Cooperation to attract clients in the tourism sector was observed in Mongo wa Moono. Cooperation to trade non-perishable products was observed in Harar. Cooperative marketing and trading of perishable crops required more sophisticated independent quality checks, which local communities – as yet – were unable or could not afford to organise.

10.4 Collective action in the future

I see a growing trend of collective action and decision-making based, respectively, on social control and consensus. This produces collective action in which trust is institutionalised in contracts, quality control and checks and balances on the basis of enhanced experience and expertise of the heads of household concerned. Whatever national or international institutional frameworks apply, trust is a precondition for capacitation of a community to operate gainfully within such frameworks. It is a necessary but not sufficient condition. Local communities themselves are challenged to enhance the capacitation of their own members in order to understand and operate within a given institutional framework. Otherwise, every policy change or institutional reform would need to be accompanied by a vast extension or education process among those affected, so that they can collectively cope with the change or reform effectively and efficiently. Conducive policies and coinciding capacity building of local leaders enhance collective action and the related local economic development. Where local capacity does not suffice to guarantee quality control and checks and balances, collective action is hampered.

Hyden (1983) indicated that there is no shortcut to progress. In this research I assessed national and local level constraints and emphasised conditions that are necessary to get progress under way. It is from that perspective that I approached my research questions. Empirically the current research demonstrates a correlation between the average educational level of heads of household and the intensity of collective action towards socio-economic development in a village. Empirically, it also shows the conditions required for the institutionalisation of collective action to succeed. Finally, it empirically shows why collective action has often failed to achieve the intended socio-economic aims.

Regarding the actual 'how' question, to describe the pathway to enhance the bottom-up institutional development process, in conjunction with a conducive national or international institutional framework, I conclude that it is up to local communities to organise the necessary capacity building to understand ongoing institutionalisation. This should be incorporated simultaneously into traditional educational processes, universal primary education provision and all development interventions.

All nationally or internationally induced change should be preceded by capacity building to enable the target group concerned to deal with it. This means that such changes should be preceded by feasibility exercises – carried out beforehand – in full consultation with the target group concerned. The target group needs to understand and agree with the consequences of the proposed change in order to assume collective responsibility to operate, maintain, manage and oversee it. Too often, local capacity building to cope with exogenously induced change is taken for granted.

Within any institutional environment, local capacity building is necessary for local communities to understand and deal with change. Local capacity is required to govern action too. For example, capacity is needed to apply for technical expertise, to oversee contracts, to ensure that external experts operate in favour of the local community, to supervise transparent checks and balances and to enforce systems to enable stakeholders to learn from doing. Within any national or international institutional environment, local capacity building is necessary to have all steps in the various value chains taken in such a way that the added value of each step finds its way back to the local community. Local capacity building must therefore incorporate the maintenance of traditional insights in environmental control, in combination with modern insights, to use natural resources in a sustainable way. This includes the development and maintenance of access and feeder roads in order to reduce transport costs for inputs, outputs and further socio-economic service delivery. It incorporates the development of insights on how participants can best contribute jointly, in cash or in kind, to keep socio-economic services operational. It incorporates advancement of adequate insights on enhancement of checks and balances and further institutionalisation of collective action to minimise transformation and transaction costs. It incorporates overseeing the improved effectiveness and efficiency of all service delivery at the local level. It incorporates the technical and managerial aspects of processing, trading and marketing all that is locally produced or based on local resources such that local production can compete in relevant markets. It incorporates the development of insight on how people can best cooperate with others to reduce risks, to meet externally imposed standards and to cope with top-down institutional requirements. Local capacity building to enhance local resources is neces-

sary to enable local communities to benefit optimally from their own resources.

This leads to the main conclusion of my research as follows: Human capital is key in institutionalising collective action, while any national or international institutional facilitation of such collective action must be preceded by extension or education to enable people to cope with the changes envisioned. The actual route to progress depends on collective understandings of the joint vulnerability context and collective willingness to address the context, to design and implement livelihood strategies and to institutionalise governance to safeguard and further develop resources collectively.

Notes

- ¹ Being the first change driver as discussed by Ackerman & Anderson (2002).
- ² Being one of Garud's (2010) principles of path creation.
- ³ London (1996) in his 'Understanding Change' quotes Arnold Toynbee's (1934) 'Study of History' referring to such 'natural challenge and response' as a community's starting point towards civilization.
- ⁴ This input supply of information depends on the availability of recently developed technology such as mobile phones, which confirms one of Garud's (2010) principles of path creation.

Annexes

Annex A1: Village questionnaire baseline survey Mbulu District / Karatu District 1988-2010¹

1. Village..... 2. Ward.....
3. Division 4. Date of registration
5. Respondents/Interviewees

	Name	Position held	Sex M/F	Age	Education
1.
2.

Population

6. How many ethnic groups are here in the village? (Please specify)

1. 2. 3.

7. Could you please indicate the number of people in the following table as per year:

Year	Number within age group						Total no of people	House- holds	Dis- abled
	Male			Female					
	< 14	15-64	65+	< 14	15-64	65+			
2010									
2009									
2008									
2007									
2006									

Social services

8. How many services does the village have out of the following?

- | | |
|-----------------------|-----------------------------|
| 1. Shop | 5. Milling machine |
| 2. Local brew pub... | 6. Market |
| 3. Tailoring | 7. Bar |
| 4. Butchery | 8. Petrol station |
| 9. Bakery | 12. Godown / Warehouse..... |
| 10. Handcrafting..... | 13. Hotel |
| 11. Carpentry..... | 14. Others (Specify) |

* Please mention all, Village properties owned by the village and those owned privately

9. Do the village have the following services?

- | | |
|------------------------|-----------------------------------|
| 1. Postal office | 5. Missionary centre..... |
| 2. Dispensary | 6. School..... |
| 3. Church | 7. Number of teachers..... |
| 4. Mosque | 8. Number of pupils/students..... |
| | 9. Police station..... |

10. Are there any problems facing the available social services in the village?

If yes, please specify.....

11. As a village, what would you recommend to be done so as to overcome the identified problems in Q. 10 above?

.....

12. How many civil servants are there in the village that are in the following sectors?

- | | |
|-------------------|--------------------------------|
| 1. Farming | 5. Forestry |
| 2. Livestock..... | 6. Fishing |
| 3. Water | 7. Ward leadership |
| 4. Health | 8. Others (Mention them) |

Water

12. Where does the village get water for the following uses?

	Matumizi ya nyumbani (Domestic uses)		Umwagiliaji (Irrigation)	Kunywesha mifugo (Livestock drinking)	
	Kiangazi (Wet season)	Kifuku (Dry season)		Kiangazi (Wet season)	Kifuku (Dry season)
Mtoni (River)					
Kisimani (Well)					
Lambo (Dam)					
Bomba (Tap)					
Ziwani (Lake)					
Chemchem (Spring)					

14. Are there any problems associated with water supply in the village?

Yes / No)

15. If the answer is yes in Q.14 above, what are those problems?

.....

16. What measures the village is proposing to be undertaken so as to overcome such problems?

.....

Nishati (Energy)

17. Out of the following types of energy state which ones are being used in the village?

Type of energy	Uses*	Average uses in %					
		1-10%	11-25%	26-50%	51-75%	76-95%	96-100%
Firewood							
Charcoal							
Kerosene							
Biomass							
Crop residues							
Biogas							
Electricity							
Others (Please specify)							

*Uses include: Cooking; Melting; Lighting; Drying meat and fish, Bick burning; etc.
 18. What are the major problems associated with the availability of energy in the village mentioned above?

19. What measures / strategies that are being undertaken by the village with regard to environmental conservation?

Transport

20. Is the village road accessible throughout the year? Yes / No
21. If the answer in Q. 20 above is no, at what season of the year the village is completely not accessible?

22. Is there frequent and reliable transport to and from the village? Yes / No
23. If the answer in Q. 22 above is yes, please explain:

Aina ya usafiri (Type of transport)	Ukomo wa safari (Last station of transport)	Umbali (Distance)	Mara ngapi? (Frequency)

24. If the answer in Q. 22 above is no, what is the distance to the nearest station where villagers get transport services?

25. What type of transport is available in that area?

26. How many times is it available?

27. What is the nearest town to this village?..... Distance.....

Economic activities

28. What are the major sources of income for the villagers in this village? (Please mention them in order of importance e.g. first, second, etc.)

1. Farming
2. Livestock keeping.....
3. Farming & Livestock keeping
4. Fishing.....
5. Formal Employment.....
6. Hunting and gathering.....
7. Others (please specify)

29. What is the size of the land given to each household for farming?

30. What size of the land is reserved for each of the following uses?

1. Village farms.....
2. Individual/private farms.....
3. Pasture/ grazing area.....
4. Natural forest.....
5. Artificial forest.....

	Village farm		Individual farms		Pasture/ grazing area		Natural forest		Artificial forest	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Is there scarcity of land?										
Is there sufficient land?										
Is there land in abundance										

32. If generally there is land scarcity, what could be the reasons for such situation?

33. If there is scarcity of pasture/grazing land, how can this problem be solved?

34. What do we mean when talking about land scarcity and excess?

1. Land scarcity:
2. Excess land:

35. What type of farm inputs and implements are commonly used by the villagers?

Type of input & implement	That was available in 2009/2010)	Where found or bought	Status of availability		Status of farm implements
			Satisfactory	Unsatisfactory	
Inputs					
Implements					

36. What types of crops are grown in this village?

1. 5.
 2. 6.
 3. 7.
 4. 8.

37. Please, give us the Farming calendar of this village:

Crops	Crop 1		Crop 2		Crop 3		Crop 4	
	Planting	Harvesting	Planting	Harvesting	Planting	Harvesting	Planting	Harvesting
Rainfed agriculture								
Irrigated agriculture:								

38. What type of crops were grown, harvested and sold by the village as per listed season?

Season	Type of crop	Size of land cultivated	Amount harvested	Sales / Revenue	Buyer
2009					
2008					
2007					
2006					
2005					

39. Do you frequently face food shortage the village? Yes / No

40. If the answer in Q. 39 above is yes, does such shortage increased in the past five years? Yes / No

41. When did you lastly face serious food shortage?

.....

42. What was the reasons for such shortage?.....

.....

43. What types of livestock are kept in the village?

Type of livestock	Total number of livestock				
	2009	2008	2007	2006	2005
1. Cattle					
2. Goats					
3. Sheep					
4. Donkeys					
5. Pigs					

44. What is an average number of cattle that can be possessed by an individual in the village?

How many for the one with fewest cattle
 How many for the one with most cattle

45. How many cattle dips are available in the village?)
 What is the status of the available cattle dips?

46. Generally, what are the main development problems facing the village?

1. 3.
 2. 4.

47. How many development projects are found in the village currently? Mention them according to their importance

1.
 2.

End of the interview

Interviewers: 1. (Date)
 2.

2009					
2006					
2005					

39. Do you frequently face food shortage the village? Yes / No

40. If the answer in Q. 39 above is yes, does such shortage increased in the past five years?
 Yes / No

41. When did you lastly face serious food shortage?

.....

42. What was the reasons for such shortage?.....

.....

43. What types of livestock are kept in the village?

Type of livestock	Total number of livestock				
	2009	2008	2007	2006	2005
1. Cattle					
2. Goats					
3. Sheep					
4. Donkeys					
5. Pigs					

44. What is an average number of cattle that can be possessed by an individual in the village?

.....
 How many for the one with fewest cattle
 How many for the one with most cattle

45. How many cattle dips are available in the village?)
 What is the status of the available cattle dips?

46. Generally, what are the main development problems facing the village?

1. 3.
 2. 4.

47. How many development projects are found in the village currently? Mention them according to their importance

1.
 2.

End of the interview

Interviewers: 1. (Date)
 2.

Annex A2: Household questionnaire baseline survey Mbulu District / Karatu District²

C. Information with regard to Household nutrition

14. Usually what household members eat during the following periods?

Period	Wet season	Dry season
	Types of food	
Morning		
Noon		
Evening		

* Make sure that the respondent mention and you write one type of food for every meal

15. Please, explain the types of food usually given to children who are under 5 years in your household

Age	Types of food	How many times they are fed per day?
0 - 1		
2 - 5		

D. Information with regard to head of household's occupation

16. What is your major occupation from which you get your income?

1. Crop cultivation.....
2. Livestock keeping.....
3. Crop cultivation & Livestock keeping).....
4. Formal Employment.....
5. Hunting and/or gathering.....
6. Business.....
7. Others, (Specify)

17. Do you have a land where you currently live? 1. Yes / 2. No)

18. If the answer in Q. 17 above is yes, please explain:

Where the land is/village	Land size (acres/ Ha)	Land uses

E. Information with regard to crop cultivation/production

19. What crops have you grown in the last season?

Type of crop (s)	Size of land cultivated	Amount harvested in terms of tons/bags	Amount sold	
			Amount (tonnage/bags)	Value (Tshs)
1.				
2.				
3.				
4.				

20. What types of crops you used to grow for the past 5 years?

1.
2.
3.
4.

21. Land availability:

	For communal farming	For private farming	For grazing	Other uses (Specify)
1. Do you face land scarcity? (Yes / No)				
2. There is enough land but limited for further expansion?				
3. The land is enough and there is excess				

22. If there is land scarcity, how do you interpret such scarcity? In other words, what do you exactly mean when talking of land scarcity?

.....

23. If there is land scarcity of what do you think can be done to solve such problem?

.....

F. Farm inputs and implements

24. Out of the following farm inputs and implements which ones were used at your household in the last season?

Type of input & implement	Usage	For what type of crops?	Where was it bought / obtained)	Costs incurred	If the implements were bought state the year
Hand hoe					
Drought animal					
Tractor					
Cow dung					
Pesticides					
Type of Improved seeds					
Artificial fertilizers					
Combine harvester					

25. If you are not using any kind of fertilizers, please give reasons:

1.
2.

26. Do you usually get extension services in your farming activities? 1. Yes / 2. No)

27. If the answer is yes, where do you get such services?

Type of extension service	How many times did you get the services in the last season?	The extension service was about what farming activities?

28. If you don't get extension services, please give reasons:

1.
2.

29. What major problems limiting your farming activities?

1.
2.

30. In your opinion do you think how such problems you face can be solved?
.....

G. Information with regard to livestock activities

31. What types of livestock do you keep at your household?

Type of livestock	Number of livestock	Number of livestock you sold last year	Value / Amount of money obtained
1. Cattle			
2. Goats			
3. Sheep			
4. Donkey			
5. Pigs			
Other (specify)			

32. Generally, what can you say about the pasture in this village?
More than required?..... Sufficient? Not sufficient?.....

33. If the pastures are not sufficient, what do you think are the causes of such situation?
.....

34. In your opinion, in what ways can the problem of pastures' insufficiency be solved?
.....

35. Do you use to take your livestock to animal dips? 1. Yes / 2. No

36. If you do so, is it 3 times per week? 1. Yes / 2. No

37. If the answer in Q.36 is yes, how many kms is the animal dip from your homestead?
.....

38. How much do you pay for washing a single animal once?.....

39. If you are not used to take your animals to the dip 3 times per week, please give reasons:
1.
2.

40. For the past 5 years were the number of your livestock increasing or decreasing?
1. Increased Decreased No changes.....

41. Please give reasons for your answer in question 40 above
.....

42. What problems are you facing in livestock development?
1.
2.

43. How do you solve the mentioned problems in Q.42 above?
.....

H. Information with regard to energy uses

44. Out of the following types of energy, which ones are used in the village? Mention them according to their importance

Uses	Types of energy						
	Kuni (Firewood)	Mkaa (Charcoal)	Kinyesi cha wanyama (Biomass)	Masalia ya mavuno (Crop residues)	Mafuta ya taa (Kerosene)	Umeme (Electricity)	Nyingine (Taja) (Others (Mention)
1. Cooking							
a) Food							
b) Local liquor/brew							
2. Lighting							
3. Brick /Tiles burning							
4. Drying meat/Fish							
5. Tobacco drying)							
6. Other uses (Specify)							

45. Please explain the following with regard to firewood at your household

- Do you collect them by yourselves? 1. Yes / 2. No
- Do you buy some? 1. Yes / 2. No
- Do you buy all? 1. Yes / 2. No

46. If all or some of the firewood are collected by you for domestic use:

- How many people in your household participate in collection of firewood?
Male Female Children
- What is the distance from your homestead are firewood obtained?
- How many hours does the activity of firewood collection take?
- How many hours are spent in firewood collection per week during the dry season?
- How many hours are spent in firewood collection per week during the wet season?

47. What is your opinion on firewood availability?

- Are they abundantly available?
- Are they sufficient?
- Is there scarcity of firewood?

48. If there is firewood scarcity, when did you realize? (Specify the year and the season of the year)

49. What do you think could be the causes for such scarcity?

.....
 Generally, what are the major problems facing your household with regard to availability and uses of energy?)

Type of energy	Type of problem	Since when did you experience problems?
1. Firewood		
2. Charcoal		
3. Kerosene		
4. Crop residues		
5. Biomass		
6. Electricity		
7. Others (Specify)		

51. In your own opinion, what do you think can be done to do away with the energy problem?

.....

I. Household properties

52. Do you have the following properties/items at your household?

Property	Yes = V / No = X	Is it in good order/operating? Yes / No
Tractor		
Bicycle		
Radio		
Sewing machine		
Ox-cart		
Wheel barrow		
Corrugated iron roofed house		
Animal drought		
Candle		
Bunsen burner		
Charcoal stove		
Table watch		
Wall watch		
Wrist watch		
TV		
Mobile telephone		

J. Household expenditure

53. Out of the following goods/commodities, which ones were bought by your household in the past 7 days?)

Type of the good/commodity	Amount bought	Amount of money spent	Buyer	Where was it bought
Maize				
Maize flour				
Cassava				
Rice				
Wheat flour				
Salt				
Sugar				
Tea leaves				
Meat				
Fish				
Eggs				
Cooking oil				
Beans				
Vegetables				
Fruits				
Milk				
Kerosene				
Soap				
Matches				
Battery				
Clothes				
Airtime				

54. Estimated household expenditure for the past 4 weeks:

Expenditure	Amount of money spent
1. Food	
2. Utensils e.g. spoons, cups, pots etc.	
3. Alcohol and soft drinks	
4. Medical expenses	
5. Contributions to the village (District, Region or National, e.g. Cattle)	
6. Traditional ceremonies	
7. Payments / assistance to relatives	
8. Transport costs / fare	
9. School fees, uniforms and other school facilities	
10. For farming activities e.g. fertilizers, pesticides, hoes etc)	
11. For livestock activities e.g. pesticides, vaccination, Tax, etc)	
12. Others (Specify)	
Total	

55. What are the sources of income for your household expenditure as shown in Q. 54 above?

Activity	Yes / No
1. Selling crops	
2. Selling livestock	
3. Undertaking labour work within the village	
4. Undertaking casual labour outside the village	
5. Formal Employment	
6. Remittance/assistance from relatives	
7. Carpentry/Masonry/Tailoring etc.	
8. Petty business e.g. selling charcoal, firewood etc.	
9. Others (Specify)	

56. Is there any member of your household who was employed last year (2009)?

57. If the answer in Q.56 is yes, please specify:

Name of the employee	Duration of employment
1.	
2.	

K. Information about Transport

58. Is there any member of your household who travelled out of the village last year 2009?

Name of the traveller	Where he/she went Village District	Distance	How many times did he/she travel?	Means of transport used	Objectives of the journey	Time of travel-Dry or wet season
1.						
2.						

59. Information with regard to head of household's daily activities and his wife, for the past last week:

Major daily activity of the head of household	Week days	Major daily activity of the head of household's wife
	Monday	
	Tuesday	
	Wednesday	
	Thursday	
	Friday	
	Saturday	
	Sunday	

60. What are the major problems facing your household?

61. In your own opinion, what do you think can be done to solve problems that persist in your household?

62. Name of the interviewee:

63. Sex: M F.....

64. Age:

65. Marital status:

66. Name of the interviewer: Date:

Annex A3: Questionnaire community organisations Mbulu District / Karatu District

Name Community Organisation:

1. Village 2. Ad hoc or Membership organisation? A/M

3. Date of foundation 4.

5. Registered under Act: Y / N 0 LG / 0 NGO / 0 Cooperatives

6. Date of registration 7. Do you have a written / approved Constitution? Y / N

8. Respondents/Interviewees Name	Position held	M/F	Age	Education
8.1.
8.2.

9. Could you please indicate the number of members in the following table as per year:

Year	Male	Female	Total no of people
2012			
2011			
2010			
1988			

10. Vision

11. Mission

12. Sector	12.1 Governance.....	0
	12.2 Economic service delivery.....	0
	12.2 Social service delivery	0
	12.3 Financial service delivery (inclusive saving & credit)	0
	12.4 Culture / traditional	0
	12.5 Religious	0
	12.6 Security	0

13.1 Output 2011

13.2 Output 2010

14.1 Outcome 2011

15. Describe the effectiveness of the collective action
.....

		Human Resources	Material Resources	Financial Resources
16.1	Input 2011			
16.2	Input 2010			

17. Describe the efficiency of the collective action
- 18.1 Relations/links within village, with whom?
- 18.2 Relations/links within ward, with whom?
- 18.3 Relations / links within district, with whom?
- 18.4 Relations/ links within Tanzania, with whom?
- 18.5 International relations y / n 18.6 With whom and Where?
19. Context description: what are the issues the organisation intends to address?
20. With whom does the organisation cooperate?
21. Describe the efficiency of the collective action
22. How are tasks and responsibilities distributed?
- 22.1 Management / decision making? How do you plan the work?
- Who takes the decisions? On what basis?
- 22.2 Supervision of implementation?
- 22.3 Income generation / financial accountability?
- 22.4 Actual implementation of works / production / supply of output?
- 22.5 Learning / monitoring?
23. Why do individual members participate? (see Q.8). What benefit?
- 23.1
- 23.2
- 23.3
24. How do you describe your organisational capabilities?
- 24.1 Capability to motivate / inspire
- 24.2 Capability to offer services (planning, implementation, monitoring, learning)
- 24.3 Capability to cooperate with others
- 24.4 Capability to learn and adjust
- 24.5 Capability to balance diversity and coherence in the organisation

Annex B: Livelihood development in eight villages

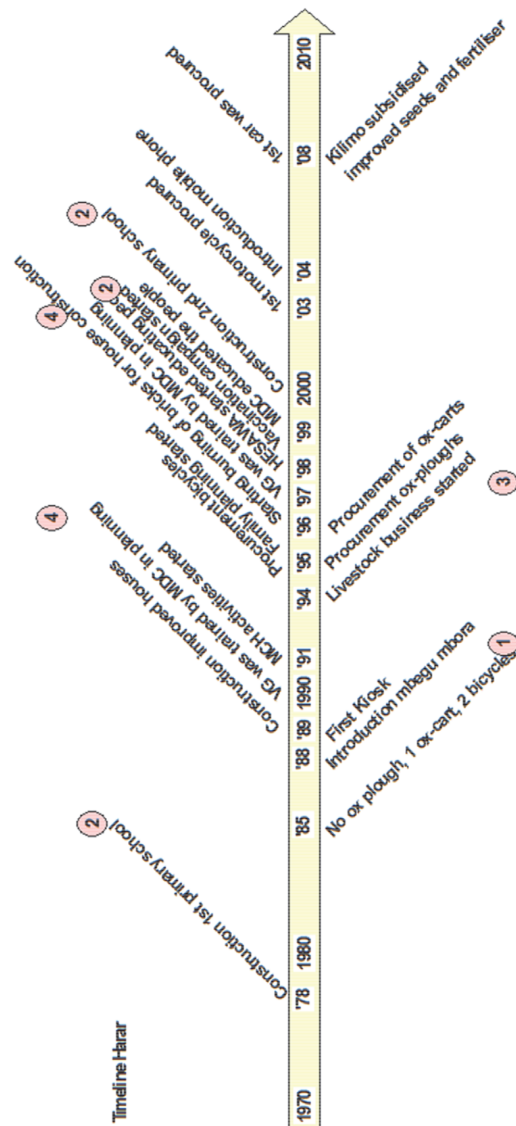
In 1988, on behalf of the Mbulu District Rural Development Programme (MDRDP) that operated within the constituency of Mbulu District Council, I commissioned the Institute of Resource Assessment (IRA) to conduct a household survey in eight villages in different agro-ecological zones³ in the then Mbulu District, making use of the household questionnaire as given in Annex A2. Simultaneously I conducted focus group discussions with the village leaders concerned, making use of the village questionnaire as given in Annex A1. In 2010, with support of staff and students of the Institute of Rural Development Planning (IRDP), I conducted a similar survey in the same villages around the same time of the year, making use of nearly the same questionnaires to identify changes over time. In addition, I conducted focus group discussions regarding various forms of collective action in these villages, making use of the questions as raised in Annex A3.

Identified changes between 1988 and 2010 at household level are summarised in Annexes B.1 through B.8. Based on the output of the focus group discussions with the village government leaders and the comparative analysis between the two household surveys of 1988 and 2010, I describe for each village how the village leaders perceived key aspects of their development process over time. In addition, I describe the change in households' livelihood assets over time and consequently the change in their vulnerability context, collective action to strategize and influence their development path and consequently their livelihood outcome.

B.1 Harar village

In 1988 Harar (Haydom Ward, Haydom Division) has been described as a remote area with a moderate agricultural surplus, located in the South-West tip of Mbulu District, near the Mbulu–Singida–Hanang borders and close to the Southern entrance of Yaeda Valley (IRA, 1989). By that time Harar was situated in Haydom ward, Dongobesh division, while currently, since the last administrative re-division in 2010, it is situated in Haydom ward, Haydom division, Mbulu District. In 1988 Mbulu district was one of the eight districts in Arusha region, while since 1995 it is one of the five districts in Manyara region.

Figure B.1.1
Timeline Harar⁴



Source: Author

Harar is a rather new settlement. In 1988 about 80% of the heads of households were not born in the ward. Local governance structures are in place as by Local Government Act. The Councils of Elders (M/F) are in place as well, but has not yet led to a strong sense of cooperation among people to work towards functioning socio-economic infrastructure.

In 1978 Harar people started the construction of its first primary school, while its second primary school was constructed in the year 2000. The construction of these schools has been the major form of collective action in the village besides the clearing of some of the feeder roads. The joint construction of the schools has been mentioned as key in the development process.

In 1988 the first private kiosk was established in the village and private entrepreneurial activities like the purchase of ox-ploughs, ox-carts, bicycles, motorcycles, tractors and cars, together with the start of livestock business and the purchase of improved seeds and fertiliser were mentioned as important characteristics of socio-economic development in the village, leading to the burning of bricks and construction of improved and burned brick houses in the late eighties.

The introduction of ox-ploughs, ox-carts and bicycles, together with the introduction of education were indicated as development interventions that were of utmost importance for the socio-economic development of Harar. The Mbulu District Council's training of village government leaders in planning and the start of livestock business were seen as of high development value as well. In reference to the components of the sustainable livelihoods framework changes over time are described below.

B.1.1 Cultural capital

The Councils of Elders (male and female) function, while two *ngoma* groups function as well. Rainfall has been problematic in the area and therefore a group of rain dancers perform when necessary. With a predominant Mwiraqw population the Mwiraqw culture guides norms and values with a major consequence that people observe the unwritten rule not to cut indigenous trees without approval of the – nowadays – village government.

Agricultural practices, animal husbandry, cultural dances, norms and values, feelings of togetherness, cooperation and social control are all aspects of life that in first instance are taught and maintained through traditional family upbringing, but – although being Mwiraqw – as most people have been migrating recently into the area, the traditional upbringing is less strong than in the more closed areas as Mama Issara.

B.1.2 Human capital

The number of households shrank from 250 in 1988 up to 180 in 2010 as Harar was split in two villages in 2009. The average household size grew from 6.5 in 1988 up to 7.9 in 2010 with a constant m/f ratio of 110, and a slightly growing working age population as percentage of the total population from 46% in 1988 up to 60% in 2010. Over time, with about 90%, the population has been mainly Mwiraqw with a few Wanyaramba and Hadzabe. With one exception, people have married within their own tribe. 38% of the current heads of households was born in Harar, while in 1988 only 11% was born in Harar, even though the average age of the heads of household in 1988 was 10 years younger than in 2010 (46 years of age). Up to now people are still migrating to and settling in Harar from all kind of other places from all over the district. Main reasons for migration to Harar have been the search for land for cultivation and/or pasture.

A key issue in human capital development is the change in educational level. In 1988 25% of the population and 21% of the heads of household had at least standard seven qualification, which that time was just below the average, while in 2010 those percentages were 50% and 57% respectively, which were rather below the average of Mbulu district and the research area as a whole. In the past, adult education played a major role, while current generation of heads of household did not attend such education. Among the sampled heads of household, no secondary school leavers were identified. Within the research area Harar has been the second last to have a primary school constructed (1978) as all other villages had a primary school in the early '50s. It does not have a secondary school. The percentage of population with at least secondary education changed from 1% to 9% which – although shown as an increase – does not reflect the reality as many secondary school graduates left the village for work or further education elsewhere. The school representatives indicated that primary education in Harar is meant mainly to proceed to-

wards secondary education and thus towards a life outside of Harar, as it does not prepare children for agriculture or livestock practices.

B.1.3 Natural capital

The average household land size has been just above 4.5 acres and did not change over time, because over time pastoral land has been prepared for cultivation. Nearly 60% of the households, i.e. nearly all with livestock, indicated that pasture land was not adequately available any longer, despite the fact that in 2010 – in average – one has reduced its livestock herd to half in comparison to 1988. One owns the land on basis of customary rights.

Despite the fact that fuelwood becomes scarcer and in 2010 none of the households indicate to have ‘plenty of fuelwood available’, about 90% of the cooking, 100% of the meat drying and 100% of the brick burning is based on the use of natural capital in the form of available fuelwood.

Everybody looks after the environment him/herself. Natural trees are preserved and can only be cut after approval of the village government.

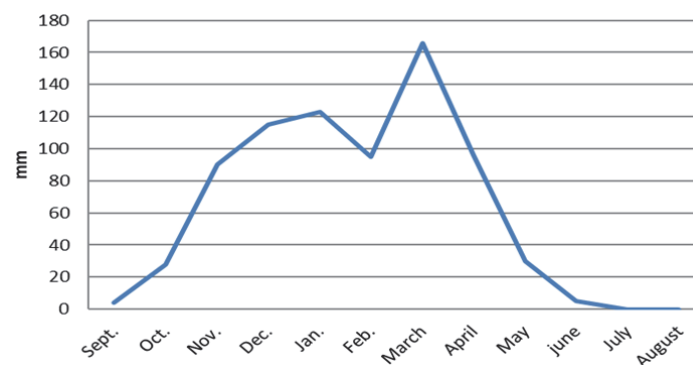
Maize (2 acre) and beans (0.8 acre) are on average the acreages per household and the major crops, while in the '80's sorghum (1 acre) and nowadays sunflower (0.7 acre) in average were grown as well. Intercropping has long been common practice. Improved seeds have been made available locally since 1988 and have been re-introduced a few times. Since 1988 agricultural extension messages – introduced together with the availability of improved seeds (*mbegu mbora*) – enabled people to improve their harvest and consequently to get a higher income. In 1988 one harvested 4 bags of maize per acre, which was below the district average, while in 2010 one harvested in average 13 bags per acre, which was ahead of the Mbulu average and equal to the whole sample average. Some of the village leaders confirmed the increased harvest figures since Harar started using improved seeds. ‘Harvest yields improved from 6 bags of maize to 10 to 15 bags of maize per acre; from 3 bags of sunflower up to 7 to 9 bags; and from 4 bags of dengue to 10 bags. In addition, the yield of beans improved from 3 bags of beans up to 5 bags per acre, even though one did not have improved seeds, but cultivation methods had improved. Nowadays one plants in between the maize and intends to enlarge the harvest by planting at the right time’.⁵

The planting / harvesting times for the various crops are November / June for maize and sorghum, November / March for beans and January / June for sunflower.

Farming calendar	
Rainfed	Planting / Harvesting
Maize (<i>mahindi</i>)	November / June
Sorghum (<i>mtama</i>)	November / June
Beans (<i>maharage</i>)	November / March
Sunflower (<i>alizetti</i>)	January / June

Food shortage was mentioned for 2000 and 2009, mainly through inadequate rain fall and therefore drought. In those days people were encouraged to grow sorghum. The mean annual rainfall in Haydom ward is 752 mm as depicted in Figure B.1.2.

Figure B.1.2
Mean annual rainfall data Haydom (752 mm, close to Harar)



Source: Magoggo (1995)

B.1.4 Physical capital

From the village perspective accessibility has remained a problem for Harar up to today. There is no daily transport except through bicycles since 1995 or through motorcycles since 2003. The access road is poor

and during the rainy season not passable, except by tractor. Therefore, the communication with neighbouring villages is poor. Public transport is available at Haydom which is 12 km from Harar.

Private shops started operating since 1988, while in 2010 Harar accommodated 8 kiosks and some local brews, 1 blacksmith (for making knives and frying pans), people that are making bricks and a few youngsters with vocational training background. People made bricks to construct a dispensary, but no support from Mbulu District Council has been offered yet. People have access to mobile clinics, but Harar does not have its own dispensary yet, although it has been one of the main felt needs of the village authorities since 1988 (Van Dijk, 1988). Maternal and child health services are delivered from the nearby hospital in Haydom.

The major felt need of the village authorities in 1988 has been adequate access to water supply. Only since 2005 the drilling of boreholes to ensure water supply has been in the village budget, and people themselves paid Tsh. 3,000 annually, but so far, no Mbulu District Council support has been given yet and consequently Harar does not have adequate water supply and from that perspective water is still mentioned as a major felt need in 2010 as well. For the daily market one goes to Haydom at a distance of 12 km.

Since 1988 towards 2010 individual households gained in average physical capital in terms of ownership of bicycles (from 8% to 77%) and ox-ploughs (from 37% to 50%) which are both far above the average; radios (from 8% to 23%), which is far below the average; the percentage of households with hurricane lamps (around 40%) and watches (18%) remained stable; those with mobile phones (from 0% to 46%) and houses with corrugated iron sheets (from 2% to 30%), grew below the average within the district. The percentage of households with access to a tractor increased from 0% to 7% and consequently the percentage of households with ox-carts diminished from 32% to 21% but remained above the district average.

B.1.5 Financial capital

Financial capital development is measured traditionally in terms of livestock availability or in financial terms in reference to households' expenditure level. Both measurements are not accurate. In addition, finan-

cial capital development can be measured in terms of capital development growth as well.

People have had their cattle herd more than halved in between 1988 and 2010 from in average 9 to 4 per household, as they indicated through timely sales, while their goat (in average 4 per household) and sheep (in average 2 per household) herd remained stable. The percentage of households with cattle (68%), goats (62%) and sheep (44%) remained constant over time.

Since 1994 livestock business has started. People sell their cattle through which one gets income. In the past livestock was meant mainly for 'savings' and was sold or used only at emergencies or in case of celebrations. Keeping livestock as business encourages people to sell their livestock at the optimum weight and therefore being more efficient in pasture use.

Financial capital development in terms of household expenditure level could be a proxy indicator for financial capital development. Households' financial capital in 1988 is far below the average of 80 to 90% within the district but grows slower comparatively to the average growth in Mbulu, and grows just as fast as the national growth. In 2010 the average four-week expenditure overview for Harar households as proxy indicator for the household income level is only 75% compared to the average household expenditure in Mbulu district, and only just above 50% of the combined Mbulu-Karatu household expenditure.

Financial capital development of the village as a whole in terms of growth in the percentage of households owning specific physical capital comparatively to the growth in the total research area is seen over the period 1988 to 2010 through the percentage of households owning ox-ploughs (Harar growth of 1.36% vs. the average growth of 1.32%), owning bicycles (Harar growth of 9.72% vs. the average growth of 10.75%), owning radios (Harar growth of 2.94% vs. the average growth of 2.96%), owning hurricane lamps (Harar growth of 1.04% vs. the average growth of 1.75%) or owning corrugated iron sheets (Harar growth of 11.69% vs. the average growth of 2.75%).

Access to financial capital has grown with the establishment of the village community banks (2) since 2008 and savings and internal lending communities (6) since 2011. The roughly 25 savings and internal lending communities' members per group contributed first Tsh. 1,000 for the

social fund and Tsh. 5,000 weekly for the business fund, on which basis one is able to get access to a short-term loan of currently maximum 3 times the total amount of money that has been entered into the account by the person concerned at an interest of 10% per 3 months, to initiate a profit-making undertaking.

B.1.6 Social capital

The Local Government Act (1982) describes the functioning of the village assembly, village government and its standing committees, while in addition the village government appointed an *ardhi* (lands) committee, an Environmental committee, an HIV/AIDS committee and a Construction committee. Because of the ongoing administrative split up of the village, one *kitongoji* (Geyson) operates since 1975, while another one (Masqurir) operates since 2009 only. The *sungusungu* operates under the command of the village government. The primary school committee, although independent, has strong links with the village government as well. Although the primary school operates in Harar since 1978, in 2009 it still had to construct 11 teacher's houses in order to satisfy the requirements. Even in 2012 the school committee although representing 370 households, found it difficult to convince the village government to take adequate decisions to accomplish the necessary school infrastructure.

As mentioned above since the '80s people have collected money and made bricks to construct a dispensary as – together with inadequate water supply – such was mentioned as one of the key challenges in 1988,⁶ but up to date one has not been able to construct the dispensary. In a similar way, since 2005 households paid Tsh. 3,000 and the drilling of boreholes has been included in the village budget, but up to date no safe and clean water supply has been organised yet.

Like the *ngoma* from traditional point of view, there are various choirs (3) from religious point of view that in first instance operate during the church services.

Although tree planting and harvesting is an individual undertaking the preservation of natural trees is a communal one. Natural trees are preserved and can only be cut after approval of the *aya* or even by the village government.

Social capital to enhance production or economic performance operated up to 1988/89 as primary society Harar (5095), including the villages Labay, Maghang, Endanachan, Endamillay, Getanyamba, Haydom, Harar, Mewadani, Endaharghadat and Hayderer, Dongobesh division.

Since 2006 a group of women started making charcoal burners and sells about 30 of them monthly on the market (*mnaada*) in Haydom.

B.1.7 Political capital

CCM and Chadema have both their local organisation, but the village government is CCM. In Haydom ward about 86% of the population votes for CCM and 13% for Chadema. Except the construction of the primary school, Harar leadership has not been very successful to have other socio-economic infrastructure like roads, dispensary or water supply accomplished, despite the fact that funds had been collected once in a while and formal decisions were taken by the village government to include such in the village budget.

B.1.8 Vulnerability context

The percentage of households that indicate to experience shortage of land for individual farming has increased from 60% in 1988 up to 77% in 2010. The percentage of households that indicate to have insufficient land for livestock farming has decreased slightly up to 25%, which is mainly explained by the fact that the percentage of households that keep extensive livestock remained the same (68%), but with the livestock population itself being more than halved. One indicated that the livestock population has been halved through timely sales as pasture land has been transformed into agricultural land. The percentage of households that indicates to have just enough pasture decreased from 42% in 1988 up to 14% in 2010, which remained above the average. While in 1988 still 16% of the households indicated to have plenty of pasture, in 2010 only 5% indicated that s/he had plenty of pasture available. People identified inadequate rain as an additional main cause for reduced pasture.

Animal diseases remained an issue among the majority of the livestock keepers (> 55%), which in 1988 was followed by 'unavailability of livestock medicines' (36%). In 2010 'availability of livestock medicines' was no issue at all and replaced by inadequate availability of pasture,

which in 1988 was not seen as an issue yet in connection with animal health.

Concerning fuelwood availability in 1988, 64% of the households indicated to have 'just enough fuelwood' available, which that time is far above the district average, while in 2010 that percentage has decreased to 42%, which reaches up to the district's average. In 2010 58% of the households indicate to face shortage of fuelwood.

In 1988 still 53% of the households used fuelwood for lighting as well, while in 2010 nobody used fuelwood for lighting any longer, which is fully replaced by use of kerosene.

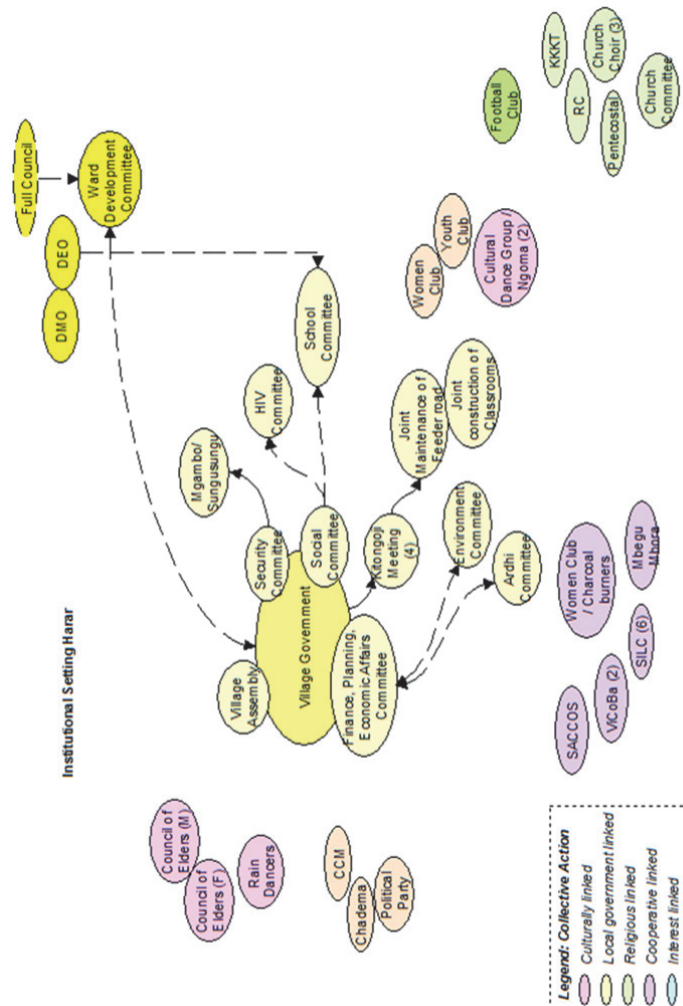
The average distance to get fuelwood increased slightly around 2.3 km, with the average time necessary to collect fuelwood increased slightly as well. The percentage of women involved in fuelwood collection decreased slightly, but in still 79% of the households mainly the women collect fuelwood. It seems that children are getting more involved in fuelwood collection as well as nowadays in 50% of the households, children join in fuelwood collection.

B.1.9 Transforming structures and processes

In reference to prevailing cultural, social and political capital and based on existing human, natural and financial capital, people operate in the first place collectively to safeguard traditional values and to prevent environmental degradation, coping with the given vulnerability context. The council of elders oversees general development. Where necessary it agrees e.g. not to cut specific trees. The council of women organises the 'rain dancing' when applicable. In the formal governance setting one co-operates to have minimum necessary school infrastructure established. School infrastructure is mainly understood in terms of classrooms and an office for the headmaster. There seems to be less collective interest to attract quality teachers through supply of adequate teacher's houses. Up to date the necessary teacher's houses have not been accomplished. Despite the collection of funds to drill for water or to erect a dispensary, up to date the village government leaders proved not to be able to organise themselves to have minimum health or water supply infrastructure established either. Change in village boundaries discouraged people to contribute to new school infrastructure in the new village, despite the fact that those from the new established village had contributed to the establishment of the old school. With the change of administrative boundaries

and the establishment of new *mitongoji* (neighbourhoods) responsibilities for road maintenance changed as well. The village governance structures are in place and all sub-committees meet regularly. The Village Executive Officer indicated that, in case individual households do not cope with communal work, fines up to Tsh. 5,000 are charged. However, its agency has been inadequate having the socio-economic infrastructure established as required and consequently it has been inadequate to have socio-economic service delivery up to standard.

Figure B.1.3
Overview of current collective action in Harar



Source: Author

Further, collective interest of people has been in some economic undertakings of small groups, like those involved in the marketing of charcoal burners, where social control among members is apparent. In addition, Harar has 2 village community banks and 6 savings and internal lending communities operational within its boundaries. They are not linked to each other, although they do not have sufficient liquidity to satisfy their members' needs. Other forms of collective action relate to political, religious or sport activities. See Figure B.1.3 for an overview of the current collective action in Harar.

Collective action and socio-economic infrastructure

People indicate problems in reference to water supply and the availability of a dispensary. Both for human and livestock consumption during the wet season one need to dig 1.5 metres to get water, while in the dry season one may have to get as far as the *korongo* (sand river) which – in average – is on about 2 km distance. Water is not safe and clean either. To overcome these problems, since 2005 drilling of boreholes is included in village budget, while households paid Tsh. 3000 each. However, Harar's request to the Mbulu District Council for additional support did not get response yet. In 2010 water had remained to be a major problem in the area.

Since 1991 maternal and child health activities started in Harar. Family planning activities started in 1995. There is no dispensary in Harar but the referral KKKT Haydom Hospital is close by on 12 km distance. People have made bricks to build a dispensary, but no Mbulu District Council support has been received yet to add up to the local contributions.

The village is responsible for the construction of classrooms and teacher's houses as well. Like in 2009 every household paid Tsh. 10,000, besides their physical contribution to collect sand, stones and aggregate, as at that time still 11 teachers' houses needed to be constructed to satisfy the needs.

The mobile phone did its entrée in Harar in 2004 and since that time communication has improved as nearly halve of the households have access to mobile phones.

Accessibility to Harar by road is poor, in particular during the rainy season, and mentioned by the village leaders as the major development problem of the village. However, the maintenance of the access roads

within the village is with the various *vitongoji* or neighbourhoods. Each chairperson of a *kitongoji* organises his or her people to ensure that the roads are well maintained. Only in case construction works like bridges, culverts or drifts are required support may be given by *Ujenzi* (Department of Road works and Construction) from the Mbulu District Council. Local transport is organised mainly by means of bicycle or ox-chart. From Haydom busses and lorries are available daily to Dongobesh (40km), Mbulu (75km), Babati (80km), Singida (80km) and Arusha (300 km),

Haydom has public market facilities. Most of socio-economic infrastructure like private shops, restaurants, guest houses, petrol station, post office and milling machines are situated in neighbouring Haydom village.

Collective action and civil society

There are 4 churches (KKKT, TAG, PAG, RC) in Harar and up to the split of the village in 2009 there were two primary schools, the first one being established since 1978. The 2nd primary school that was constructed in 2000 went to the other village after the split up, leaving Harar again with one primary school, 10 teachers and 463 pupils. It is in first instance the parent teachers' association (PTA) that requires the village government to support the construction of classrooms or teachers' houses, after which the village government and village assembly may decide to include such in the annual plan. Only then people are told to contribute in cash and kind. So far, the PTA⁷, although representing 370 households in the village, found it difficult to convince the village government to take adequate decisions to accomplish the school infrastructure. So far, there are insufficient teachers. Through PTA, parents have organised themselves to pay for a 'voluntary' teacher to fill the gap, and for the cook to prepare lunch for the pupils. In addition, parents organise the ingredients for the lunch themselves.

Additional income is generated through individuals being allowed to have their cattle grazing on the school compound for some small money.

The PTA does not have independent linkages with PTAs of other schools. The role of PTA is mainly to supervise the headmaster and to endorse his/her decisions, while the headmaster supervises the functioning of the teachers. The village government supervises the functioning of the PTA. Communication is mainly done through headmaster and village government.

According to the school representatives, gradually the objective of primary education is not any longer to educate up to the level of a Tanzanian citizen that can survive in its environment, but to educate to enter secondary education.

Collective action and production

In 1988 the first kiosk was opened. In 2010 individuals run kiosks (8), some local brew pubs that actually are not for business, a blacksmith (knives, frying pan), while 2 youngsters are skilled in carpentry. A number of women produce charcoal burners of clay that – collectively – are sold on the market in Haydom.

Harar counts 6 savings and internal lending communities that operate as savings and credit organisations, each of them having about 25 members. Loans may be requested for economic (or business) and social activities. The business loans are there to improve its livelihood/well-being: e.g. buying sunflower or maize at harvest time (in August) at village level for Tsh. 40,000 in order to sell it for Tsh. 60,000 up to Tsh. 70,000 afterwards (December) at Haydom on a distance of 15 km. Or buying goats at one *mmaada* (livestock market) for Tsh. 40,000 per goat and selling them at another one in an area, where goats are scarce for Tsh. 60,000 up to Tsh. 100,000. The social fund may be spent to pay school fees or hospital expenses or in case other social problems need to be addressed. To manage the social funds and loans, each member pays Tsh. 1,000 per week and is entitled to get a loan for 3 months without interest up to max. Tsh. 50,000. In case one does not pay back within the indicated period, one gets fined (*fineyesbwa*) Tsh. 5,000 per month. To manage the business fund and loans, each member pays Tsh. 5,000 per week and may get a loan of max 3 times the amount that has been brought in, at an interest of 10% per 3 months. In case one does not pay back the business loan within the indicated period one is fined Tsh. 10,000 per month.

However, it is mainly through social control to collect the initial money and to get the money back after the loan periods have expired. In 2012 after one year of operations the 25 members of one savings and internal lending communities had Tsh. 5,400,000 in the business account and Tsh. 500,000 in the social account with part of it outstanding.

At school collective action is taught through cultivation of the school *shamba* where one produces about 10 bags per acre.

Local institutional embedding

Just like in 1990, in 1997 the Mbulu District Council trained the members of the village government in planning, which was seen by them as one of the building stones towards local socio-economic development.

In 1998 HESAWA started training in the field of health, water and sanitation of the population in general.

The split up in two villages in 2009 resulted in a split up of some of the neighbourhoods (*vitongoji*) as well. E.g. *kitongoji* Masquirir has been founded in 2009 only, while *kitongoji* Geyson was founded in 1975. Consequently, responsibilities for e.g. the maintenance of specific roads changed as well.

The village executive officer supervises the implementation of all collective action and is entitled to issue fines up to Tsh. 5,000 (in 2012) in case households do not cooperate with communal action in e.g. classroom construction or road works.

Besides the village executive officer in the village office and the 10 teachers in the primary school, Harar does not have technical staff at village level, but has access to the ward-based agricultural (1), livestock (1), forestry (1) and health (1) officers, all civil servants in Haydom. Technical staff gives advice when required, while administratively there are regular meetings at ward level through the Ward Development Committee (WDC).

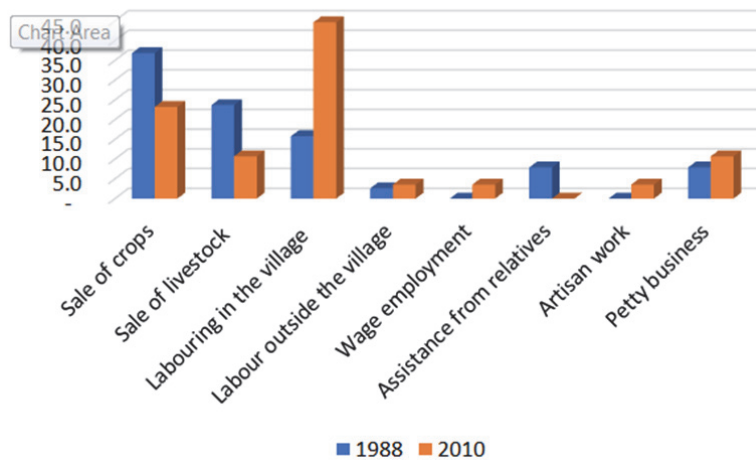
As savings and internal lending communities initially has been introduced through RC support, there is some exchange of views through the RC Diocese in Mbulu, which mainly took place through the initial training. Thereafter people organised themselves with safebox and padlocks.

B.1.10 Livelihood strategies

Harar is to be seen as an area to migrate to. The majority of the heads of household is born elsewhere and migrated to Harar. In 1988 10% of the heads of household was born in the village, while in 2010 that percentage was 38%. The majority (85%) was born within the district. One came to Harar as there was still space to cultivate. Although in 1988 there was still space for livestock as well, 25% of the households indicated that time that there was no space for expansion and that outmigration to have access to pasture was seen as a solution. Harar shows a gradual shift of households that cultivate only in 1988 (53%) and households that

combine agriculture with livestock keeping (45%) to the situation in 2010 where only roughly 28% of the households grow crops without having any livestock and 71% of the households that keep livestock as well. In 2010 destocking and procurement of crop residues was seen as a major solution to feed its livestock.

Figure B.1.4
Main source of income of Harar households in 1988 and 2010



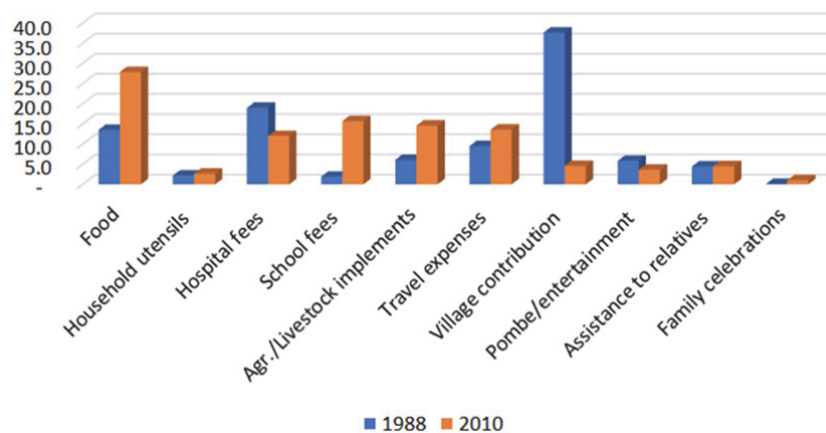
Source: Author

Although the sales of crops and livestock are still important, in 2010 their contribution to the total income has diminished and 'labouring in the village' has bypassed them as a major source of income. In 1988 16% of the heads of household had their major source of income through labouring, while in 2010 that percentage rose to 45%. Although the percentage of heads of household in Harar that is *wage employed* has doubled from 2.6% to 5.4%, it is still negligible, but gets closer to the average in the current Mbulu district. In Figure B.1.4 the heads of household indicate what their major source of income as percentage of their total income is.

From an expenditure point of view, in 1988 household expenditure was spent for 15% on food items and in addition over 35% on village

contributions. In 2010 over 25% of the average household expenditure was spent on food which still is below the district average and the village contribution has decreased up to less than 5% of the household expenditure. In 1988, hardly any money was spent on education and just 5% of the expenditure was spent on agricultural and livestock implements. In 2010 about 15% of the household expenditure was spent on school fees and agricultural and livestock implements. Increased expenditure to have access to social service delivery I conclude as partly caused by people's awareness and interest to invest more in one's education and production, and partly by government's inability and unwillingness to pay social service delivery for 100%. Increased expenditure on agricultural and livestock implements I conclude as being caused by improved knowledge and awareness at one hand and better availability of such implements at village level on the other hand. Figure B.1.5 depicts the household expenditure over a period of 4 weeks in the period July–August.

Figure B.1.5
Average household expenditure in 4 weeks in percentages⁸



Source: Author

Although not expressed by a major expenditure increase, a striking increase can be seen in the *mobility* of the population. In 1988 only 8% of the heads of household travelled outside the village in the year before,

which in that time was twice as much as the sample's average over the district. Nowadays, over 66% of the heads of households travels outside the village, which is still a bit more than the average over Mbulu district, but close to the average all over the two districts.

B.1.11 Livelihood outcomes

Joint responsibility, based on cultural values, safeguards the environment in reference to tree cutting. Despite the available space and consequently an above average household land size, the estimated household income and expenditure in Harar belong to the lowest, just keeping track with the national Consumer Price Index (CPI). I conclude that increased level of education made people aware of their vulnerable situation and spurred them to change their farming systems towards mixed farming, attaining increased agricultural production per acre and livestock reductions. However, in comparison to the other villages, the actual increase of the educational level in the villages lagged behind and so did collective action to improve its socio-economic infrastructure.

B.1.12 Summary

The initial conditions in Harar are described in terms of comparatively recent settling of predominant Wairaqw searching for space for agriculture and livestock rearing. Traditional consultation among elders takes place. Cutting of trees was decided upon collectively. The construction of a primary school started in 1978 only. Although in 1988 the settling population in average had a similar educational level as the rest of the research area, in 2010 the average educational level lagged behind. Harar contained a growing population with comparatively little capacity for collective action in terms of construction of socio-economic infrastructure and management of related services. People invested in transport individually and remained dependent on the neighbouring Haydom for general service delivery. As the population grew the village has been split in two separate villages with the consequence that additional socio-economic infrastructure was required to be constructed by a relatively small population. Recent split of village resulted in a split of and new installation of various coordination committees. In 2010 the number of lower local government related committees (15) is just below the average, while the number of civil society organisations (15) and the number of collective actions in the productive sector (11) is below average as

well. Coordination structures are there but necessary agency is not there to stimulate people to construct and maintain feeder roads adequately, to collect adequate funds and manpower to construct teachers' houses and/or to collect adequate funds to pay the Mbulu District Council or private enterprise to conduct a water survey for rural water supply (bore-holes).

B.2 Kwermusl village

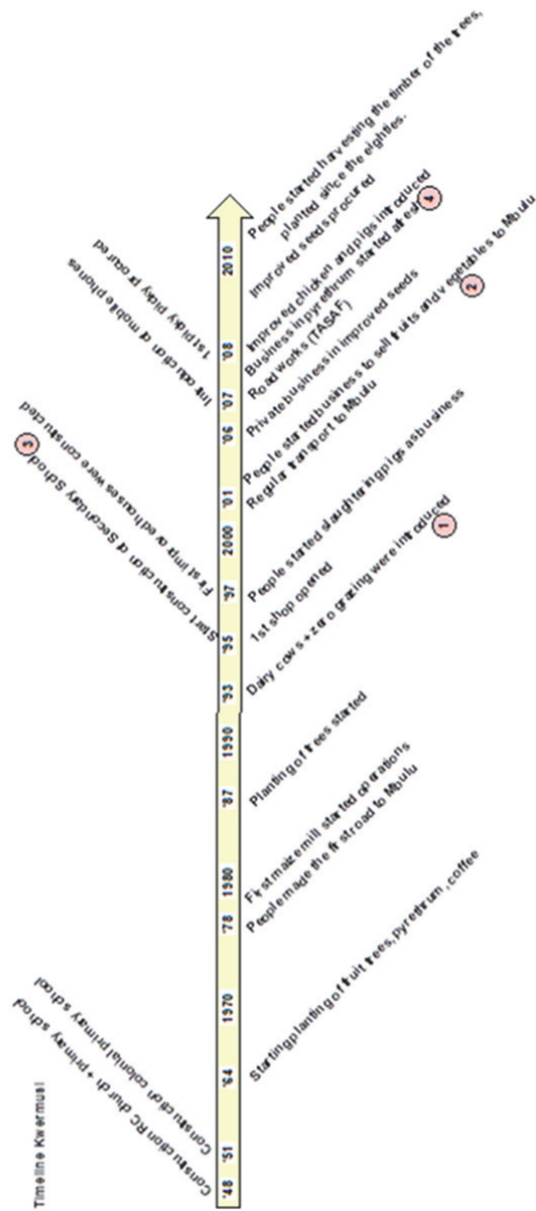
In 1988 Kwermusl has been described as an area with no significant agricultural surplus, difficult to reach due to the poor state of the road. Only in 1978 the first road towards Mbulu was established. Kwermusl is situated about 10 km from Mbulu located on the highlands North of Nou Forest Reserve (IRA, 1989). By that time, it was situated in Murray ward, Endagikot division, while currently – since the latest administrative re-division in 2010 – it is situated in Nambis ward, Nambis division. Kwermusl is one of the villages in 'Mama Issara', which is seen as the cradle of the Wairaqw (Thornton 1980, Snyder 2005). In 1988 Mbulu district was one of the eight districts in Arusha region, while since 1995 it is one of the five districts in Manyara region.

Since its formal registration in 1974 village governance institutions are in place. However, the traditional – informal – governance structures of the Wairaqw operate for over 200 years in the area (Winter, 1968). Their joint environmental management of the steep mountain slopes through the *aya* operates since then. Traditionally the '*kabamusmo*' speaks for the people, but does not rule them (Loiske, 1996).

In 1948 the Roman Catholic Church established a church in Kwermusl in conjunction with a primary school. In 1951 the school was constructed further and taken over by the then colonial government. Primary education started in the forties with collective responsibility for its operations since then. Secondary education operates since 1997 on basis of collective action, while since the recent split of Murray ward a new secondary school is under construction.

The introduction of dairy cows has been mentioned as one of the most important development issues in Kwermusl in the last 25 years. This, together with the introduction of business in fruits, vegetables and pyrethrum enhanced the local economy.

Figure B.2.1
Timeline Kwermus⁹



Source: Author

Traditionally, people that live on one and the same slope look after the slope collectively to prevent environmental degradation. It means that contour planting, grazing, water distribution and planting of trees is done in consultation with each other. People have been receptive for cultivation of new and high yielding varieties of fruits, vegetables, trees and animals in order to produce for the market mainly in Mbulu town.

Social control to safeguard cultural values is strong. Joint construction and maintenance of roads is apparent. A maize mill opened in the early eighties. The first shop opened in 1995, while currently there are 8 shops and 8 kiosks that cater for general input supply. Six private milling machines are operational. Kwermusl counts 10 village community banks with each about 30 members. The village community banks are not linked financially but twice a year their management exchanges views.

In reference to the components of the sustainable livelihoods framework, changes over time are described below.

B.2.1 Cultural capital

Mama Issara is seen as the origin of the Wairaqw (Thornton, *ibid*; Snyder, *ibid*). Traditionally, some families mainly depend on livestock, while others mainly engage in cultivation. The exchange of these resources was common between families in particular between those within the *aya* (local or ridge community) while little exchange took place with people outside the area. Both in 1988 and 2010 the population within the survey existed for hundred percent out of Wairaqw. The Wairaqw at Mama Issara cultivated the steep slopes intensively. The slopes initially were inhabited by members of one and the same clan looking after the environmental management of the slopes jointly (Thornton, *ibid*). The surrounding plains were inhabited mainly by pastoralist peoples (Masaai, Barabaig) and hunters and gatherers (Hadzabe). Currently Mama Issara is still seen as the homeland of the Wairaqw, the place of the forefathers, although the Wairaqw have spread over a much greater area (Snyder, 2005). Among the Wairaqw in the past there has been a rather strict division of labour between men, who took care of the livestock and women who did most of the agricultural work (Börjeson, 2004).

B.2.2 Human capital

The population of Kwermusl, being the centre of Mama Issara, in majority is born in the village itself with only a few people in a neighbouring ward. In the past, relatively more people were born outside the village and shifted to Kwermusl afterwards. The population exists of Wairaqw only. The number of households grew from 369 in 1988 up to 478 in 2010 with an average household size growth from 6.5 in 1988 up to 7.2 in 2010 with a slightly changing m/f ratio from 95 in 1988 up to 102 in 2010, and a slightly growing working age population as percentage of the total population from 52% in 1988 up to 55% in 2010. In the past boys – more than girls – left Kwermusl to attend secondary education and remained outside of Kwermusl thereafter. Nowadays boys and girls have access to secondary education at Murray Secondary School, although they may leave the area afterwards.

The whole population has been Mwiraqw over time. In 1988 71% of the heads of household was born in the village, while in 2010 that percentage was 95% of the heads of household.

A key issue in human capital development is the change in educational level. In 1988 32% of the population and 23% of the heads of household had at least standard seven qualification, while in 2010 those percentages were 59% and 88% respectively. The percentage of population with at least secondary education changed from 1% to 9% which – although shown as a major increase – does not reflect the reality as many secondary school graduates left the village for further education and/or work elsewhere. Over 79% of the population indicated to be ‘educated’. Expansion of education facilities together with quality improvement has led to such achievements. In the past, adult education played a major role, while current generation of heads of household don’t mention such education as being their only source of education.

B.2.3 Natural capital

The average household land size has been just below 3 acres and did not change over time. One owns the land on basis of customary rights. People intensively cultivate the slopes along contours (Börjeson, 2004) and mix various crops with trees and grasses to ensure environmental control and to fight erosion. Since long people do grow a variety of trees individually: both for fruit, fuelwood, poles and timber production. About 95% of the cooking, 100% of the meat drying and 100% of the brick

burning is based on the use of natural capital in the form of available fuelwood.

Although people cultivate individually, contour making and erosion control is governed and sometime done collectively (Thornton, 1980). The altitude, temperature and rainfall allow agricultural production the whole year round.

Over time there has been quite a shift in agricultural practices with more households concentrating on agricultural activities only and less households that do so in combination with animal husbandry as major activity. The average number of livestock per household, which was comparatively low, did not change over time, but as the number of livestock in the rest of the district has diminished tremendously, the average number of livestock per household that keep livestock is now close to the average number (9) all over Mbulu district. However, the percentage of households that keep livestock has been reduced from 48% up to 37% as pastoral areas are taken for agricultural cultivation. Zero grazing has been introduced in 1993, while in 1997 and again in 2008 improved pigs and chicken have been introduced. One may continue to have some livestock but does not get much income out of it. With the adequate use of manure or fertiliser one cultivates twice a year in the same field. Maize (0.9 acre), beans (0.5 acre) and sweet potatoes (0.6 acre) are in average the acreages per household and have long been the major crops, while in the '80's sorghum (0.6 acre) and finger millet (0.6 acre) were grown as well. Intercropping has long been common practice. Since 2006 improved seeds are available locally. Beans are grown twice a year (November / March and April / August).

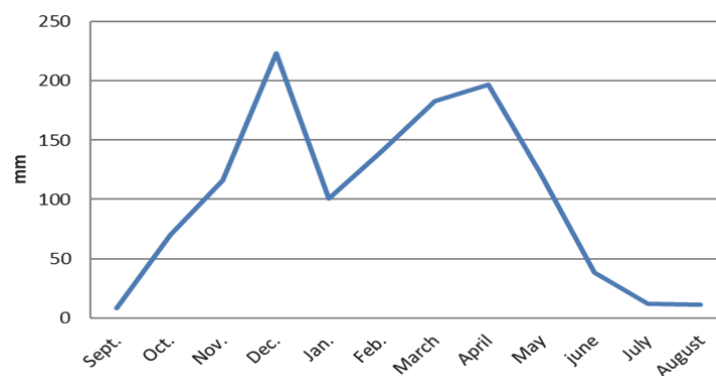
Farming calendar

Rainfed	Planting / Harvesting
Maize (<i>mahindi</i>)	June / February
Sorghum (<i>mtama</i>)	November / March
Millet (<i>ulezi</i>)	November / March
Beans (<i>maharage</i>)	November / March & April / August
Pyrethrum	November / many times
Wheat (<i>ngano</i>)	April / August
Sweet potatoes	November / July

Business in fruit tree or forestry products is expanding. In 2001 people started business to sell their fruits and vegetables in Mbulu town, while in 2010 one started harvesting the timber of the trees that had been planted in the eighties. All this business is conducted individually or in cooperation with family or clan members.

The mean annual rainfall in Mama Issara is 1,221 mm as depicted in Figure B.2.2.

Figure B.2.2
Mean annual rainfall in Mama Issara (1,221 mm, Kainam)



Source: Magoggo (1995)

B.2.4 Physical capital

From village perspective, accessibility has changed from being poor in 1988 (Van Dijk, 1988) to being accessible nearly the whole year round. Since 2007 Tanzania Social Action Funds (TASAF) supported the construction of the road from Mbulu to Babati, passing through Kwermusl. In April/May Kwermusl is difficult to reach still and therefore in 2010 communication is still mentioned as an issue for transportation of crops as well. Communication by mobile phone is felt as being an issue too, as connectivity in the area is poor still.

Regular transport to Mbulu town started in 2001 through the RC church, while recently a private transporter started running a daily bus (*daladala*) service as well.

Private shops started operating since 1995, while in 2010 Kwermusl accommodated 8 shops, 8 kiosks, 4 cake makers, 10 carpenters, 8 milling machines, a cattle dip, a godown and a weekly market (together with Murray).

Kwermusl primary school exists since the early fifties, while the Murray (ward) secondary school operates since 1997. Teachers' houses have been constructed, but in 2010 still 7 houses were required.

A government dispensary operates since the eighties with some staff houses available. Water supply, except one shallow well, comes directly from the river or people dig their own open well down the slopes. Very few people only do have rainwater harvesting facilities. Despite the use of open well or river water, water supply is not seen as an issue within the village.

Since 1988 individual households gained towards 2010 in average physical capital in terms of ownership of bicycles (from 4% to 39%), radios (from 11% to 54%), hurricane lamps (from 25% to 86%), watches (from 16% to 56%), mobile phones (from 0% to 51%) and houses with corrugated iron sheets (from 2% to 53%). Very few people (the RC church, the secondary school and 5 households) have access to solar, wind or generator operated energy.

In most other villages the growth in ox-drawn equipment I see as an example of increasing physical capital development. In Kwermusl however, ox-drawn equipment has not been there and is not available as the natural environment is not conducive for such equipment.

B.2.5 Financial capital

Financial capital development is measured traditionally in terms of livestock availability or in financial terms in reference to households' expenditure level. Both measurements are not accurate. In addition, financial capital development can be measured in terms of capital development growth as well.

Although livestock availability among those households that keep livestock has slightly increased, average number of livestock per household has remained the same. According to the village statistics the total livestock availability in the village has diminished slightly over time. In case pasture is in abundance (which is not) the livestock herd could be a measurement of (potential) financial capital as one does not keep its

money on the bank. However, pasture unavailability and changing animal husbandry practices from 'grazing in the commons' to 'individual zero grazing' disqualifies the number of livestock as measurement of financial capital.

Financial capital development in terms of household expenditure level could be a proxy indicator for financial capital development. Households' financial capital in 1988 is far below the average (less than 60%) within the district, but grows faster comparatively to the average growth in Mbulu, which grows faster again than the national growth. In 2010 the average four-week expenditure overview for Kwermusl households as proxy indicator for the household income level has grown just above the average Mbulu district expenditure figure. It still is at a level of about 80% of the combined Mbulu-Karatu expenditure.

Financial capital development of the village as a whole in terms of growth in the percentage of households owning specific physical capital comparatively to the growth in the total research area is seen over the period 1988 to 2010 through the percentage owning bicycles (Kwermusl growth of 10.83% vs. the average growth of 10.75%), owning radios (Kwermusl growth of 5.07% vs. the average growth of 2.96%), owning hurricane lamps (Kwermusl growth of 3.46% vs. the average growth of 1.75%), owning clock/watch (Kwermusl growth of 3.47% vs. the average growth of 0.82%), or owning corrugated iron sheets (Kwermusl growth of 29.17% vs. the average growth of 2.75%).

Access to financial capital has grown with the establishment of the village community banks since 2009. The roughly 30 village community banks members per group contributed first Tsh. 500, but nowadays Tsh. 5,000 weekly to the own group funds, on which basis one is able to get access to a short-term loan of currently maximum Tsh. 150,000 to initiate a profit-making undertaking.

B.2.6 Social capital

Norms and values and nearly all aspects of life are governed and maintained through the council of elders, despite the fact that formal governance takes place through the village government structure. Traditional leaders guide the elected leaders informally. Kwermusl, being in the centre of Mama Issara, the so-called cradle of the Wairaqw is represented indirectly by its traditional leaders. Technically, the traditional joint environmental control management of the steep slopes by the *aya* (clan or

local or ridge community) leaders ensures construction of contours, planting of trees to prevent erosion. Within such ridge communities one shares resources like pasture, woodlots and water. In the past neighbours cooperated in the construction of houses and farm work as well, but such communal work has decreased over time (Snyder, 2005). At the moment such neighbour support is gradually replaced by 'paid labour'. Road works are done still by members of the *kitongoji* once a year on the part the *kitongoji* has been assigned.

The traditional birth attendants are organised as well in the sense that they exchange experience and work together in small groups in case one needs to attend birth. They are not registered and do not have any written documentation, but they are linked to the government maternal and child health services to get extension on hygiene and on what to do in case of 'emergencies'.

The *ngoma* is another form of traditional social capital that accompanies all cultural, government or other feasts or treats, while the *sungusungu* (or *mgambo*) does that to safeguard security in the area.

In practice there is little difference between the *aya* and the *kitongoji* (neighbourhood) leaders that take collective action to ensure road construction and maintenance, or to construct a classroom or teacher's house for the primary school. The *kitongoji*, however is part of the formal local government structure, which means that the chairperson has been elected and the other *kitongoji* government members have been appointed (by the chair). The chair represents the *kitongoji* in the village government and the village government in the *kitongoji*¹⁰.

B.2.7 Political capital

CCM as political party has had its supremacy up to 2009 when Chadema was established in Kwermusl as well. Since 2010 the majority of the village government belongs to Chadema, although the Councillor belongs to CCM. The vision/mission statements of the two parties do not differ much and people easily shift from one party to another one. The actual power game does not apply on village level (as traditional decision-making is followed on basis of consensus) but among villages as in case of the location of the new secondary school as described in sections 7.1, 9.2.1 and B.2.9.

B.2.8 Vulnerability context

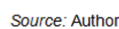
The percentage of households that indicate to experience shortage of land for individual farming has increased from 41% in 1988 up to 100% in 2010. The percentage of households that indicate to have insufficient land for livestock farming has remained the same (18%) which is mainly explained by the fact that the percentage of households that keep extensive livestock diminishes. The percentage of households that keeps livestock decreases and the total livestock population decreases slightly as well. The percentage of households that indicates to have just enough pasture decreased from 39% in 1988 up to 14% in 2010. While in 1988 still 13% of the households indicated to have plenty of pasture in 2010 nobody indicated that s/he had plenty of pasture available any longer. In a similar way in 1988 64% of the households indicated to have 'plenty fuelwood' available in 2010 that percentage has decreased to zero, while 85% of the households indicated that time to have 'just enough'. Comparatively the fuelwood situation is better than in other parts of the district. As people have started planting fuelwood trees the actual distance to get fuelwood is shorter now than it was in the 80's, while the time involved in the collection of fuelwood has become shorter too. Fuelwood collection is mainly a task for women, while children are in support. Fuelwood is used for cooking in 100% of the households, while kerosene is used for lighting in nearly 100% of the households. Trees that were planted in the eighties for having poles and timber are currently harvested.

B.2.9 Transforming structures and processes

In reference to predominant cultural, social and political capital and based on current human, natural and financial capital, people operate collectively. Culturally, the council of elders safeguards social values. Behaviour outside of the 'ordinary' behaviour is dealt with traditionally. If people do not perform their social responsibilities in e.g. carrying sick people to the dispensary or hospital, they are 'fined' in cash or kind. If somebody is killed by an accident (even if it is not your fault) you may compensate the relatives. If you do not comply with collective action or the collective decision, ostracism may be the consequence. In reference to the environment, the *aya* is key to cope with the given vulnerability context of the slopes in *Mama Issara*. All ordinary local governance and related committees are functional. Besides governance in general, such

The Local Government Act (1982) describes the functioning of the village assembly, village government and its standing committees, while in addition the village government appointed an *ardhi* (lands) committee, an environmental committee, an HIV/AIDS committee, a primary health care committee and a construction committee. Although independent, the primary school committee, the secondary school committee (or board) and the dispensary committee have strong links with the village government as well. E.g. the current conflict among the three villages where the new secondary school has to be constructed in Nambis Ward is fully incorporated within the local government structural discussions. See Figure B.2.3 for an overview of the current collective action in Kwermusl.

Figure B.2.3



Collective action and socio-economic infrastructure

On daily basis many people walk in between Kwermusl and Mbulu, which is the closest shopping centre. People carry commodities from as far as Mbulu and sell them to their neighbours. The first registered shop in Kwermusl started in 1995. To date Kwermusl does not have its own market or cattle dip. People make use of the weekly market in Murray, which is operational since 2007, or of the daily market in Mbulu. For dipping its cattle, one goes to Murray as well.

Communication is an issue. The Kwermusl access roads are maintained by the district council and the feeder roads by the village government. This latter one means that the people in the neighbourhood (*kitongoji*) concerned maintain the feeder roads. During the rainy season (April - May) it is rather difficult to reach Kwermusl by car. Since 2007 TASAF has been instrumental to have the community constructing the Mbulu–Kainam–Kwermusl–Murray–Kuta–Babati road with the consequence that pyrethrum production started afresh.

Mobile phones to improve communication have been introduced in the area since antennas were established in 2007. Although over 50% of the households carry a mobile phone, telecommunication does not reach everywhere yet. One has to step on particular (small) hill tops to have access to the mobile network.

One private *daladala* and a pickup from the RC mission have both a daily service to Mbulu town on a distance of 14 km. Otherwise people are walking to Mbulu. From Mbulu busses and lorries are daily available to Dongobesh (40km), Babati (80km), Singida (160km) and Arusha (225km),

Mbulu has public market facilities. Most of socio-economic infrastructure like a bank, post office, private shops, restaurants, guest houses, petrol stations and milling machines are situated in Mbulu town.

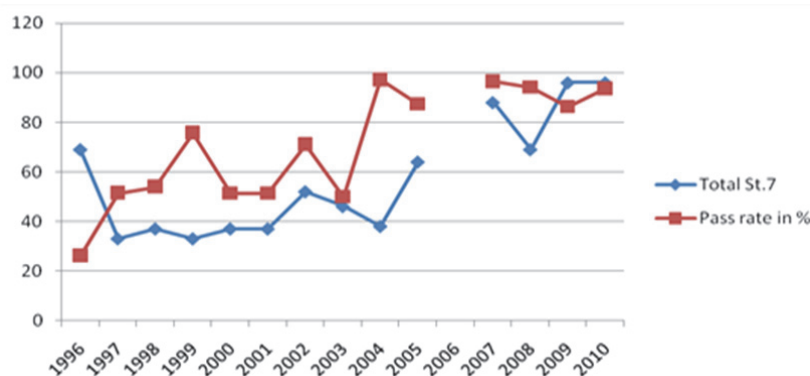
Nearly every household has its own well to get water from, or otherwise people and livestock get water from the Nambis, Burmai or Haynu River. Since 1991 a water group is formed to look after the water pump at Kwermusl primary school. That pump was built on an open well at the lowest point in a valley. Only recently there were two other initiatives to do the same with other open wells. People are used to get water from open wells. Water is not seen as a problem as it is always available.

Collective action and civil society

Ngoma (local dance groups) have long existed for people to enjoy themselves and entertain others and to bring and sustain the Iraqw culture. One of them, *Haidaffa*, exists since 1999. Its mission is to educate Iraqw culture to the children. One performs irregularly. In 2011 one performed only once. However, on each occasion one is able to perform. One operates on voluntary basis and gets paid in terms of *chai* or one joins in the meal. E.g. in 2007 one was invited to DSM to show the Iraqw culture on behalf of Mbulu. The trip and accommodation were paid for through local contributions of Tsh. 40,000 per person and one was encouraged to construct a rondel as a 'club house', which was done but which has collapsed in the meantime.

Construction of schools, inclusive classrooms and teachers' houses has taken place and continue when required. Under guidance of the village government people construct classrooms, teacher's houses and school VIP latrines. The primary school has 16 teachers and misses still 7 teacher's houses. To overcome this, the village government plans to construct two teacher houses every year. For a number of years Kwermusl Primary school is amongst the 20 best of the district with over 115 primary schools.

Figure B.2.4
Number of pupils that sat for Standard 7 exams and percentage that passed at Kwermusl primary school



Source: Kwermusl Primary School (2012)

Supervision of educational management is conducted collectively as well. A *parents-teachers association* (PTA) exists since 1951. It aims to develop a school that supplies educated youngsters that are able to meet the standard of secondary education entry or that are able to earn themselves an adequate living in current society. According to its constitution, the PTA meets four times a year, but in reality, it meets more often. Twice a year it meets with all parents. The PTA chair and the headmaster meet with the village government and the ward education coordinator when necessary. The PTA ensures that adequate numbers of books are available and children are taught agriculture subject as well. It employs temporary teachers if necessary. For 12 years such teachers are employed and paid for by the parents. At the moment of the interview¹¹ two of such teachers were employed. The PTA follows up the school funds received from parents and government. It discusses action to be taken in case of low pass rate. It organises budget for the construction of toilets, classroom, teacher's house or for cultivation of the shamba. It follows up truancy and intends to get children to school (those that stay at home). It intends to ensure a high level of education.

Grade 7 parents pay Tsh. 6,000 and grade 4 parents pay Tsh. 2,000, which mainly is meant to have the examination organised according to standard. A pass rate of 93.8% in 2010 for 96 pupils in standard 7 resulted that actually 70 of them went to secondary school that year. In 2011 120 Kwermusl pupils entered secondary school.

A *Kikundi ya Wazazi* (Tanzania People Association TAPA) has been established in Kwermusl in 2007. Its membership is gender balanced. It focuses on improved standard of living in terms of education, economy and improved houses for all members. It intends to get all children having access to further education. Its members are encouraged to burn bricks for construction of socio-economic infrastructure, while e.g. in 2011 they were challenged in addition to central government's contribution to contribute Tsh. 3,000 for the upgrade of the dispensary.

In neighbouring Murray there is a secondary school, which has been constructed since 1997 by the four surrounding villages in the then Murray ward, Kwermusl being one of them (Hayloto, Kuta and Murray being the others). Like Kwermusl, each village constructed a classroom or teacher's house every year.

After the latest administrative split (see above) and its neighbouring village construct a new secondary school collectively, which is to be opened in 2018.

Together with Murray, Kwermusl operates a *dispensary* as well with 3 staff members.

A group of 10 *traditional birth attendants* collaborate since the early days of existence to assist pregnant women from about seven months pregnancy onwards. They get irregular support from the maternal and child health department of Mbulu hospital.

There are 4 *church communities* in Kwermusl (RC, KKKT, TAG, Kanisa la Mongu).

The Roman Catholic Church (RC) was founded in 1949 and registered under the Diocese of Mbulu in 1953. The majority of the population is RC member. The RC vision towards the human being has political, economic and social dimensions as follows:

- Politically, from the point of view, that all people are assumed to understand their rights.
- Economically, that people are assumed to be aware of the need of additional tree planting; of increased agricultural production (for food security + income); of increased fruit growing; of good roads (to Mbulu and Babati markets); of adequate social communication (telephone) to know the market; and of electricity for processing agricultural produce, timber, to process raw material. The church shamba itself is worked at to flourish for the church's own support.
- Socially, from the point of view that women are encouraged to know their rights which leads to gender equality; that adequate education is there for all; that female circumcision has stopped; that both Catholic women association and Catholic men association flourish; and that people's awareness in general to get involved in village community banks, savings and credit cooperative societies or savings and internal lending communities credit and loan schemes.

The awareness raising as discussed is done by 41 small groups of three members each. One intends to organise out-stations, tree nurseries and tree planting, while one advocates to stop beer drinking. Decision-making is done by a small committee where all expenditure is accounted for quarterly as well.

The Lutheran church (KKKT) has been established in 1995 and started constructing its church since 2000. The construction took up to 2013 to accomplish. The church was constructed by its youngsters, while the *fundis* were paid from the annual contribution of Tsh. 5,000 of its members. KKKT Kwermusl does not employ its own preacher but gets support from the preacher of the neighbouring village Kainam.

The Tanzania Assemblies of God has been established in 1999 and currently it intends to construct a church building. In 2011 one was encouraged to contribute one iron sheet per household. During 2012 -2013 one intended to make bricks, collect stones and sand and to have them carried to the site by its members. In addition, one is encouraged to pay Tsh. 20,000 per household as well. The preacher of Kwermusl goes to other meetings, like e.g. those in Hayloto, those with the Bishop in Man-yara or those at national level. The preacher together with some elders form the decision-making body of the church.

Like the *ngoma* from traditional point of view there are various choirs (4) from religious point of view, that in first instance operate during the church services, but as group cooperate to educate people (norms and values) or to construct a church as well. In addition, there is a youth choir of secondary school students.

Since 1977 Kwermusl has a local branch of CCM. It aims to educate the people and to have governance close to the people, so that they take care of their own environment. It encourages small administrative units (*vitongoji*). It stimulates the construction of schools. The membership fee of Tsh. 1,200 annually is shared among CCM Kwermusl (50%) and the district CCM (50%). Membership is gender balanced.

Since 2009 *Chadema* has a local branch as well in Kwermusl. Its objectives are like those of CCM with in addition a focus on self-employment.

The *Umoja ya Wanawake wa Tanzania* (UWT) has established its local branch in 1977 as well from the perspective to have women following up women issues among themselves. With about 100 members the group intends to help women in case they have problems. E.g. in 2011 ten women got assistance at times of birth giving, carrying/accompanying to dispensary or to look after their children. In total, members contribute Tsh 500,000 annually.

Collective action and production

Social capital to enhance production or economic performance operated up to 1988/89 as primary society Nambis (4046), including the villages Murray, Kainam, Kwermusl, Hayloto, Kuta, Nahasey and Hareabi, which all are villages in *Mama Issara*, Endagikot division. Since the liberalisation of the primary societies and its free membership, collective action to enhance production has not materialised again in Kwermusl. Only through the non-functioning membership of the farmer membership association MVIWATA for advocacy, the government supported improved seed supply service, the savings and credit cooperative societies or the village community banks (10), links are laid between collective action and economic enhancement.

Individually people run their milling machines (6), shops (8) or kiosks (8). A few women (4) make cakes. There are about 10 carpenters operational.

At ward level an agricultural and a livestock extension officer operate. For the last years various approaches were undertaken by government to encourage agricultural production. Specific groups of households got access to subsidised inputs.

Under the heading of *kilimo kwanza* 86 households got subsidised seeds (10 kg) and fertilizer through government support (75% discount).

Under the heading of *mbegu mbora* a committee is formed to encourage people performing better in agriculture (i.e. from current 5 bags per acre → 10 bags maize per acre). It intends to teach people to measure the land and have adequate quantities of (government subsidised) fertiliser and seeds applied (45% subsidy) to be purchased from private agent (business). For a few years every year another 100 households got access to the subsidised input, while it is assumed that people started procuring the improved inputs on commercial basis thereafter, as their income increased through the subsidised input use.

Since 2009 Kwermusl counts 8 village community banks of which *Tiken* with 35 members is one. Its mission is to reduce poverty and to improve livelihoods by having the economy of its members growing¹². The village community banks function quite well to have savings and credit supply operational within the individual groups. All members pay a small amount every week. The village community bank intends to give loans to individuals reaching from Tsh. 100,000 up to Tsh. 500,000, and

did so in 2011 for in total Tsh. 15,700,000. People have repaid the money with 10% interest. An example of one member indicates that after getting a loan of Tsh. 1,000,000 to procure trees, he employed labour for Tsh. 500,000 and sold the planks for Tsh. 2,000,000 within 3 months. He paid 10% over the loan and had Tsh. 400,000 profit in three months. Every group is formed by maximum 30 people that select chairman, secretary and treasurer and three people that each has a key of the money box. The three keys are of three different locks on the box and kept in three different places. So those three always have to be together to open the box, while the three board members do not have a key and the box itself is kept in a place where nobody has the key. Transparency, accountability and trust are key issues that the system is based upon. One indicates that the general level of education of the people has made this possible.

There is no direct link between the individual village community banks, but twice a year one exchanges views on ward level. One is in discussion to have a district account opened and that all village community banking accounts are registered – as separate accounts – under the district account.

There are some groups with economic activities, like a women group that raises improved chicken and a mixed group that raises improved pigs, which organised the input supply jointly. They both have 30 members.

Local institutional embedding

The village government functions as per Act and intends to ensure good living conditions for citizens, which incorporate good houses, adequate education (good schools), higher secondary school, new secondary school, teachers' houses, dispensary, good roads to every neighbourhood (*kitongoji*), economic activity in fruit growing, good seeds, shallow wells, etc.. It intends to ensure that adequate infrastructure is in place and functions. E.g. it organises people (parents) to contribute Tsh. 20,000 annually for classroom or teacher's house construction. Decision-making by village government is assumed to be endorsed by the village assembly that meets four times a year.

A specific case was discussed on 20th of April 2013 with representatives of the village government of Kwermusl concerning the location of the new secondary school after that Kwermusl, Hayloto and Amoa were

split from the former Murray Ward into the new established Nambis Ward. The discussion among the three villages did not reach to consensus. Amoa and Kwermusl want to have the secondary school at Kwermusl (in the centre of the three villages). Hayloto wants to have the school in Hayloto. According to the LG Act, a LG decides (within the rules of law) and cannot be counteracted by other LGs. The situation of a secondary school is a decision among the three villages in the WDC (which is 2 vs. 1). However, the DED of Mbulu seems to have given a contract to his brother to start construction at Hayloto. Amoa and Kwermusl have started clearing the ground for the school in Kwermusl. The DC from Mbulu wrote a letter that the school should be built in Hayloto. The village governments of Amoa and Kwermusl officially resigned (all members). One agreed that in case there will be by-elections nobody (none of the villagers) will nominate him/herself as candidate and nobody will vote. Newly appointed DED follows WDC decision. One expected the DC to withdraw his letter.

The village government incorporates a few subject specific committees:

- The Lands or *Ardhi* Committee, established in 2011, ensures that all land disputes are settled. The committee exists of four women and four men and ensures that all land disputes are settled. People just pay some *chai* to the committee to sit and sort out the land dispute.
- The Construction Committee (2 women, 2 men) monitors the status and construction of all buildings at village level and report to the village government. In 2011 the committee monitored the construction of classrooms, a teacher's house and toilets, while 2 classrooms were provided with iron sheets. Specific tasks are distributed over the members, but decision-making is done jointly.
- The Committee for Safety and Security exists out of the chairpersons of the 5 neighbourhoods (*vitongoji*) and 2 village government members and intends to ensure a safe and secure environment, e.g. to help and intermediate in case people fight among themselves. Members follow up payments of village government and ward contributions. During school examination members do surveillance to ensure that everything goes well. They supervise the functioning of the *mgambo*, a group of about 100 members that – if necessary – is involved in the follow up of village government contributions as well. The fines for

not paying village government contribution go to the respective *mgambo* member @ Tsh. 2,000 per case.

Besides the village executive officer in the village office and the 16 teachers in the primary school, Kwermusl does not have technical staff at village level, but has access to the ward based agricultural (1), livestock (1) and health (3) officers, which are all civil servants at Nambis ward.

Kwermusl has 5 neighbourhoods (*vitongoji*) each of them counting a bit more than 100 households. Some of them exist since the initial village registration. Others exist since the latest administrative split up in 2009. In cooperation with the 'Ujenzi Committee' of the village government, the *kitongoji* is responsible for the maintenance of its feeder roads to ensure that they are passable throughout the year. People are motivated to work together, as it benefits as cars can reach the house to collect agricultural products, instead of carrying it on the back or head to the main road or the market.

Change of administrative boundaries causes socio-economic infrastructure to belong to 'the other village' although the population of 'the one village' had contributed to it as well. Such infrastructure – now in the other village – is not compensated, while – with a smaller population – the new village has to start constructing such infrastructure afresh. As mentioned above, since the splitting up of the Murray ward into two different wards in 2010 and consequently Nambis ward leaders sat together to select the location of a new secondary school, one got stuck, as there was no consensus. Decision-making according to the Local Government Act (majority decision is taken by half plus one) did not lead to the required action immediately, as other governing bodies (District Executive Director and District Commissioner) intervened outside of the Act. It took a few years before the 'bottom-up' collective action was able to countervail the 'top-down' interference.

Except the traditional birth attendants all forms of collective action are governed by their documented vision/mission statements. However, none of these groups have any documented institutionalised relationship to relate to each other, unless such is governed by top-down (local) government, church, party or farmers' association (MVIWATA) regulations. For instance, in case innovation, like the development of the marketing management information system (MaMIS) of MVIWATA takes place, it

is not clear in which way farmers and/or traders use such innovation as developed through collective initiatives (at national level).

Except in micro-financing, the women groups and the facilitation of a weekly market ground, little cooperation takes place in economic activities. Ten village community banks are operational within the village boundaries, of which some of them are even operational from one household compound, but they are not linked to each other, while all individually do not have sufficient liquidity to satisfy their members' needs. The women groups cooperated to have some input supply collectively. The collective facilitation of the market area was done under the former ward boundaries and it is still to be seen how such operates in the future.

B.2.10 Livelihood strategies

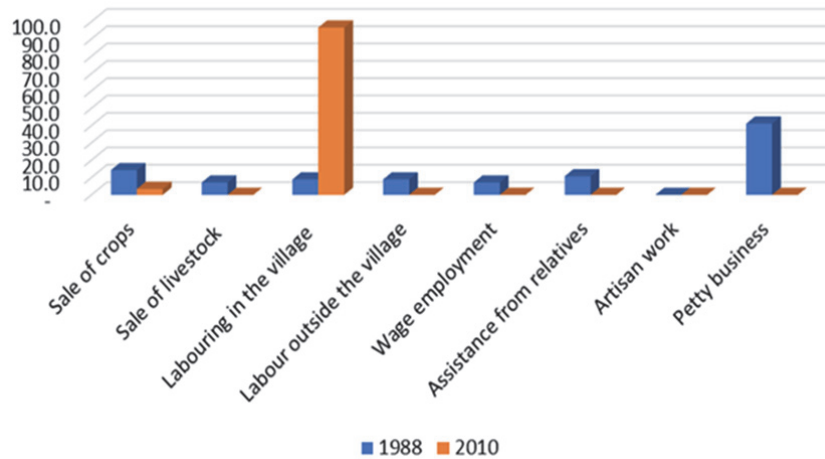
Since 1987/88 people started planting trees individually in their own fields, which actually means on their own slopes. One has been convinced that both environmental control, fuelwood availability, fruit tree and timber production made individual tree planting optional to address its vulnerable situation that time and in the future. One realised the economic potential of the sloping areas.

Individual household livelihood strategies included different farming systems with less *zebu* cows on 'the commons' and more 'zero-grazing' within the individual compound.

People have long exchanged their resources, while gradually it became clear, that the 'natural' exchange of resources has been replaced by 'payment for work done'. Nowadays people are still involved in mainly agricultural and livestock activities, but exchange of resources predominantly takes place through exchange of money, defined by people as working in the village. 'Labouring in the village' has become a major source of income. See Figure B.2.5.

The percentage of heads of household to get income from casual labour within the village itself has multiplied by factor ten, which means that what was done in the past as mutual support is still done, but nowadays on paid basis.

Figure B.2.5
Main source of income of Kwermusl households in 1988 and 2010



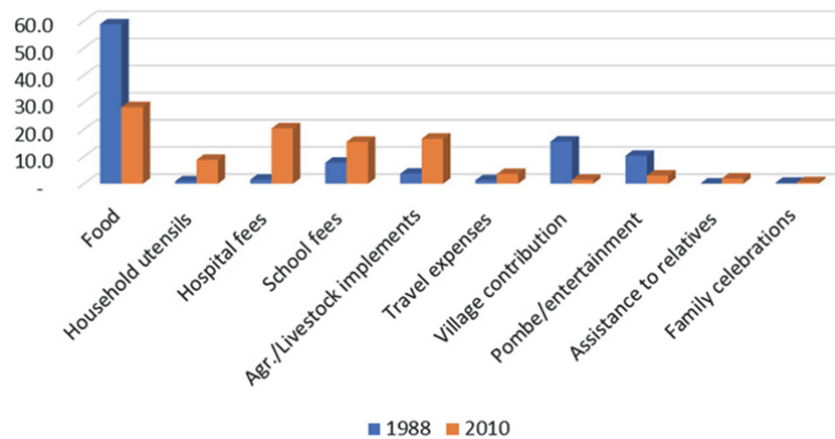
Source: Author

While in other parts of the district cultivation methods changed through increased use of ox-ploughs and tractors, in *Mama Issara* cultivation remained to be done by hoe as in the past, as because of the contour cultivation on the steep slopes the environment is less conducive for ox-plough or tractor.

From expenditure point of view, in 1988 household expenditure was spent for 60% on food items and in addition to village contributions and beer/entertainment. In 2010 only 30% of the average household expenditure was spent on food, while 15 to 20% of the household expenditure was spent on school fees, agricultural and livestock implements and hospital fees. See Figure B.2.6.

Increased expenditure to have access to social service delivery - I conclude - is partly caused by people's awareness and interest to invest more in someone's education and health, and partly by government's inability and unwillingness to pay social service delivery for 100%. Increased expenditure on agricultural and livestock implements I conclude as being caused by improved knowledge and awareness at one hand and better availability of such implements at village level on the other hand.

Figure B.2.6
Household expenditure in 4 weeks before the survey in percentages¹³



Source: Author

Although percentagewise little difference is seen in travel expenditure, the *mobility* of the population has increased. In 1988 only 7% of anyone in the household travelled outside the village in the year before, which in that time was above the sample's average over the district. Regular transport towards Mbulu started in 2001 when the RC church started operating a daily connection with Mbulu, where people could make use of. People started business selling fruits and vegetables to Mbulu. Nowadays it is just 46% of the heads of households that travelled outside the village, which is below the average.

B.2.11 Livelihood outcomes

Referring to their traditional responsibility for the environment, I conclude that the increased level of education made people more aware of their vulnerable situation and did them change their farming systems in reference to crop rotation, tree planting, livestock reduction and change towards zero-grazing. It encouraged people to enhance its vegetable, fruits and timber business in e.g. Mbulu town, through which – over time – it grew from comparatively below average expenditure in 1988 up to above average expenditure in Mbulu district. Their labouring in the village enabled households to have their income growing faster than

Tanzania's Consumer Price Index. Education encouraged people collectively to construct more socio-economic infrastructure and particularly enabled people to grasp exogenous resources to make such infrastructure operational, as what one did with the secondary school: first in reference to Murray secondary school and later on in reference to Haynu secondary school.

B.2.12 Summary

The initial conditions in Kwermusl are described as being the cradle of the Wairaqw, as the Wairaqw are said to have settled initially in the area over 200 years ago. Traditional consultation among elders takes place. Households living and cultivating on the same slope controlled erosion collectively. Primary education started in the early '50s, followed by secondary education in 1997. In 1964 people started the cultivation of cash crops to be traded in Mbulu town. An access road was constructed collectively in 1978. In 1988 the educational level was just above the Mbulu average, but below the level of the general research area, while in 2010 the educational level of Kwermusl has been marked as the highest. Besides the construction of a secondary school, collective action among various villages took place to operate a cattle dip and a weekly market. Both the number of lower local government related committees (17), the number of civil society organisations (19) and the number of collective actions in the productive sector (16) is on average level.

Coordination structures are there and agency is there too to maintain feeder roads, to prevent erosion, to collect money for maintaining the primary school and for the construction of a secondary school. After the recent split up of the ward it took some time to construct a new secondary school, as one of the villages that was assumed to cooperate, was not willing to cooperate. Following the institutional cadres, it took Kwermusl about three years to sort out its rights in order to start the construction, which then took place in a well-coordinated way.

B.3 Tlawi village

In 1988 Tlawi has been described as a moderate agricultural surplus area about 10 km South-West from Mbulu, West from Nou Forest, along the district road to Dongobesh and Haydom. It has irrigation and fishing potential because of Lake Tlawi and its supply streams that rise in the

forest and surrounding hills (IRA, 1989). By that time, it was situated in Tlawi ward, Endagikot division, and currently – thanks to the latest splitting up in three villages in 2009 – it is still situated in Tlawi ward, Endagikot division, although the three villages each have become smaller area-wise. Tlawi has been chosen in the late 19th century by the RC missionaries to settle in the Mwiraqwa homeland at the edge of Mama Issara (Thornton 1980, Snyder 2005), close to some water streams at the shore of Lake Tlawi.

The first primary school in the district was established in Tlawi in 1911. Education is seen as of high development importance. In 1976 a second primary school was constructed. All local governance structures operate since then. Since 1974 farmers cooperate to have efficient distribution of water agreed upon and an irrigation system operational. Only in 2004 the system has been improved when an inlet was constructed and some sluice gates were installed with support from outside, which has been considered as of high importance getting towards local economic development. A secondary school has been established in 2004 with teacher's houses constructed since 2007. Village initiatives like the operation of a tree nursery in 1988 were seen gaining development importance when they were privatised in 1995. Other economic actions like the introduction of improved seeds, the introduction of zero grazing for dairy cows, and the introduction of cell phones to improve communication has been appreciated as of major contribution towards development as well.

Collective action in general has little management capacity to ensure effective follow up of e.g. construction of teacher's houses, maintenance of classrooms or the adequate follow up of parents paying their contribution. In reference to the components of the sustainable livelihoods framework, changes over time are described below.

B.3.1 Cultural capital

Traditionally nearly all people cultivated their land, while gradually they changed more towards mixed farming. In 1988 about 52% of the households practised mixed farming, while in 2010 that has grown to over 83% of the households. Nearly the whole population is Mwiraqwa of which in 1988 over 75% was born in Tlawi, while in 2010 that percentage has even increased up to 93%. Since long Tlawi area has been overpopulated in terms of people and livestock and consequently there has

Figure B.3.1
*Timeline Tlawi*¹⁴



B.3.2 Human capital

The number of households grew from 380 in 1988 up to 923 in 2009 at the time Tlawi was split in three, Tlawi officially remaining with 261 households. The average household size grew from 7.1 in 1988 up to 7.7 in 2010 with a slightly changing m/f ratio from 107 in 1988 up to 111 in 2010, and a rather balanced working age population as percentage of the total population of about 51% of the whole population. The whole population has been over 96% Mwiraqwa over time. In 1988 76% of the heads of household were born in the village, while in 2010 that was 93% of the heads of household.

A key issue in human capital development is the change in educational level. In 1988 33% of the population and 28% of the heads of household had at least standard seven qualification, while in 2010 those percentages were 60% and 83% respectively. Some of the leaders (irrigation, dairy) had form IV and completed vocational training as well. The percentage of households with at least secondary education remained stable on about 7%, which however does not reflect the reality as many secondary school graduates left the village for further education or work elsewhere.

B.3.3. Natural capital

The average household land size has been just below 3 acres, but as irrigation has expanded some of the land has been cultivated twice a year. Therefore, in the statistics it is shown that the actual cultivated area has expanded. One owns the land on basis of customary rights.

Over time there has been quite a shift in agricultural practices with more households concentrating on agricultural activities only and less households that do so in combination with animal husbandry as major activity.

With the adequate use of manure and/or fertiliser one cultivates the irrigated parts twice a year. Maize (1.5 acre), beans, sorghum and finger millet (each 0.5 acre) have long been the major crops (with these on average being the acreages per household), with maize and beans half an acre added under irrigation as well. Intercropping has long been common practice. Maize, sorghum and beans are grown under rain-fed cultivation from November to June, while beans, Irish potatoes, garlic and

onions are grown under irrigation from April to August. *Mbaazi*, sweet potatoes and wheat are grown under rain-fed cultivation as well.

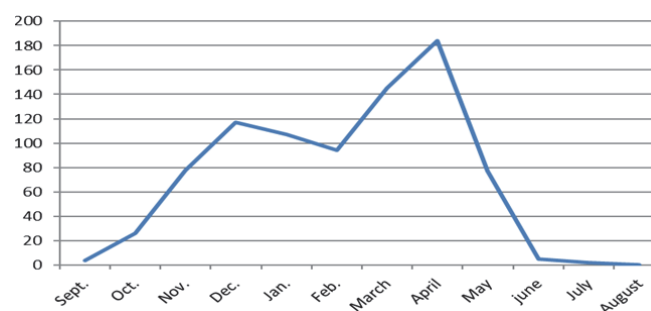
Farming calendar

Rainfed	Planting / Harvesting
Maize (<i>mahindi</i>)	November / June
Sorghum (<i>mtama</i>)	December / March
Beans (<i>maharage</i>)	November / June
Beans (irrigated)	April / August
Onions (irrigated)	April / August

See mean annual rainfall data.

The average number of livestock per household, which in 1988 was just above the Mbulu average, did not change over time, but as the number of livestock in the rest of the district diminished tremendously, the average number of livestock per household is now nearly double the number per household in comparison to the total research area. However, inadequate pasture availability caused people to have smaller herds, while farmers changed towards zero-grazing. Zero grazing has been introduced in 2000.

Figure B.3.2
Mean annual rainfall in Tlawi (936 mm)



Source: Magoggo (1995)

About 77% of the households with livestock indicate to have not enough pastures. In order to cope with the inadequate availability of pasture, zero grazing together with improved fodder seeds have been introduced by the agricultural extension officer.

In 1988 a tree nursery was started under supervision of the village government. Since 1995 the nursery has been privatised and other private nurseries have started. People do grow a variety of trees: both for fruit, fuelwood, poles and timber production. About 90% of the cooking and 100% of the brick and tile burning in kilns is based on the use of natural capital in the form of available fuelwood. The rest of the cooking and all meat and fish drying is done on charcoal. Since 1926 Tlawi people have the skills to produce roof tiles.

B.3.4 Physical capital

Despite Tlawi's position along the main road, in 1988 its village authorities indicated the 'lack of building materials' as a key challenge for the village (Van Dijk, 1988). Since 1974 farmers operate traditional irrigation, but only in 2004 an inlet has been constructed (through TASAF support) in combination with 3 sluice gates. In 1988 it did not have a functioning cattle dip. Neither did it have a godown.

Tlawi is situated along the road from Mbulu to Dongobesh – Haydom, which currently is maintained well and has about 5 times a day public transport in both directions.

The first maize mill operates in Tlawi since 1970, while in 2000 it accommodates 10 private maize mills. In 2010 Tlawi has 12 shops, 4 small pubs, a bar, a cattle dip (which does not function), while one mainly uses the daily market in Mbulu. Tlawi accommodates one carpenter, four craftsmen making roof tiles, while 8 craftsmen make bricks. Burning of bricks and roof tiles has been a skill that exists in Tlawi since 1926. However, initially the roof tiles were of good quality of 0.5 inch, but nowadays they are hand-made, of less quality and of 0.25-inch thickness.

Tlawi primary school exists since 1911 with a second one constructed in 1978. This latter one moved with the other village. Tlawi (ward) secondary school operates since 2004. Teachers' houses have been constructed.

A Roman Catholic (RC) dispensary has long operated. Water supply mainly comes directly from the river or people dig their own open well

down the slopes. In the past Tlawi had a well, but that one got stuck. Since 2010 the RC dispensary and secondary school have access to piped water supply. Water supply is seen as an issue within the village, and for long one has not been able to address the issue.

Since 1988 individual households gained towards 2010 on average physical capital in terms of ownership of bicycles (from 7% to 36%), radios (from 21% to 70%), hurricane lamps (from 43% to 70%), watches (from 29% to 44%), mobile phones (from 0% to 36%) and houses with tiled roofs or corrugated iron sheets (from 28% to 46%). Very few people (the RC church, the secondary school and 5 households) have access to solar, wind or generator operated energy. The use of radio, hurricane lamp and watch has been above average in comparison to the research area, while that of the bicycle nowadays is below average.

Since long ox-drawn equipment is used in Tlawi. In 1988 just 43% of the households owned ox-ploughs and 9% had an ox-cart. In 2010 these percentages reached up to 70% and 22% respectively. Over time, the use of ox-drawn equipment has been above average in comparison to the research area.

B.3.5 Financial capital

Financial capital development is measured traditionally in terms of livestock availability or in financial terms in reference to households' expenditure level. Both measurements are not accurate. In addition, financial capital development can be measured in terms of capital development growth as well.

Income from livestock has grown as about 7% of the households in 1988 and 17% of the households in 2010 indicated to keep livestock as a major source of income. The percentage of households with livestock has slightly increased, while the average number of cows per household has slightly decreased, so the total number of livestock in the area is rather stable. Pasture unavailability and changing animal husbandry practices from 'grazing in the commons' to 'individual zero grazing' disqualifies the number of livestock as measurement of financial capital.

Financial capital development in terms of household expenditure level could be a proxy indicator for financial capital development. Households' financial capital grows just faster comparatively to the national growth.

Financial capital development of the village as a whole in terms of growth in the percentage of households owning specific physical capital comparatively to the growth in the total research area is seen over the period 1988 to 2010 through the percentage owning ox-ploughs (Tlawi growth of 1.61% vs. the average growth of 1.32%), owning bicycles (Tlawi growth of 5.16% vs. the average growth of 10.75%), owning radios (Tlawi growth of 3.36% vs. the average growth of 2.96%), owning hurricane lamps (Tlawi growth of 1.61% vs. the average growth of 1.75%), owning clock/watches (Tlawi growth of 1.51% vs. the average growth of 0.82%) or owning corrugated iron sheets (Tlawi growth of 1.66% vs. the average growth of 2.75%). Tlawi growth is modest in comparison to the rest, as in 1988 it was relatively ahead of the other villages in terms of roofing (since the late '20s) and ownership of bicycles and ox-ploughs.

Access to financial capital has grown with the establishment of the village community banks and savings and internal lending communities since 2010.

B.3.6 Social capital

Norms and values and nearly all aspects of life are governed and maintained through the council of elders, despite the fact that formal governance takes place through the village government structure. Traditional leaders guide the elected leaders informally.

The *ngoma* is another form of traditional social capital that accompanies all cultural, government or other feasts or treats, while the *sungusungu* (or *mgambo*) does that to safeguard security in the area.

The *kitongoji* (neighbourhood) leaders are responsible to organise collective action to ensure feeder road construction and maintenance, or to construct a classroom or teacher's house for the primary or secondary school. The *kitongoji* is part of the formal local government structure, which means that the chairperson has been elected and the other *kitongoji* government members have been appointed (by the chair). The chair represents the *kitongoji* in the village government and the village government in the *kitongoji*.¹⁵ The Local Government Act (1982) describes the functioning of the village assembly, village government and its standing committees, while in addition the village government appointed an *ardhi* (lands) committee, an environmental committee, an HIV/AIDS committee and a primary health care committee. Although independent, the

primary school committee, the secondary school committee, the traditional birth attendants' group and the dispensary committee have strong links with the village government as well.

B.3.7 Political capital

While in 1988 it was not mentioned as an issue, in 2010 10% of the households indicated interest to be educated on 'group formation' as solution to address the challenges on village level. Within Tlawi ward during the last elections of 2010 the vast majority of the people (95%) voted for CCM with 5% for Chadema.

B.3.8 Vulnerability context

The percentage of households that indicate to experience shortage of land for individual farming has increased from 59% in 1988 up to 71% in 2010. The percentage of households that indicate to have insufficient land for livestock farming has increased from 31% in 1988 up to 51% in 2010, which is mainly explained by the fact that although people reduced their livestock herd slightly, comparatively with the rest of the research area the total herd remained rather constant over time. While in 1988 30% of the households indicated not to have sufficient pasture, in 2010 that percentage has raised up to 70%. The percentage of households that indicates to have 'just enough' pasture decreased from 49% in 1988 up to 20% in 2010.

In 1988 about 70% of the households indicated to have sufficient access to fuelwood, which figure changed to 49% in 2010. That time 51% of the households indicated to face shortage of fuelwood. According to Tlawi households, fuelwood becomes scarce as it does not grow in line with the population growth. Some natural forest is still available. People are encouraged to grow their own trees around their houses, getting seedlings first from the village nursery established in 1988, and from 1995 onwards from private tree nurseries.

Cooking, brick and tile burning is mainly done by means of fuelwood. Lighting is done by use of kerosene, which currently is easily available in the local shops. Meat and fish drying is done by use of charcoal. Bio-gas is used at the RC mission only

Lake Tlawi itself is losing its attractiveness for fishing as partly the fishing population has reduced and partly the water level of the lake has

reduced. To safeguard Lake Tlawi the village government took environmental measures like prohibiting cultivation within a distance of 60 metres from the lake.

B.3.9 Transforming structures and processes

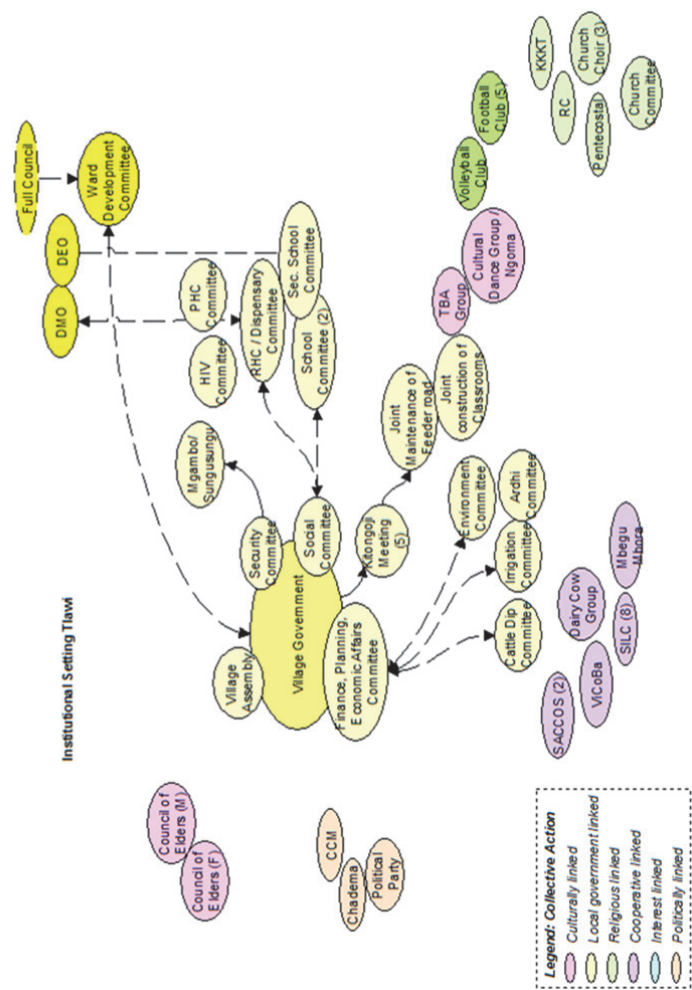
In reference to available cultural, social and political capital and based on existing human, natural and financial capital, people operate collectively, mainly to enhance socio-economic infrastructure to cope with the given vulnerability context. Culturally the council of elders guides government decision-making informally. The local governance structures and related committees are operational. Distribution of irrigation water is the main form of collective action in Tlawi, besides the collective construction of education infrastructure. Despite the existence of local governance and traditional governance structures, actual operation and maintenance of ordinary socio-economic infrastructure is managed poorly, while construction of an adequate number of teacher's houses seems beyond the local management capacity. See Figure B.3.3 for an overview of the current collective action in Tlawi.

All collective action mentioned in the figure in Tlawi is guided by documented vision and mission statements and registered through Local Government Act, community development office or through 'parent' organisations like the church.

Changing administrative boundaries and consequently the splitting up of the original Tlawi village in three other villages, with the current Tlawi village counting less than $\frac{1}{3}$ of the population than before 2009, caused inadequate governance follow up.

The village government decided to raise funds to construct adequate socio-economic infrastructure, but so far it did not implement its decision. It finds it difficult to collect money and therefore it finds it difficult to construct adequate classrooms and teacher's houses. The village government requested the Mbulu District Council as well to give support to get clean water, which did not get adequate response either. The RC church in the meantime assisted to construct piped water supply to the dispensary and the secondary school.

Figure B.3.3
Overview of current collective action in Tlawi



Source: Author

For some time now, governance of local government related collective action is under pressure, as expressed by the following examples:

- although the water distribution within the irrigation scheme seems okay, the actual construction of inlet and sluice gates took long and maintenance and cleaning of the canals is jeopardised, while water distribution among villages is under tension;
- at the time of village split the school committee was not supported by the village government to prevent truancy of pupils and village leaders did not speak to parents to ensure the future of their children;
- consecutive village governments collected money to have socio-economic infrastructure established but were not able to arrange external support to implement its decisions in reference to construction of teacher's houses and water supply.

Ongoing controversy between government and teachers on curricula change and level of salaries has demotivated teachers to perform at their maximum with poor results as its consequence. Inadequate capacity of the school and inadequate support of the village government and/or ward development committee had this situation ongoing for a long time, with school leavers left behind without proper 'final' education to establish themselves a living in ordinary Tlawi circumstances.

In productive matters, micro-financing like a village community bank, 8 savings and internal lending communities and 2 savings and credit co-operative society operate besides a women dairy group that safeguards input supply and a kind of veterinary 'insurance'.

Collective action and socio-economic infrastructure¹⁶

Structured irrigation takes place since 1974. With the construction of the inlet and 3 sluice gates for the irrigation scheme¹⁷, supported by TASAF through the Mbulu District Council in 2004, Tlawi farmers have been able to expand their production as by that time too much water disappeared unused during the dry season. It has been the mission of the group of farmers to have the water distributed efficiently. However, at the moment of the focus group discussion there was inadequate attention to maintain the canal system, while there was an upcoming conflict on water distribution between Tlawi and Silaloda.

Amongst farmers there is cooperation on water distribution. There is no cooperation as far as agricultural produce is concerned, but one in-

tends to ensure that all water is used efficiently, that livestock does not enter the irrigated land or the channels for drinking and that unauthorised use of the water is prevented, otherwise one gets fined.

In the past Tlawi had a well, but that one got stuck. Tlawi mainly uses water from the river for human and livestock consumption and since 2004 in a structured way for irrigation purposes. It does not have access to safe and clean water, although human and livestock consumption has been separated. In particular in the dry season, it is difficult to access water. The village government decided to raise funds to construct adequate socio-economic infrastructure, but so far it did not implement its decision. The village government requested the Mbulu District Council as well to give support to get clean water, which did not get response either. RC in the meantime assisted to construct piped water supply to the dispensary and the secondary school.

In general terms the village government indicated to find it difficult to collect money for collective action and consequently it seems inadequate to construct or operate socio-economic infrastructure in terms of office, classrooms, teachers' houses, cattle dip or village nursery. Since the split in 2009 Tlawi does not have an independent village office.

In 2009 the Mbulu District Council constructed a bridge towards the primary school.

Collective action and civil society

Primary education exists in Tlawi since 1911. Since 1976 another primary school was constructed that started functioning in 1978. With support of TASAF a secondary school has been established in 2004, while during the period 2005–2007 classrooms and teachers' houses were constructed for the primary school with financial support of local government capital development grant (LGCDG). Since recent administrative split, Tlawi has one primary and one secondary school. The primary school has 16 teachers and 450 pupils. The secondary school has 12 teachers and 480 pupils.

Nowadays parents look after the construction of teachers' houses (currently there are 9 houses for 14 teachers), which goes slow; the construction of toilets; the maintenance of classrooms (since '63, but they are not well maintained); the maintenance of the office; and the school feeding (parents pay for food and cook). Teachers buy their own books (as there is inadequate support from the parents). If one does not pay,

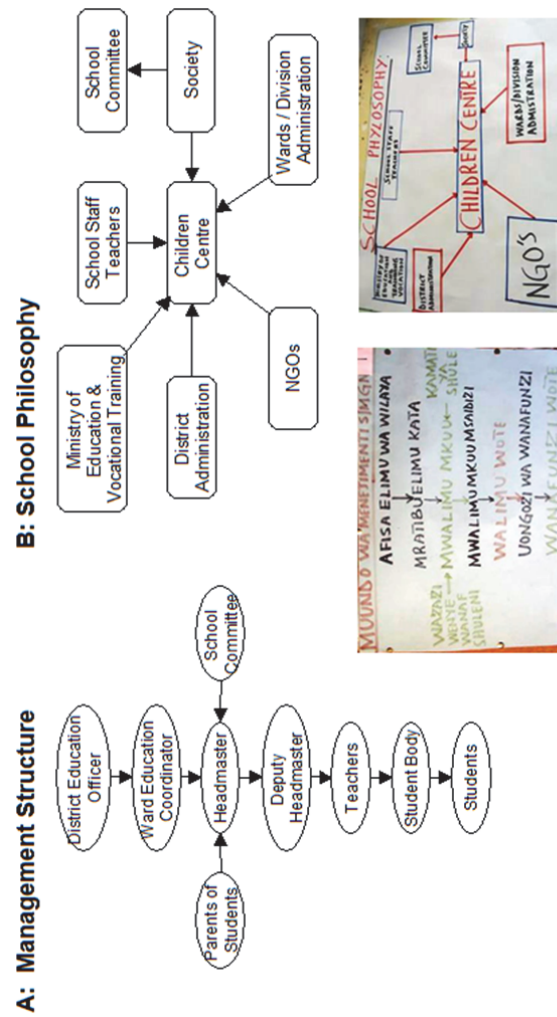
the village government leaders are assumed to check whether it is true that one is not able to pay or whether one pretends, but in general the parents are unable. In case the harvest is good, children get well fed and payment for school is received. If the harvest is insufficient the financial situation of the school is bad as well. Despite irrigation, most farmers are weather dependent. Last year the school *shamba* gave 12 bags of maize + 1 bag of beans (1.5-acre intercropping) which were sold for Tsh. 1.2 mln. The capitation grant is fluctuating and insufficient to pay for all necessary operation and maintenance. In 2012 all standard seven pupils passed and went to secondary school.

The school committees of both primary and secondary school indicate inadequate capacity to raise funds for construction of teacher's houses (the primary school has 7 teacher's houses and needs another 8; the secondary school has 9 teacher's houses and needs another 16). Inadequate capacity here means that the primary school board is not able to stimulate the village government to act, while the secondary school board is not able to stimulate the ward development committee to take adequate action. Consequently, one cannot cope with 'less motivated teaching staff' and insufficient teaching aids to have educational level enhanced. Inadequate capacity means as well that truancy is not followed up. It was reported that when children were absent of school and parents were called to follow up, little was done and the village government itself that time (2009) was not strong enough to follow it up either.

Since 2010 motivation of teachers is fading away, because late receipt of salary; parents do not support their children to go to school and consequently there is a high level of school absenteeism (which is not followed up by parents); one has only one book for seven to ten children; and starting from standard one there is a high drop-out rate.

The parent teachers' association (PTA) talks about school finances, although school resources are not sufficient, as parents don't pay sufficient, and PTA is not able to follow it up adequately. One pays a flat rate, but a certain percentage of the parents just does not pay. Capitation grant is for books, exercise books, chalk, etc. One has its own school account with the headmaster and chairman of the Board as signatories. There is no communication among PTAs of various schools in neighbouring villages.

Figure B.3.4
Primary school management links

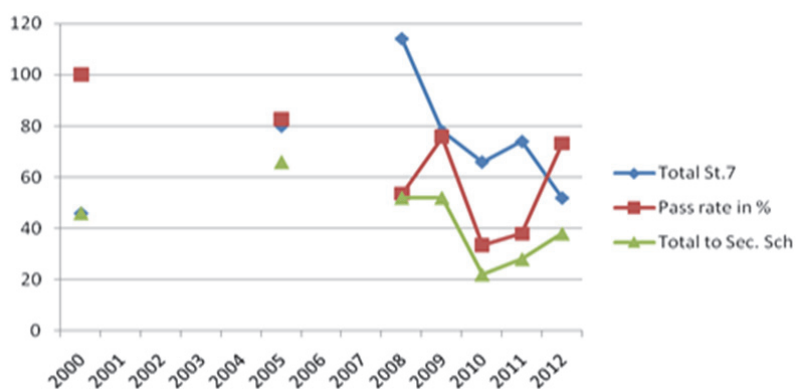


Source: Author

There is no clear view on how schools have been developed, managed and maintained bottom up by society. Schools see themselves mainly linked in the governmental education hierarchy with either or not a school committee linked to society or parents as indicated on their notice boards. See Figure B.3.4.

In the year 2000 all standard seven pupils passed and went to secondary school. In more recent years the pass rate has not always been impressive but those who passed all went to secondary school. See Figure B.3.5.

Figure B.3.5
Number of pupils that sat for Standard 7 exams, percentage that passed and number of pupils that went for secondary education



Source: Tlawi Primary School (2012)

Tlawi secondary school has been founded by the ward. The responsibility of the Board is mainly an advisory one, as e.g. the actual organisation of construction is done by the WDC. WDC coordinates / decides what construction costs people can afford per year (classrooms, teachers' houses, office blocks or toilet blocks). The Board decides on the budget for the money that is collected by the school. The capitation grant is accompanied by guidelines where it is meant to be spend on, but the Board is responsible to monitor whether that is actually spend on those issues. In case there is shortage of money, the Board takes the matter to the

parents. Board takes disciplinary decisions in reference to both students and staff.

Although the Government releases funds for books, not all subjects do have Government priority. E.g. History, Civics, Geography and Agriculture do not have Government priority and the school advises parents to purchase books themselves, as it feels that these subjects improve the performance of students. Agriculture is included but irrigation not yet, as the school *shamba* is outside of the reach of the irrigation scheme, while managing the vegetable gardens is done with handhold irrigation. A number of primary school pupils just prepare for the examination to pass the test, so that they can enter secondary school. They don't prepare for life any longer.

From 2007 onwards it was mentioned that secondary school pass rate is decreasing because of: 1) long lasting conflict between Government and teachers; Government is unwilling to consider the salary demand of the teachers; but simultaneously forced teachers to go back to teaching with the consequence that teachers are unhappy and do not perform (do not teach proper); 2) a change of curriculum since 2005 without having teachers involved resulted in new content and teachers not being taught how to teach the new curricula. The form IV results are not very promising over the years. In 2012 out of 172 form IV pupils only 60 passed, out of which only 9 went further to form V.

Tlawi has a dispensary that is run by the RC mission. The RC mission supported the Sisters' compound and the secondary school with water supply. Tlawi has 2 churches (RC, TAG).

Like the *ngoma* from traditional point of view there are various choirs (3) from religious point of view that in first instance operate during the church services, but as group cooperate to educate people (norms and values) as well.

Collective action and production

Tlawi does not own a village *shamba*. Agricultural production takes place by individual households with the trader going directly to the farmer to buy the agricultural surplus at 'farm gate'. Village nurseries that operated in the 80's did not function any longer, while individuals took over raising tree seedlings for themselves and commercially.

Social capital to enhance production or economic performance operated up to 1988/89 as primary society Guwangw (4052), including the villages Masquaroda, Tlawi, Harbaghet, Titiwi, Guwangw, Tsawa, Issale, Ayamaani, Khaday, Silaloda and Endanyawish, and as primary society Kwanseri AR 87, including the villages Masquaroda, Iwai and Harbaghet, all in Endagikot division. Since the liberalisation of the primary societies and its free membership, collective action to enhance production has not materialised again in Tlawi, as only through the water distribution of the irrigation scheme. The cooperation among the farmers is just to have the available water distributed efficiently, to have even more water available in the future and to have less water disappearing (passing by) without being used for cultivation/irrigation of maize, garlic, wheat, onion and/or Irish potato. Yet there is inadequate attention among the farmers to maintain the canal system optimally. Although the water distribution within Tlawi is commended as rather efficient, the upcoming conflict concerning water distribution among the villages Silaloda and Tlawi is yet to be resolved. There is no cooperation among farmers to transport farm produces jointly. Besides efficient water distribution, the group of farmers that irrigate ensures livestock not to enter the irrigated land to drink water from the scheme. One is fined in case one uses water without authorisation. The agricultural extension officer (*bwana shamba*) has been appointed by the irrigation committee to measure the harvest of the irrigated production in order to determine the financial contribution to cover the operation and maintenance costs of the scheme. One is supposed to pay 5% of its 'irrigated income'. Both the village government and the District Agriculture and Livestock Development Officer (DALDO) oversee the functioning of the irrigation committee.

Another productive activity started in 2000 when dairy cows were introduced on basis of zero grazing. Since 2008 a group of women works together to have milk (on average between 12 to 16 litres daily) and manure supply in the village. Members pay Tsh. 25,000 annually to get support in case one's dairy cow falls sick and veterinary treatment or support is required. One indicated to stick to the criteria for having access to dairy cows, like the availability of a good '*banda*' (cowshed), the availability of a functioning spraying pump (against ticks), the availability of $\frac{1}{2}$ acre of cattle fodder and adequate food storage facility. The professional animal husbandry officer (*bibi mifugo*) has been requested to monitor member's adherence to the requirements (including the availability of

salt) to maintain the standards. New group members are accepted on basis of group management decision when they meet the requirements. Consequently, the number of traditional Zebu cows reduced.

Savings and internal lending communities were established since 2010. In 2012 there were eight savings and internal lending communities groups. In general, every week each member pays Tsh. 500 for the social fund in order to get e.g. a loan of Tsh. 20,000 without interest for school fee, hospital treatment, etc. In addition, one pays Tsh. 5,000 every week for the business fund. From that fund one could get a loan of e.g. Tsh. 100,000 to repay again in 3 months with Tsh. 10,000 interest. Loans have been given to individuals to raise chicken or goats that were sold with profit after some time, on which basis one was able to repay the loan with interest. savings and internal lending communities started under the umbrella of the RC diocese and a teacher from the diocese comes to inspect the functioning of the group every month. Every group member pays Tsh. 200 monthly to have the teacher paid Tsh. 5,000 per group to inspect 'the books'. In case members are not able to pay their weekly contribution, they are stopped to be member and get the money back that they have paid so far. All is done in a full transparent way.

In 2011 a village community bank was established which partly managed a social fund to enable people to help themselves socially in case emergencies occur. Members were able to get a loan for 3 months, where no interest needed to be paid for. In addition, a business was managed, to enable people to do business and gain income. One could get a loan of Tsh. 100,000, which one needed to repay within 3 months with Tsh. 5,000 interest. Some examples were given on how people made use of their loan. The first example is of a member that bought maize or chicken for e.g. Tsh. 200,000 and sold them after some time for much higher price. It was indicated that as people just repay the money with interest the village community bank itself did not know how much profit one made. The second example was of a member that borrowed Tsh. 150,000 of which Tsh. 50,000 was used to pay school fees for one of her children. The other Tsh. 100,000 was partly spent on procurement of two goats of Tsh. 30,000 and Tsh. 50,000 which respectively were sold after three months of nurturing for Tsh. 70,000 and Tsh. 90,000, which was sufficient for repay + interest. It is agreed procedure that if people do not repay in time, one gets fined. However, since its establishment nobody has been fined yet, as everybody repaid the loan timely.

To safeguard the environment of Lake Tlawi the village government and Assembly took environmental measures like prohibiting cultivation within a distance of 60 metres from the lake.

Local institutional embedding

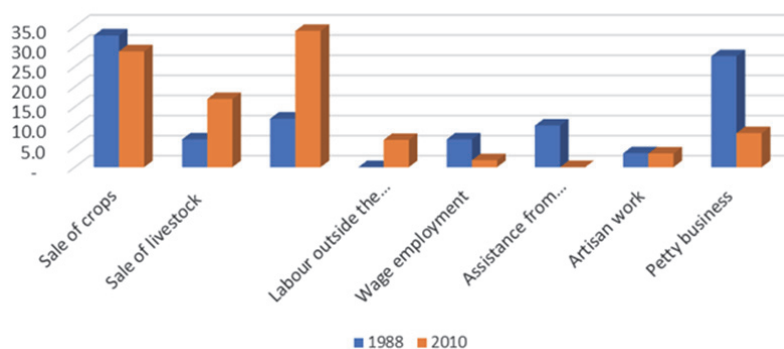
Besides the village executive officer, the 16 primary and 12 secondary teachers, Tlawi has 4 health officers, and agricultural extension officer and a livestock officer, although the latter ones operate in Tlawi ward.

B.3.10 Livelihood strategies

Most of the population has been born in the area, both during the survey in 1988 and in 2010. While in 1988 only 2% of the households indicated to travel once, in 2010 that percentage rose to 76%.

According to the village leaders, besides agricultural activities, fishing and wage employment are important economic activities as well.

Figure B.3.6
Main source of income of Tlawi households in 1988 and 2010



Source: Author

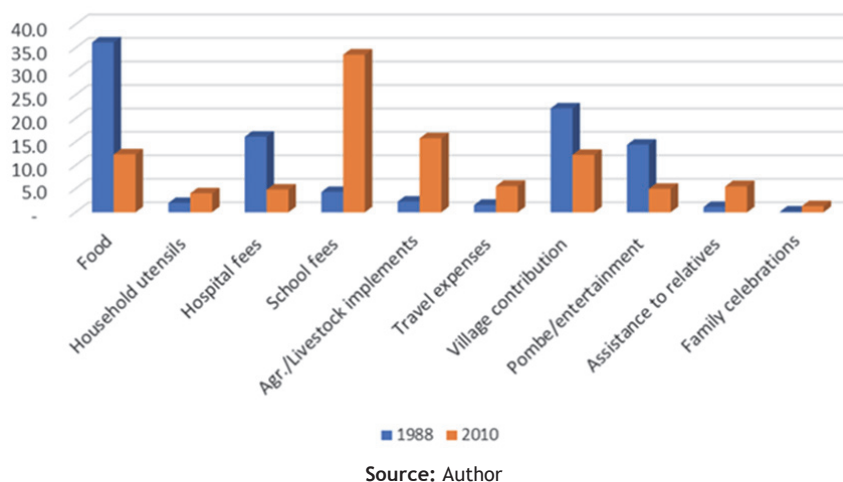
The percentage of heads of households that see wage employment or labouring as major economic activity is negligible. However, 34% of the heads of households indicate 'labouring in the village' as their major source of income, irrespective the fact that one does not see it as their major economic activity. Agriculture and livestock development has been and in 2010 still is seen as the major economic activity with 29% of the

heads of household seeing ‘sales of crops’ as their main source of income and 17% of the heads of household see the sale of livestock as their major source of income as indicated in Figure B.3.6

In 1988 village nurseries were introduced but only 7 years later they were privatised and people took initiative themselves to plant trees to obtain fuelwood, fruits, poles and timber.

Individual household livelihood strategies included a change in farming systems as pasture area was cultivated and destocking has been practiced with less livestock on ‘the commons’ and more ‘zero-grazing’ within the individual compound. Because of expansion of irrigation the agricultural land has been cultivated more intensively, with the consequence that the maize production per acre has been tripled.

Figure B.3.7
Household expenditure in 4 weeks before the survey in percentages¹⁸



From expenditure point of view, in 1988 household expenditure was spent for 36% on food items and in addition to village contributions and beer/entertainment. In 2010 only 12% of the average household expenditure was spent on food. Household expenditure on school fees as part of the total expenditure raised from 4% in 1988 up to 37% in 2010. Household expenditure on agricultural and livestock implements raised

from 2% in 1988 to 16% in 2010. See Figure B.3.7. Increased expenditure to have access to social service delivery I conclude as partly caused by people's awareness and interest to invest more in one's education, and partly by government's inability and unwillingness to pay social service delivery for 100%. Increased expenditure on agricultural and livestock implements I conclude as being caused by improved knowledge and awareness at one hand and better availability of such implements at village level on the other hand.

Household expenditure on food, village contribution and beer drinking has decreased relatively. Expenditure on health has decreased relatively as well as one always had to pay for attending the Missionary dispensary. Expenditure on education and procurement of agricultural and livestock implements has increased.

The mission statement of the current management of the primary school indicated that it intends to prepare all pupils for secondary education in conjunction with teaching the skill of ox-ploughing and how to make use of 'modern technology' like the ATM. At the same time 10% (i.e. above average) of the heads of households indicated that 'collective action skills' needed to be incorporated more in the curricula, or that otherwise education is to be provided to enhance group formation.

Currently the Mbulu–Dongobesh/Haydom road is well maintained with the consequence that transport has increased. Consequently, a striking increase can be seen in the *mobility* of the population. Although in 1988 only 2% of the heads of household travelled outside the village in the year before, which at that time was half of the sample's average over the district, nowadays it is over 76% of the heads of households who travelled outside the village, which is far above the average of Mbulu district. In the 80's public transport was poor because of the (main) road conditions. Since 2000 transport is well organised with daily busses travelling between Mbulu and Dongobesh/Haydom. Nowadays the public transport between Haydom (70km)–Dongobesh (30km) and Mbulu (15km) is well organised for Tlavi people easy to make use of, as it is just along the main road and currently five times a day a bus passes through Tlavi. In addition, it is easy to reach Arusha (230km), Babati (75km) or other destinations.

B.3.11 Livelihood outcomes

Tlawi accommodated the first primary school in the district. Since 1988 till today the educational level of its population and its leaders has been just above the district average. The percentage of households with ox-ploughs (currently 70%) has been among the highest. Agricultural and livestock production has always been above average as well. 93% of the heads of households interviewed was born in Tlawi.

Initiatives to construct socio-economic infrastructure have been undertaken but – apart from an efficient distribution of irrigation water – the actual collective operation and maintenance of such infrastructure does not show much effect.

B.3.12 Summary

The initial conditions in Tlawi are described in reference to the availability of perennial streams used for irrigation, Lake Tlawi, the early establishment of a missionary primary school, and the manufacturing of burnt bricks, roof tiles and consequently the construction of improved houses. Traditional consultation among elders takes place. Traditional irrigation and water distribution takes place since 1974, but joint emphasis to improve the irrigation system through TASAF construction of inlet and shutters took place in 2004 only, while the registration of the irrigation group happened in 2012. Operation and maintenance is the joint responsibility of farmers. Farmers sell their produce individually. The village nursery, although established as a collective activity, has been privatised shortly after its establishment.

Although Tlawi accommodates primary education for long, recent administrative split up of the village in three villages, resulted in inefficient and ineffective collective leadership to operate and manage the schools. At primary level it resulted in high level of truancy as leadership and management did not follow up parents adequately to send children to school, to have parents paying for books, to have parents contributing for the construction of teacher's houses, etc. The split of Tlawi resulted in a splitting up of and new installation of various coordination committees.

In 2010 the number of lower local government related committees (16), the number of civil society organisations (19) and the number of collective actions in the productive sector (15) are close to the average

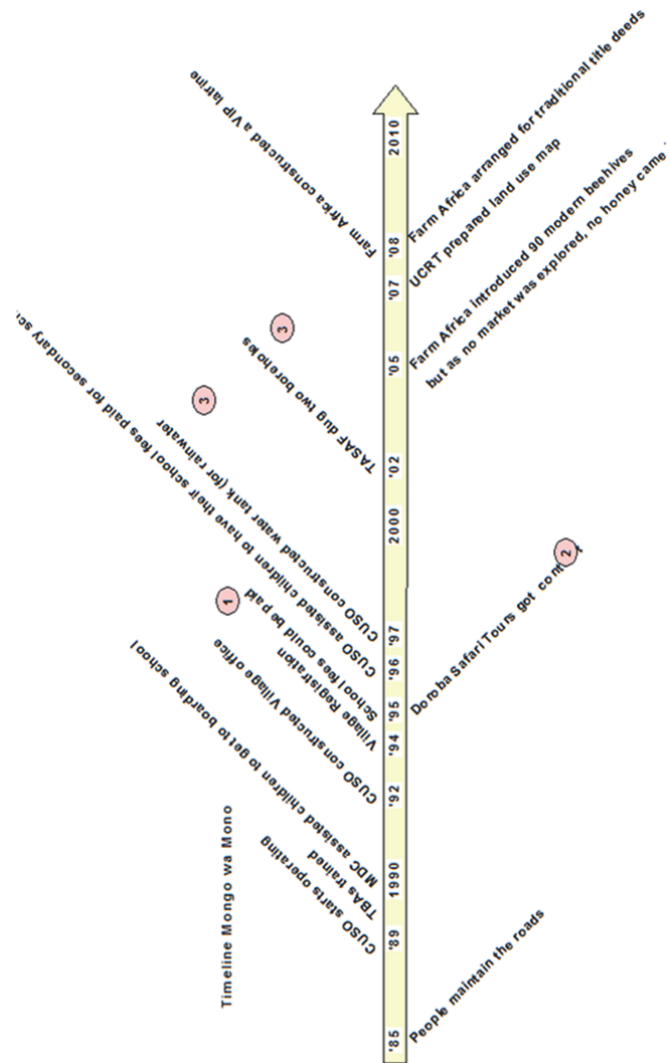
level. Coordination structures are there but necessary agency is not there to stimulate people to collect adequate funds and manpower to construct teachers' houses, to stimulate parents and village leaders to prevent truancy, to stimulate farmers to clean the irrigation channels and/or to collect adequate funds to pay the Mbulu District Council or private enterprise to construct rural water supply (boreholes). So far there is no consensus concerning the water distribution among the two villages Tlawi and the neighbouring Silaloda.

B.4 Mongo wa Moono village

In 1988 Mongo wa Moono has been described as an area of mainly hunters and gatherers (Hadzabe) and pastoralists (Barabaig), with no agricultural surplus. It is remotely situated along the Rift Valley (Yaeda Chini) (IRA, 1989). By that time Mongo wa Moono did not exist as a village yet, but was just part of Yaeda Chini that covered the whole valley. In the seventies under the ujamaa policy the Hadzabe were challenged to live close together to farm collectively, but they refused and got back to their way of hunting and gathering (Ndagala, 1985; Davis, 2011). People from other parts of the district (mainly Nyisanzu, Nyiramaba, Wairaqw) had entered the area and started cultivating. Nowadays Mongo wa Moono is a registered village in Yaeda Chini Ward, Haydom Division, Mbulu District.

The Hadzabe live in small camps together, look after each other's children and eat together what has been gathered. People move individualistic and not on basis of collective decision-making. Except opening up of the area by establishing a 'track', little has been done by the initial inhabitants of Mongo wa Moono than accepting support from outside. Initial support came from CUSO while afterwards Mbulu District Council gave support in training of traditional birth attendants and enabling children to get to boarding schools with a small scholarship. In 1992 CUSO assisted to have a village office constructed, while in 1994 Mongo wa Moono was registered as a separate village with a mixed population of hunters and gatherers (Hadzabe), pastoralists (Barabaig) and agriculturalists (Wairaqw and Wasukuma). The ordinary village governance structures were established gradually. In 1995 Safari Tour Companies contributed to the village whenever they took tourists to the area, so that the village had a source of income.

Figure B.4.1
Timeline Mongo wa Mono¹⁹



Source: Author

CUSO went on to support even children to get to secondary school, while water harvesting tanks were constructed and linked to the village office roof. TASAF supported with the drilling of boreholes. Farm Africa introduced 'modern bee hives', a VIP latrine and arranged for 'land titles'.

In reference to the components of the sustainable livelihoods framework, changes over time are described below.

B.4.1 Cultural capital

The Hadzabe community is egalitarian (Woodburn, 1981) and the Hadzabe move from place to place continuously to gather and hunt according to availability. They move as well to prevent conflict with others (Madsen, 2000). The percentage of heads of household born in the area (ward) is with 39% in 1988 and with 63% in 2010 far below the average.

The population composition in 1988 in Yaeda Chini has been different from the population composition in 2010 in Mongo wa Moono. In 1988 the population of Yaeda as represented by their heads of household existed of 28.1% Nyisanzu, 22.8% Hadzabe, 15.8 Nyiramba, 10.5% Wairaqw, 5.3% Barabaig, 3.5% Nyaturu and 14% others. At time of registration the Mongo wa Moono village statistics of 1994 indicate to accommodate 590 households with a total population of 3,958 (1,922 male and 2,036 female). By that time Mongo wa Moono counted 708 Hadzabe, 1,700 Wabarabaig (Wadatoga), 1,100 Wairaqw and 450 Wasukuma. while in 2010 the majority (84.4%) of the heads of households of Mongo wa Moono were called Hadzabe, as through intermarriage all people in the area considered themselves to be Hadzabe, if they were not Wairaqw. Straightforward comparison between Yaeda Chini in 1988 and Mongo wa Moono in 2010 therefore is less opportune.

B.4.2 Human capital

The Hadzabe have been accustomed to a direct and immediate return from their labour, which is different from those that depend on delayed return, as is the case with fishermen, pastoralists, agriculturalists or others that own property (Woodburn, 1981, 1988). In 1988 32% of the heads of household was born in the village, while in 2010 that was 41% of the heads of household. In 1988 the Hadzabe (which is 23% of the Mongo wa Moono research population) had not entered primary school yet. The Hadzabe just got their education to survive traditionally. That

time the level of education was low but in comparison not very different from to the rest of the district as people interviewed belonged to a major extent to the – that time – recently in-migrated people that got their education before moving into the area. In 2010 the research had been focussed more on the Hadzabe (by that time 84% of the research population) in Mongo wa Moono itself with 41% of the heads of households not having any form of formal education yet. That time 32% of the population indicated to have at least standard 7 educational level. The current chairman had been sponsored by CUSO up to Form 2, but when CUSO left, sponsorship stopped and there was no payment for further education. However, as formal education does not teach anything for the Hadzabe to survive in their area, education was not considered to have added value to someone's existence, which traditional education, given by parents and *mazee*, has.

B.4.3 Natural capital

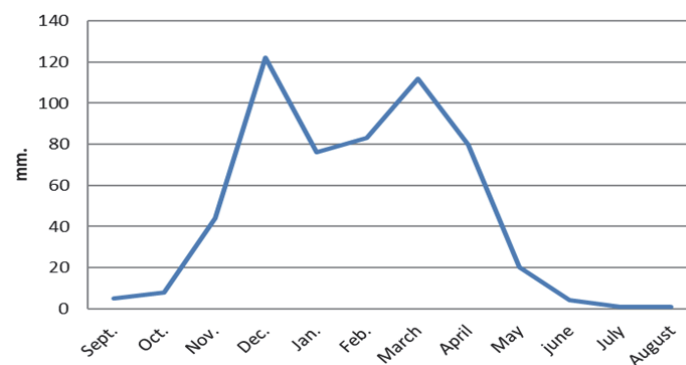
In 1988 one did not have access to land in a formal way, although in average one indicated to cultivate 3.9 acres of land. The land and all what it produced naturally belonged to the Hadzabe for their gathering and hunting practices. People did not invest at all than only their time at the moment of gathering and hunting. Although in 1988 Mongo wa Moono had an estimated surface of 600 km² at the time of official registration the surface area was measured as being 470.7 km², while thereafter the Hadzabe got about 200 km² under the Group Certificate of Customary Right of Occupancy (CCRO).²⁰ In 2008 the households in Mongo wa Moono got 'traditional' land titles which resulted in each household being entitled to 10 acres to 'survive', while the Hadzabe as hunter/ gatherer got access to more. In 2010 still 31% of the households indicated to 'survive' on hunting and gathering only, having no problem to access the necessary fruits and roots. Little space was left for pastoralists in the area. The planting season for most crops is from November to June with only *mangware* cultivation during February–June. See the local farming calendar below.

Farming calendar

Rained	Planting / Harvesting
Maize (<i>mahindi</i>)	November / June
Sorghum (<i>mtama</i>)	November / June
Mangware (kind of beans)	February / June
Pigeon / Cow peas / <i>Kunde</i>	November / June

Others indicated to grow maize (1.4 acre), sorghum (0.6 acre), pigeon peas (0.6 acre) and beans (0.4 acre), but production remained very low, because of low and unreliable rainfall.

Figure B.4.2
Mean annual rainfall in Yaeda Chini (556 mm)



Source: Magoggo (1995)

In the past there has never been a food shortage, as people always could get their food through hunting and gathering. Since they are 'forced' to cultivate as well, they become more dependent on rain and good harvest. In the recent years Mongo wa Moono has been affected more often with food shortages, the last one being in 2009 with the Mbulu District Council giving support of one *debbe* maize per household.

For the future the area is not sufficient for a hunter/gathering type of livelihood. Although the village has the right to allow or refuse new peo-

ple to come in, gradually people are ‘forced’ by circumstances to cultivate as well giving up their traditional lifestyle.

B.4.4 Physical capital

In 1985 people opened up the area to have a ‘track’ established that could be passed by 4WD, although in 1988 the village authorities indicated transport and availability of agriculture and livestock implements a key issue (Van Dijk, 1988). In 1992 a village office was constructed with foreign support. In 2010 transport still was mentioned to be an issue for the people, e.g. for the transportation of honey and bees wax.

Although since 1988 water supply has been mentioned by the village authorities as a key issue to look into, only in 1997 a rain water harvesting water tank was constructed with foreign support, which however, did not suffice. Boreholes have been dug of which only one operates. In 2010 water still has been mentioned as a key issue to address, but in 2013 piped water supply from Endellah (10 km distance) was constructed with support of the RC diocese from Mbulu.

Although one indicated in 1988 that primary education facilities were a main issue, only in 2009 one started the construction of a two-class primary school with two temporary teachers teaching, but such has not been registered yet. In 2010 the village authorities indicated education still as a major issue.

In 1988 and in 2010 the village authorities indicated the lack of a dispensary as a major felt need. Since 2013 the construction of a dispensary is on its way. A committee has been formed in which traditional birth attendants participate.

Eight kiosks have been spread over the area, while nearly everybody makes its own local brew. A milling machine is not available than in Yaeda on about 15 km distance.

Support has been given to spread 90 improved beehives over the area, but – so far – not in use as people were not able to find a market for bee products (honey, wax).

Among the Hadzabe households, individual physical capital hardly exists, than only what one made him/herself traditionally in terms of simple tools like bows, arrows, axes, pipes, etc. In comparison to Yaeda Chini in 1988 little seems to have changed in Mongo wa Moono in 2010. However, from a different perspective you may say that Mongo wa

Moono developed from a community of hunters and gatherers with hardly anything more than 'natural' tools in terms of bows, arrows and spears into a society that gradually gets into the 'money' economy and gets access to means of transport in terms of bicycles (25%) and oxcarts (3%), agricultural implements (ox-plough 15.6%), communication (radio 18.8% and mobile phones 9.4%) and hurricane lamps (9.4%).

B.4.5 Financial capital

Financial capital development is measured traditionally in terms of live-stock availability or nowadays in reference to households' expenditure level. Both measurements are not accurate. In addition, financial capital development can be measured in terms of capital development growth as well.

With the pastoralists roaming around both in the '80s as nowadays, the livestock population in Yaeda Valley/Mongo wa Moono is far above the average within the district. Where in the rest of the district the trend is that people get towards mixed farming (in average 54% of the households in Mbulu district) incorporating livestock in their farming system, in Mongo wa Moono only 12% of the households has livestock still. 2008 village statistics indicate that Mongo wa Moono accommodates 7,911 heads of cattle, 2,741 goats, 1,455 sheep and 929 donkeys. Most of them belong to the pastoralist Barabaig population in the area, some of them still having herds of 300 heads of cattle.

Petty business was – and is – a major source of income, as the Hadzabe have contracts with the tourism industry. Tourists have to pay the village government to enter the area. Men are hired as 'rangers' to guide tourists. Game meat is sold. Women try to sell their 'cultural ornaments' to tourists. People spend most of their income on food. There has been a slight increase in expenditure on education, but such has been negligible in comparison to the rest of the district. Although even in Mongo wa Moono the overall household expenditure has increased in absolute figures over time, it remained comparatively far behind to the rest of the district.

Financial capital development of Mongo wa Moono as a whole in terms of growth in the percentage of households owning specific physical capital comparatively to the growth in the total research area is seen over the period 1988 to 2010 through growth in owning ox-ploughs, bicycles, radios, hurricane lamps or corrugated iron sheets but remained far

behind the average growth in the research area. This actually means that the gap between Mongo wa Moono and the rest of the district became wider.

So far there is no micro-finance institution like a village community bank or savings and internal lending communities operating in the area, as what occurred in other villages.

B.4.6 Social capital

The Hadzabe are described as an egalitarian society in which no leadership exists and in which most action is taken on basis of individual action (Woodburn, 1979). Traditionally people live together in small camps of varying numbers but in average of 30 people without much hierarchy. From that perspective they live in a communal setting, looking after each other's children. Movement of camps depends on individual decisions and not on a decision of a leader or as the consequence of a joint decision by consensus. Men hunt individually or sometimes in pairs. The eating of part of the meat is done together. Women gather fruits, berries and tubers, mainly in small groups accompanied by their children (Marlowe, 2009). In case of sorrow and joy, people sit together to mourn or celebrate. Outside of that traditionally little is done collectively in larger groups as every camp goes for its own survival. Individuals constantly join and break away. Disputes – if any – are solved by self-segregation and attract hardly attention (Woodburn, *ibid*).

The Hadzabe have clearly defined gender roles, but women and men participate equally in decision-making. From early age both men and women have the skills and knowledge to get what one needs every day. For Hadzabe, it means that if somebody asks, one shares. It is not good to accumulate more than what one needs (Peterson, 2013).

From outside the Hadzabe one tried to transform the structures top-down since the early eighties as well. Government, church and other organisations tried to convince the Hadzabe to abandon their hunting and gathering lifestyle, to change towards agricultural production and to become sedentarized participants in national institutions.

The consequence of government attempts to settle Hadzabe, mainly resulted in non-Hadzabe to settle in the indicated areas with Hadzabe migrating to other places where they could sustain their own lifestyle

(Madsen, 2000). Among the Hadzabe collective action to enhance socio-economic development hardly exists.

B.4.7 Political capital

The Hadzabe are an egalitarian society in which one withdraws in case of conflict instead of seeking his/her right (Woodburn, 1981, 1988), political organisation has not developed. The Hadzabe don't recognize any leaders or any person as having more power or influence than others.

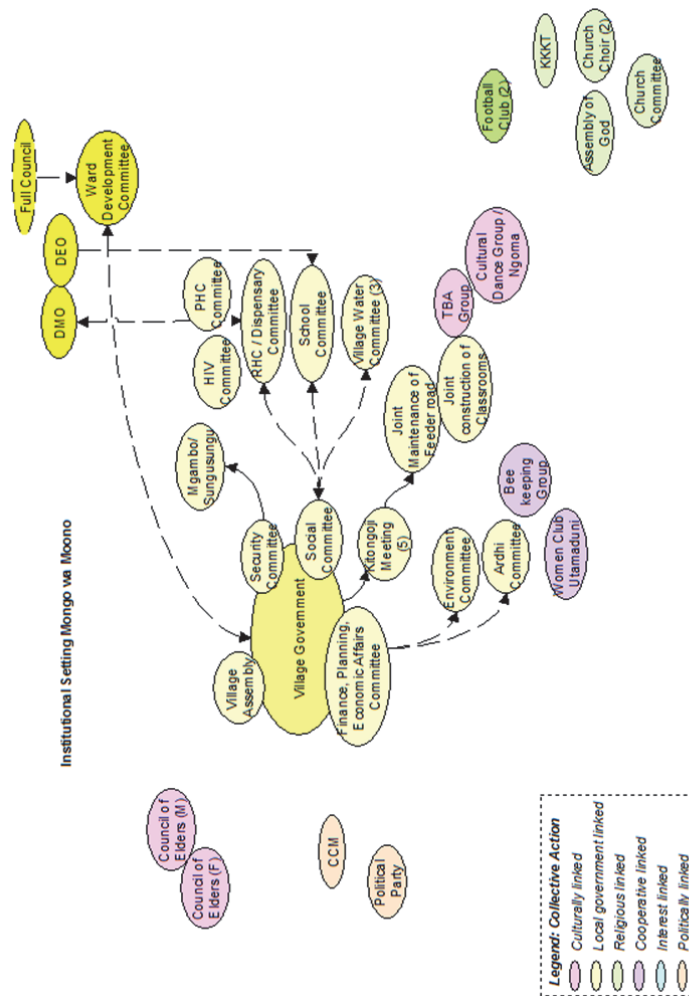
Among the Hadzabe, up to recently there has been hardly any political organisation to counter the interest of neighbouring communities (Madsen, 2000). Since short CCM has its representation in Mongo wa Moono, but such does not mean that Hadzabe interest is well vested in CCM. Other political parties are not represented yet. As indicated under social capital development collective action among the Hadzabe still needs to be developed to safeguard their collective interest.

B.4.8 Vulnerability context

The vulnerability context of Mongo wa Moono with its diminishing space and wild life habitat is coped with by people with low educational level, not being enhanced to change their culture of hunting and gathering. Shortage of land, pasture or fuelwood are hardly mentioned. Where people mention shortage of pasture it is because they realised that 'settlers' (i.e. people from surrounding areas) settle in Mongo wa Moono and start cultivating the land, which in the past belonged to hunters, gatherers and pastoralists. Destocking has been mentioned as a 'solution' and the percentage of people that keeps livestock has decreased. In 2010 shortage of water has been mentioned by half of the households. As rainfall in average is inadequate for maize cultivation and there is no potential for irrigation, food shortage is mentioned as a major problem for all those in Mongo wa Moono that are not used to hunting and gathering. The Hadzabe themselves, although practicing their lifestyle for ages, feel threatened as their area becomes inadequate to maintain their style of living and they are not educated (yet) to change.

All cooking, meat drying and lighting is done through use of available fuelwood. Nobody, so far, indicates to be concerned with fuelwood shortage. In 2010 over 80% of the households indicated to have access to plenty of fuelwood.

Figure B.4.3
Overview of current collective action in Mongo wa Moono



Source: Author

B.4.9 Transforming structures and processes

In reference to customary cultural, social and political capital and based on *existing* human, natural and financial capital Hadzabe people operate individually to cope with the given vulnerability context. Since its registration in 1994 gradually Mongo wa Moono got its local governance structures operational along with the statutory committees. However, some of them exist in theory, while in practice they do not operate. The traditional birth attendants group operates as group only when Haydom Hospital or Mbulu maternal and child health workers come for counseling sessions. The traditional birth attendants themselves operate individually. The Beekeeping group has been mentioned in reference to production as a group at the time the modern beehives were distributed, but it never operated as a group to have collected honey or bees wax transported to the market. See Figure B.4.3 for an overview of the current collective action in Mongo wa Moono

The Hadzabe lived for over 40,000 years in Yaeda valley (Marlowe, 2002) while only over the last 40 years part of their land is taken and other outside influences force them to cooperate. Traditionally the Hadzabe are used to an immediate return from their labour. Traditionally they mainly cooperate in sharing of game meat and collected food (fruits, berries, tubers) only. In case of conflict or disagreement one easily leaves the group to join another one. It still needs to be surveyed in which way the Hadzabe could be involved in collective action to address their vulnerability context. Indigenous collective action in reference to construction of socio-economic infrastructure does not exist yet, as such action is partly coordinated by the now educated village government leaders in conjunction with foreign financial, technical and even labour support.

Collective action and socio-economic infrastructure²¹

Since 1985 the population of Mongo wa Moono developed and maintained the access road. However, accessibility to Mongo wa Moono is difficult. In particular during the rainy season cars do not have access easily. The nearest bus transport can be found in Bashay, where 5 times a day a bus stops, and which is 24 km away. From there it is still 30 km to Mbulu.

The Mbulu District Council constructed a rural health centre in Yaeda Chini recently, which is not operational yet as there are no staff houses. Mother and child care is an issue.

A school has been constructed (2 class rooms) and a PTA has been formed. However, in 2010 there were only 2 temporary teachers. 90 pupils attend classes, while some others still go for boarding.

Collective action nowadays is planned in the period May to August as in other parts of the year one is busy to search around for food or honey. That period is indicated to be used for maintenance and construction of people's own houses as well.

Table B.4.1
Mongo wa Moono annual activity calendar

Activity	J	F	M	A	M	J	J	A	S	O	N	D
Preparation of <i>shamba</i> (ploughing)	✓	✓									✓	✓
Sowing	✓	✓										
Weeding	✓	✓	✓									
Harvesting					✓	✓	✓					
Storing of harvest							✓	✓	✓			
Road maintenance					✓	✓						
Construction of classrooms					✓	✓	✓	✓				
<i>Utoaji chanjo</i> ya livestock					✓	✓	✓					
Looking for food for human being and livestock					✓	✓	✓	✓	✓	✓	✓	✓
.... <i>futaji</i> wa food	✓	✓	✓	✓								
Maintenance of houses, toilets, etc.					✓	✓	✓	✓				
Evaluation of implementation					✓	✓						
Preparation village plan					✓	✓						

Source: Village Office Mongo wa Moono (2012)

During the rainy season people and livestock get water from the river, which generally is not clean and safe. In 1996 CUSO assisted with the construction of a water tank for water harvesting at the village office. In addition, four shallow wells have been constructed over a distance of 30 km. They are far away of the majority of the people, but are the source of water during the dry season. TASAF constructed 2 wells, one in Mongo wa Moono that operated from 2001 up to 2005 only, when it dried up; and one in Endangegi that still operates. NCA and Haydom Mission dug up to 95 metres but did not find water. There are plans to construct a dam for water harvesting. Through support of the Mbulu RC Diocese casual labour among the local population has been organised on basis of 'food for work' for the pipe laying for water supply. The 10 km long piped water supply from Endellah has been dug in by 'voluntary action' of about 270 people. For the operation and maintenance of the water

scheme some people volunteered to start a water committee, but no registration or vision/mission statement has been accomplished.

The same is valid for the people that intend to operate as the school committee or the health committee. Both have not registered yet and both do not have a vision/mission. The health committee intends to keep the dispensary clean when it is accomplished.

In order of priority the village indicates that water, education, health care, cattle dipping and transport are key issues that one needs to address.

Collective action and civil society

The training of traditional birth attendants has been one of the first activities the Mbulu District Council got involved in to support the people of Mongo wa Moono. Traditional midwife experiences were shared with 'modern' experiences, mainly in order to improve hygiene at the time of delivery.

Three churches (TAG, KKKT and RC) operate in the area.

Since 1990 the Mbulu District Council paid school fees for a number of children to go to boarding school as there was no school in Mongo wa Moono. The income, Mongo wa Moono raised through taxing safari tours in the area since 1995, has been used too to pay school fees for Hadzabe children and youngsters to go to school. Since 2010 a primary school is operational in Mongo wa Moono and the Mbulu District Council support for scholarships outside of Mongo wa Moono has stopped.

CUSO assisted children to have their school fees paid for secondary school, which they did up to 1999 when CUSO withdrew. Nowadays one is not able any longer to be in touch with CUSO.

Pastoralists indigenous NGO's (PINGO) and Farm Africa operate in Mongo wa Moono as well. In 2008 Farm Africa constructed a VIP latrine and arranged for traditional land titles.

Collective action and production

Social capital to enhance production or economic performance operated up to 1988/89 as primary society Dambiya AR 84, including the villages Dirim and Yaeda Chini. By that time Mongo wa Moono had not been registered yet, neither did it produce for the market.

Since 1995 Dorobo Safari Tours got a contract and paid US\$ 26 per tourist visiting the area. The village government received that money and spent it on development of socio-economic infrastructure. Through tourism, men were able to assist in scouting (or hunting), while women tried to sell their *utamaduni*. Village Game Scouts (20) operate as volunteers in cooperation with the members of the Village Environmental Committee and sometimes to guide tourists that visit the area. Communication structures had to be developed among the Hadzabe to distribute such income over specific development interventions.

For ages the Hadzabe have consumed wild honey. Bee hives have been introduced in the early '90s to enable Hadzabe to produce bee products. Improved beekeeping has been introduced since the early 90's. Support was given through the Arusha Beekeepers Association (ABA), but financial accountability, management and control were inadequate and did not succeed to have the Hadzabe becoming productive for the market (Madsen, 2000). More recently in 2005 Farm Africa did so again. Bee keeping groups were formed, but they actually did not produce for and connect to the market to sell their honey and bees wax, so they do not really have an income. Transport is an issue. Over 90 beehives are in production. Honey however is used by nearly every household to make local brew for own consumption, but not for commercial purposes. Beer brewing is done by Hadzabe, Barabaig and Wairaqw. So, in practice whatever has been produced is consumed locally as well, but there has been no collective action yet towards the market.

Some women do make *utamaduni* which are assumed traditional ornaments of beads that have been introduced by the tourism industry for people to make some income from visiting tourists, but there is hardly any market.

All over the area 8 kiosks operate. A private milling machine operates in Endangegi. To reach the market one needs to go to Yaeda Chini or Dirim

Local institutional embedding

In 1989 CUSO started assisting the Hadzabe community in Mongo wa Moono and consequently supported building their village office in 1992, after which the village has registered in 1994 and as a Hadzabe community got its land title for 47,070 hectares. From that day onwards, it was able to accept or refuse people to settle in the area. Before that time, it

did not have the authority to do so, with the consequence that many people from different ethnicity settled in the area, threatening the Hadzabe hunting and gathering life style. In 2007 Ujamaa Community Resource Trust (UCRT) assisted to make a cultural land use map of the area. In 2008 individual households got 'traditional' land titles of 10 acres per household, although Hadzabe people may use more.

Besides the village executive officer and community development officer which are based locally, Mongo wa Moono is served by ward-based agriculture and livestock officers from Yaeda Chini. All planning is done in cooperation with Mbulu District Council.

B.4.10 Livelihood strategies

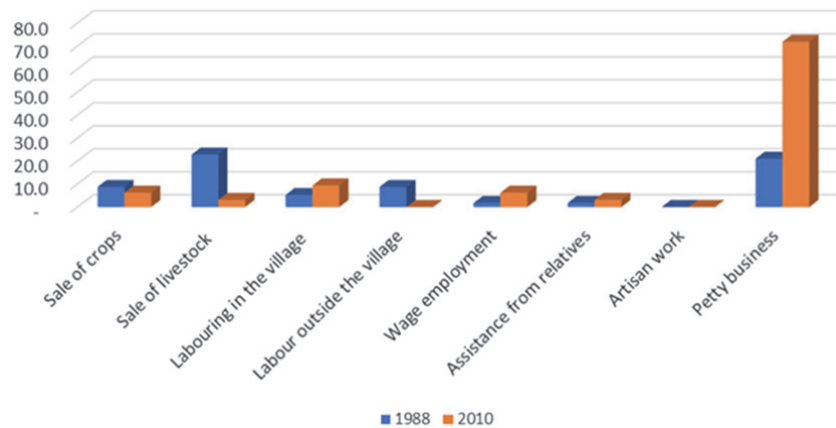
The Hadzabe still move around to find their resources to survive. One hardly stays in permanent houses. In 1988 only 32% of the heads of household was born in the village, while that percentage was 40% in 2010.

In 1988 hardly anybody travelled outside of the village, just like in other villages. In 2010, of only 25% of the households at least one household member travelled more than once. That 25% is still far below the average of 67% of the households in the total research area that have at least one member travelling outside of the village in 2010.

Key strategy to gain income has been to reflect on the opportunity of tourists entering the area, on which basis their village leaders agreed that since 1995 every tourist should pay US\$ 26 entering the area. Money that is handed over to the village government. Hadzabe themselves operate as game scout to guide tourist through the area. Although business is not seen as an important economic activity, 72% of the households indicate that their major source of income is coming from petty business as mentioned in Figure B.4.4

Potential beekeeping and business in bees' products like honey and bees wax has not been materialised as people did not overcome the perceived constraints of getting to the market. To invest labour and time to gain potential benefit at a much later stage is – as I conclude – still something outside the current livelihood of the hunter and gatherer (Woodburn, 1988).

Figure B.4.4
Main source of income of Mongo wa Moono households in 1988 and 2010

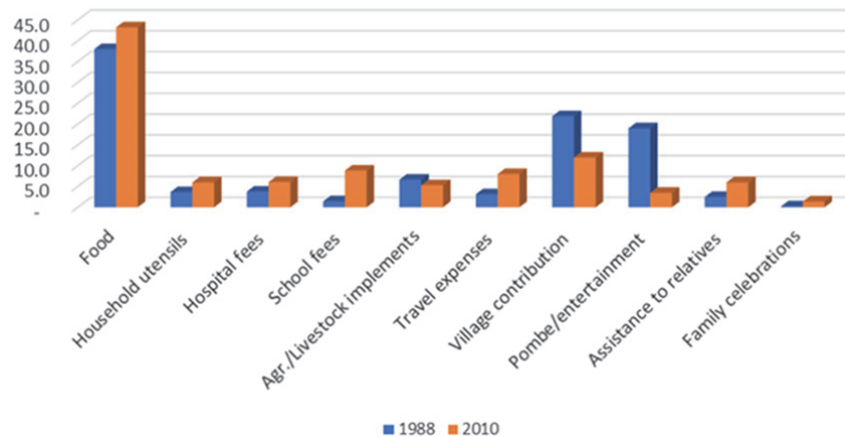


Source: Author

The household expenditure pattern has not changed much over time. See Figure B.4.5. Village contribution and beer drinking has decreased, while expenditure on education has increased. People relatively spend quite some money on food, which over time even increases, as one still cultivates little food themselves and – at the same time – spend less time on ‘hunting and gathering’ which is supposed to take care for their daily food supply.

People that remained within the area indicated not to have changed their livelihood strategy, but little is known of the people that left the area, as they fell outside the 2010 survey sample. Except some of the current village leaders, the educated ones did not return to Mongo wa Moono. People themselves are not really in the process of developing livelihood strategies to have their situation changed. The change of diminishing space for the traditional lifestyle to proceed will ultimately force people to develop livelihood strategies to survive. During the last few years, people cooperated to construct some socio-economic infrastructure. Two classrooms have been constructed. Piped water supply has been arranged. A dispensary is under construction. At this stage it is too early to conclude whether the leadership is able to manage the assumed social services delivery.

Figure B.4.5
Household expenditure in 4 weeks before the survey in percentages²²



Source: Author

B.4.11 Livelihood outcomes

Petty business from tourism has become a major source of income, but in all aspects of life the households in Mongo wa Moono are among those with minor income/expenditure and little property, which by the Hadzabe themselves has not been mentioned as poverty. As being hunter and gatherer, little has changed and outside of the external influences little endogenous action has been undertaken to change their situation. Traditional education, together with an economy of immediate return, without much individual interest to invest for delayed return and without leadership to operate from such vision to guide people e.g. towards the construction of socio-economic infrastructure, by itself does not enhance change. Income, well-being, vulnerability, food security and sustainable use of natural resources remain stable along the traditional existing lifestyle among the Hadzabe as long as such is not threatened by inadequate institutional safeguarding.

B.4.12 Summary

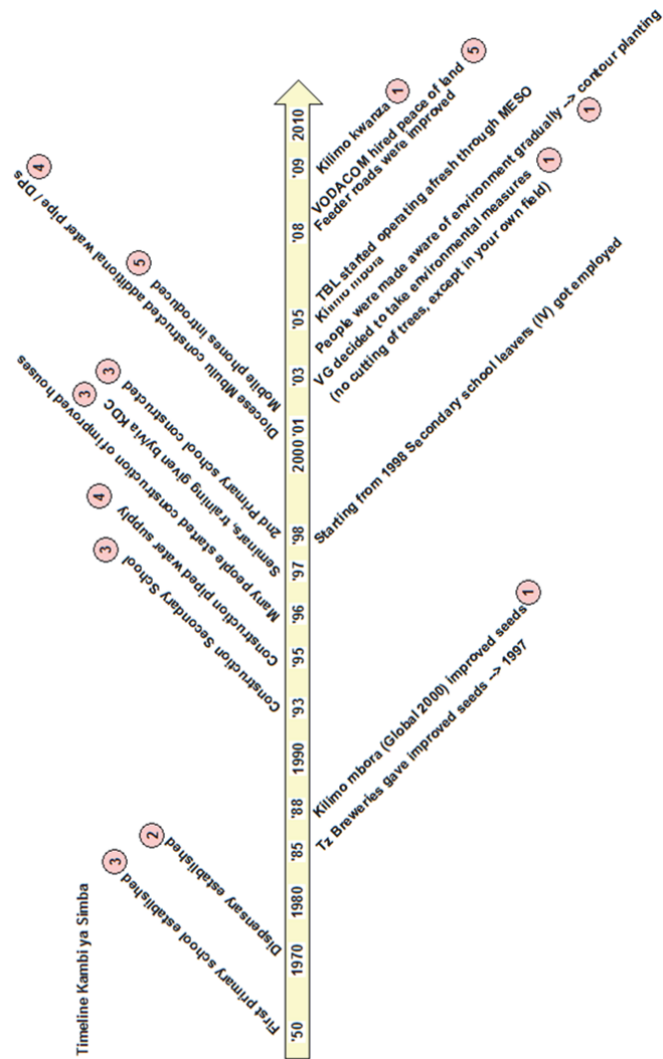
The initial conditions in Mongo wa Moono are described in terms of the Hadzabe living their hunter-gatherer way in that area for ages. They are

not settling. They do not cultivate. Collective action takes place after hunting in case food is to be shared. In case of any disagreement one just separates. The access road enabled migrants, NGO and private sector to access the area. Actual registration of the village took place in 1994 only. Such institutionalisation was a condition to provide a land title to the Hadzabe community to safeguard their lifestyle. The mainly Mwiraqwa migrants introduced their own cultivation culture, simultaneously jeopardising the hunter-gatherer lifestyle of the original Hadzabe. As the hunter-gatherer lifestyle does not invest in collective action to gain long term benefits there are no examples of bottom-up collective action as only food sharing. Top-down introduced governance seems to be executed by NGO supported externally educated Hadzabe, while top down introduced collective action in honey export did not materialise. In 2010 a primary school got under construction together with a maternal and child health clinic. However, no information is available concerning their management. Although the number of lower local government related committees (16) is on average level, the number of civil society organisations (12) and the number of collective actions in the productive sector (4) are far below the average level. The productive groups actually do not function. Government coordination structures are there but hardly function, just like the related civil society coordination mechanisms. Local population does not show much interest to gather local resources to have socio-economic infrastructure established.

B.5 Buger village

Buger has been registered as village in 1976. In 1988 Buger has been described as an area with moderate agricultural surplus, but inaccessible throughout the year due to the poor state of the road (IRA, 1989). It is situated about 15 km East from Endabash in between Mbulu and Karatu. By that time, it was situated in Kansay ward, Daudi division, Mbulu district, while currently it is situated in Buger ward, Endabash division, Karatu district. Administrative boundaries have been adjusted on district, division and ward level.

Figure B.5.1
Timeline Buge²³



Source: Author

The establishment of a primary school in 1953 and a second one in 2004 have been indicated as important development interventions together with the construction of a secondary school in 2006. The opening up of the area with road works, and the construction of a *ghala* (godown) in the late eighties, have been mentioned as important development interventions as well. The first village shop opened in 1990, and the first private shop has been established in 1995, while in 2010 about 20 private kiosks, 2 pubs, 7 *mgahawas*, a butcher and 8 tailors operate in Buger. In 1993 a village nursery was established which has been privatised in 2004 as people were concerned with the environment.

With reference to the components of the sustainable livelihoods framework changes over time are described below.

B.5.1 Cultural capital

With 100% of the population being *Mwiraqw* those traditions exist in Buger as well. Just like in the other areas where generations lived for some time, agricultural practices, animal husbandry, environmental control on the slopes, cultural dances, norms and values, feelings of togetherness, cooperation and social control are aspects of life that in first instance are taught and maintained through traditional family and clan upbringing. The council of elders guides the development process as in *Mama Issara* (Thornton 1980, Snyder 2005).

B.5.2 Human capital

The number of households grew from 402 in 1988 up to 630 in 2010 with an average household size growth from 6.4 in 1988 up to 6.8 in 2010 with a nearly steady m/f ratio of about 120, and a nearly steady working age population of about 51% as percentage of the total population. Nearly the whole population has been *Mwiraqw* over time. In 1988 68% of the heads of household was born in the village, while in 2010 that was 89% of the heads of household. In comparison to the total research area Buger is described as a rather closed society.

A key issue in human capital development is the change in educational level. In 1988 29% of the population and 24% of the heads of household had at least standard seven qualification, while in 2010 those percentages were 50% and 80% respectively. In the past adult education played a major role, while current generation of heads of household did not mention such education as being their only source of education at

all. In the past one third of the heads of household indicated not to have any formal education, while that is negligible among the current heads of households. The percentage of the population that indicates itself as 'being educated', rose from 49% in 1988 to 72% of the population in 2010 and remained in line with the average level in the district.

B.5.3 Natural capital

In 1988 the average household land size has been just below 3 acres, while in 2010 that was reduced to just over 2 acres. People indicated that population growth caused sharing of available land over more households. The land of the parents is distributed over the children that remain in the village, but an unknown percentage of the people has migrated to other areas as well. One owns the land on basis of customary rights.

Over time there has been a shift in natural resource use from more households (56%) concentrating on agricultural activities only in 1988 up to a majority of households (74%) practicing mixed farming in 2010, combining it with livestock keeping, while only 22% of the households is cultivating only. The average land size per household is slightly decreasing, but the average maize harvest has more than doubled from 7 to 17 bags per acre. This means that in 1988 the maize production equalled the average production, while in 2010 farmers in Buger produced substantially more than the average of 13 bags per acre. The average yield of beans has increased as well from 2 to 3 bags per acre, which in 1988 was one bag below the average, while in 2010 it was above the average (but still below the average of Karatu sample). Beans are intercropped with maize and the yield figures are guestimates of the heads of household themselves. Vegetables and onions are grown through use of irrigation by water can. Beans are grown twice a year. Mixed farming became more dominant. Intercropping became a custom.

Farming calendar

Rainfed ²⁴	Planting / Harvesting
Maize (<i>mahindi</i>)	December / July - August
Beans (<i>maharage</i>)	November / February & April / August
Mbaazi	December / October
Wheat (<i>ngano</i>)	April / August
Sunflower	December / April

The number of households with livestock has grown over time. The average number of cows per household has diminished from 27 in 1988 up to 6 in 2010, while the average number of goats per household has increased from 2.1 to 3.8 and the average number of sheep per household increased slightly from 1.2 to 1.6. In 1988 for half of the population pasture has not been an issue, as it was just plenty available, while in 2010, only 7% of the households indicated to have access to just enough pasture and 69% of the households indicated not having sufficient pasture. Outmigration (19%), individual pasture development (19%) and destocking (15%) have been mentioned as solution for inadequate pastures.

Although the villagers decided to start a village nursery in the early '90s and the village has a 16 acres plot of trees up to date, in 2004 the nursery was privatised and people do grow a variety of trees individually: both for fruit, fuelwood, poles and timber production. About 100% of the cooking, 100% of the meat drying and 100% of the burning of bricks is based on the use of natural capital in the form of available fuelwood.

B.5.4 Physical capital

The primary school was established in 1953. At the same time, one started digging wells. A channel has been dug from the forest to have cattle supplied with water. Road works started in 1985, while in 1988 the village authorities indicated that the road and bridge connection was the major constraint (Van Dijk, 1988). Despite the continuing road works up to now Buger is difficult to reach still in April/May during the rainy season. In 1988 the village authorities indicated that having no dispensary was felt a major constraint as well. In 1995, an airstrip was been constructed to enable maternal and child health staff to travel by plane from the Haydom Lutheran Hospital and land in Buger, but in 2010 the village authorities remained indicating the felt need of a dispensary. In 1989 a godown has been constructed. In 1990 a village shop started, while private shops started operating since 1995. A village maize mill started operating since 1999, while in 2007 a private maize mill started operating.

In 2004 a second primary school was constructed and in 2006 a secondary school. Nowadays Buger has 10 teacher houses, but that is an insufficient number to satisfy the need and the village authorities indicated the few classes and teacher's houses being a problem. This – and the

fact that Karatu is far and transport is poor to get salary paid – means that teachers are not eager to stay in Buger.

In 2010 Buger accommodated 2 shops, 20 kiosks, 2 local pubs, 8 tailors, 1 butcher, 7 *mgabawa* that make cake, 10 carpenters, a (private) milling machine, a cattle dip, a godown and a market in Endabash. Once a day, a small bus service (*daladala*) operates between Buger and Endabash/Karatu.

From 1988 towards 2010 individual households gained physical capital in average in terms of ownership of ox-carts (from 5% to 14%), ox-ploughs (from 34% to 46%), bicycles (from 2% to 65%), radios (from 12% to 67%), hurricane lamps (from 27% to 65%), mobile phones (from 0% to 60%) and houses with corrugated iron sheets (from 7% to 58%). Few people have access to solar (5 households) or generator (8 households) operated energy.

B.5.5 Financial capital

Financial capital development is measured traditionally in terms of livestock availability or in financial terms in reference to households' expenditure level, although both measurements are not accurate. In addition, financial capital development can be measured in terms of capital development growth as well.

Livestock availability among those households that keep livestock within the area has reduced significantly, while figures of those that took their cattle outside of the area to find pasture are not known. Therefore, pasture unavailability and changing animal husbandry practices from 'grazing in the commons' to 'individual zero grazing' disqualifies the number of livestock as measurement of financial capital.

Financial capital development in terms of household expenditure level could be a proxy indicator for financial capital development. Households' financial capital in 1988 is far below the average within the district (less than 50%) but grows much faster comparatively to the average growth in Karatu, which grows faster again than the national growth. In 2010 the average four-week expenditure overview for Buger households as proxy indicator for the household income level has grown just above the average of current Mbulu district, but remains far behind the average of the current Karatu district with about only 60% of the average household expenditure in Karatu.

Financial capital development of the village as a whole in terms of growth in the percentage of households owning specific physical capital comparatively to the growth in the total research area is seen over the period 1988 to 2010 through the percentage owning ox-ploughs (Buger growth of 1.36% vs. the average growth of 1.32%), owning bicycles (Buger growth of 38.47% vs. the average growth of 10.75%), radios (Buger growth of 5.66% vs. the average growth of 2.96%), owning hurricane lamps (Buger growth of 2.41% vs. the average growth of 1.75%) or owning corrugated iron sheets (Buger growth of 8.49% vs. the average growth of 2.75%).

Access to financial capital has grown with the establishment of the savings and internal lending communities and village community banks since 2009. The roughly 30 village community bank members per group contributed first Tsh. 500, but nowadays Tsh. 1,500 weekly to the own group funds, on which basis one is able to get access to a short-term loan of maximum three times the amount than one has brought in so far, to initiate a profit-making undertaking. One has to repay the loan in 3 months with an interest of 10%.

B.5.6 Social capital

Norms and values and nearly all aspects of life are governed and maintained through the council of elders, despite the fact that formal governance takes place through the village government structure. Traditional leaders guide the elected leaders informally.

The traditional birth attendances are organised as well in the sense that they exchange experience and work together in small groups in case one need to attend birth. They are not registered and do not have any written documentation, but they are linked to maternal and child health services to get extension on hygiene and what to do in case of 'emergencies'.

The *ngoma* is another form of traditional social capital that accompanies all cultural, government or other feasts or treats, while the *mgambo* does that to safeguard security in the area.

Buger started with a village shop in 1990, but a few years later people started private shops. In 1993 the village started a village nursery, while since 2004 people raise seedlings for sale through collective action with external NGO support. The same NGO supported people to raise im-

proved chicken, to raise improved pigs and to operate modern beehives. The collective action mainly focuses on the transport of the matured chicken and pigs or honey to the market. In 1999 the village started operating a maize mill, while in 2007 private maize mills became operational.

B.5.7 Political capital

Although both CCM and Chadema operate in Buger, the majority of the village council is formed by CCM. Within the ward during the last elections of 2010 the majority of the people (66%) voted for CCM with 34% for Chadema. However, there is hardly a political discussion going on at village level. The power is vested in the traditional decision-making by consensus.

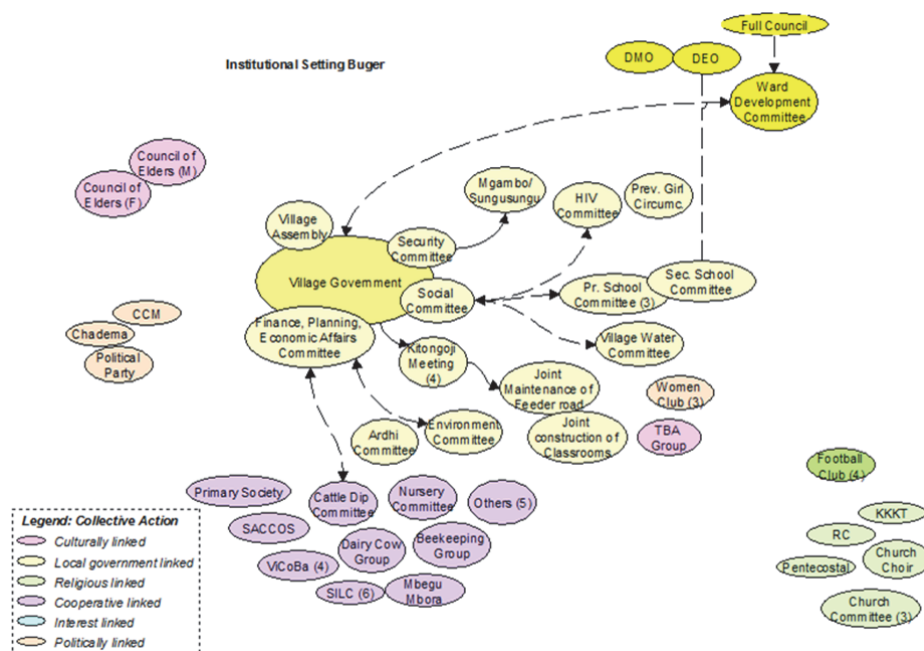
B.5.8 Vulnerability context

Land shortage grows, as such is mentioned by 12% of the households in 1988 and by 27% of the households in 2010. In 2010 94% of the heads of household indicated to have inadequate land for agricultural production. Despite the enormous livestock reduction households indicate an increasing shortage of pasture. In 2010 59% of the households indicate to have inadequate land for pasture development. Despite the well-functioning dip, 59% of the households indicate 'animal diseases' as a major problem. Fuelwood shortage has been indicated as another issue related to Buger's vulnerability context. In 1988 only 19% of the households indicated to face fuelwood shortage. People became aware of the deterioration of their environment. In the early nineties the village decided to have a village nursery to raise trees for fuelwood, poles, fruits and timber. In 2004 the nursery was privatised. In 2010 81% of the households indicated to face a shortage of fuelwood. In 1988 98% of the households used fuelwood for cooking and 53% for lighting. In 2010 91% of the households used fuelwood for cooking while only 4% used it for lighting. For lighting 92% of the households used kerosene. 7 households started using solar for lighting and 8 people operate their own generator. To ensure future availability of fuelwood and timber people have established private nurseries and plant trees on their own plots. The village has a plot of 16 acres with trees planted as well, which one harvests collectively. Tree planting and taking care of the environment goes together with timber harvesting.

B.5.9 Transforming structures and processes

In reference to current cultural, social and political capital and based on available human, natural and financial capital after some first collective undertaking, people operate individually to cope with the given vulnerability context. All local governance structures are in place and operational. Traditional *Mwiraqwa* decision-making guides the governance decision-making informally.

Figure B.5.2
Overview of current Collective Action in Buger



Source: Author

The Local Government Act (1982) describes the functioning of the village assembly, village government and its standing committees, while in addition the village government appointed an *ardhi* (lands) committee,

an environmental committee, an HIV/AIDS committee and a committee to prevent girls' circumcision. Although independent, the primary school committee and the secondary school committee have strong links with the village government as well. The secondary school has been built on the original village shamba, with the remaining part rented out to individual farmers. Buger has a cattle dip committee that operates independent to ensure that the dip is well managed and people pay for the dipping. The *kitongoji* is part of the formal local government structure, which means that the chairperson has been elected and the other *kitongoji* members have been appointed (by the chair). The chair represents the *kitongoji* in the village government and the village government in the *kitongoji*.²⁵

The coordinating structure within Buger is mainly formed by the village assembly and village government but does not raise adequate funds to develop the necessary socio-economic infrastructure on its own, neither is it able to secure adequate resources from elsewhere to fill that gap. Local governance structures were not able to raise sufficient funds having socio-economic infrastructure adequately operational and maintained, even though e.g. the individual households spend nowadays percentage-wise more money on education than they did in the past. Initial village initiatives are all privatised in a short while. The village shop, the village nursery and the village maize mill have been privatised after some time. The cattle dip has been privatised as well but taken over by a group of people as a joint undertaking. See figure B.5.2 for an overview of the current collective action in Buger.

Collective action and socio-economic infrastructure

The village government sees the organisation of getting the crops to the market for achieving a good price through the construction of storage capacity and the road works as of utmost importance for local economic development.

Village road works take place since the mid-eighties, but in April / May it is still difficult to reach Buger. The rest of the year one *daladala* per day is going to and fro Buger. The maintenance of the road is organised and supervised by the village government.

Buger counts a village *godown* which has been constructed collectively in 1989. The village office is situated in the *godown* as well.

Water is mainly used through open wells, spring and the river, which means that water is not safe and clean. Spring and river dry up during the dry season. The digging of wells started in the early fifties and continues up to date. The wells have water throughout the year. The well water is even used for simple irrigation of vegetable and onion cultivation by watering through the water can. A small channel has been dug from the forest to have water for livestock.

In 2005 Canadian Physicians for Aid and Relief (CPAR) assisted in the construction of a water tank for the first primary school.

The Department of Water has been requested to search for water. The survey has been conducted for a borehole. Now the village has to pay Tsh. 5 mln. in advance for the investment but there is no clarity yet of the total investment necessary.

In 1995 an airstrip was constructed for maternal and child health/MAF services to come from Haydom to Buger monthly, which up to today is an ongoing service. People collect money for maternal and child health services. The village is in the process of planning to construct a dispensary. People find it difficult to collect adequate funds for the construction of a dispensary.

In 1988 a minority of 21% of the cattle owners used the cattle dip which that time was under management of the livestock department. In 2010 a majority of 90% of the livestock farmers used the dip. Nowadays the dip is managed collectively by a group of livestock keepers on behalf of the village government. In 2010 one paid Tsh. 100 to Tsh. 125 per head of cattle which for the last 25 years kept track of the national inflation figures. The cattle dip is in good condition and people bring their livestock about twice a month for dipping.

Collective action and civil society

Despite the existence of the school committees it is difficult for Buger to organise themselves to have adequate funds raised to procure books and/or to construct teachers' houses with the consequence that it is difficult to attract teachers to live and teach in Buger.

Collection of sand, stones, aggregate and water as building material for the construction has never been a problem. Just like in the past the construction and maintenance of the road, the construction of a *godown* and the digging of the channel for livestock drinking, self-help labour is

easily to be organised, mainly through the *vitongonji*, as long as financial support is given by the district council or others.

In addition to the collection of stones, aggregate, sand and water as building materials for the construction, one does pay Tsh. 20,000. Under supervision of the village government one burns bricks. Additional support is requested from the Mbulu District Council through the Village Development Plan.

Buger counts more than 4 church communities: KKKKT, RC, Sabbatical and various Pentecostal churches. It has 3 church choirs that mainly operate during the church services.

There is no dispensary in Buger, but one has to travel to Endabash on a distance of 15 km.

Collective action and production

Social capital to enhance production or economic performance operated up to 1988/89 as primary society Ng'aydady (4049), including the villages Kansay, Laja, Buger, and Kambi Faru, which that time were situated in Endagikot division in Mbulu district, but which nowadays are part of Karatu district. Since the liberalisation of the primary societies and its free membership, collective action to enhance production has not materialised again than up to the establishment of REDECO in 2011 (20 women that sell bananas and oranges in Endabash). Women make the famous Mbulu mats (*mikeke*) and one cooperates in selling each other's products on the market, without actually organising collective action.

In 1999 the village started a maize mill which operated up to 2007 when it broke down. From that time onwards, a private maize mill operated in Buger.

Since 2004 Canadian Physicians for Aid and Relief (CPAR) assist in raising improved chicken, introduction of modern beehives, and raising tree seedlings (4) for groups.

The village farm has been used to construct the secondary school, while the remaining 10 acres have been rented out to individual farmers.

Collective action is mainly seen in the form of savings and credit organisations like savings and internal lending communities (6), village community banks (4), REDECO (1) and Kilimo Mboga (1) through which one has access to small loans. All groups operate well by themselves and their members are involved in small entrepreneurial activities

successfully. In average mixed groups of about 30 women and men contribute weekly to the funds and are allowed to ask for a loan that is about three times the amount that they have handed in. Members get involved in small businesses in terms of sales of eggs, maize, pigs or seedlings that are locally raised or bought and either stored for some time or transported to Karatu or Arusha for sales at a higher price, after which the loan within three to six months is repaid with interest. Some examples were presented during a focussed discussion with 12 representatives of above-mentioned savings – and credit organisations as follows:²⁶

- Loan Tsh. 150,000. Eggs purchased for Tsh. 200, sold for Tsh. 300
200 eggs per time, 2 to 3 x per month, i.e. Tsh. 40,000 → Tsh. 60,000
Over 3 months → Tsh. 75,000 (minus interest Tsh. 15,000 and transport Tsh. 10,000)
- At harvest time Tsh. 36,000 paid for one bag of maize
3 months later → Tsh. 48,000 per bag → Tsh. 75,000
- *Ngurumu* Tsh. 70,000 to Tsh. 80,000
Sold in Arusha for Tsh. 110,000 to Tsh. 120,000
Profit Tsh. 40,000 (Transport is Tsh. 5,000)
I do pigs 5 at a time
Together we transport about 95 pigs at a time (but everybody sells his/her own pigs (and not necessary everybody is member of the same savings and internal lending communities))

It is only since 2009 that such organisations have been established. Each organisation stands on its own. In case there are delays in repaying the loan the chairperson calls people that did not pay and indicates that interest is increased. S/he advises his/her friends should assist timely repay of the loan, while in the end assets are taken from the one that does not repay his/her loan timely (those assets have been indicated in the request as pledge for the loan will be taken away). The savings and internal lending communities so far keep their money in a 'strong box' in the village, while the village community bank uses such a box besides a banking account at Karatu.

So far, there is little interaction in between the individual savings and credit groups, besides that the savings and internal lending communities groups together pay the savings and internal lending communities teacher that coaches the groups in the village.

Local institutional embedding

Buger has 2 primary schools with respectively 733 and 456 pupils being taught by respectively 12 and 8 teachers. It has a secondary school with 205 pupils taught by 3 teachers and 5 volunteers. It has insufficient number of teachers and only 10 teacher's houses. Teachers have been requested through Ward Education Coordinator and DEO, but they seem not to be interested in coming to Buger as there is no transport and it is far (distance to Karatu is 36km) to get salary paid. Except educational staff and the village executive officer, all other government staff like agriculture and livestock officer, forestry officer and community development officer are based at ward level in Endabash. A voluntarily health officer operates in Buger.

The micro-finance groups like savings and internal lending communities, village community banks and savings and credit cooperative societies operate well but do not cooperate together. They all function on their own as individual groups. In a similar way the school committees operate on their own. In addition, people cooperate to transport 'Mbulu mats', chicken, pigs and honey to the market. Some people cooperate to raise seedlings and sell them as a joint undertaking.

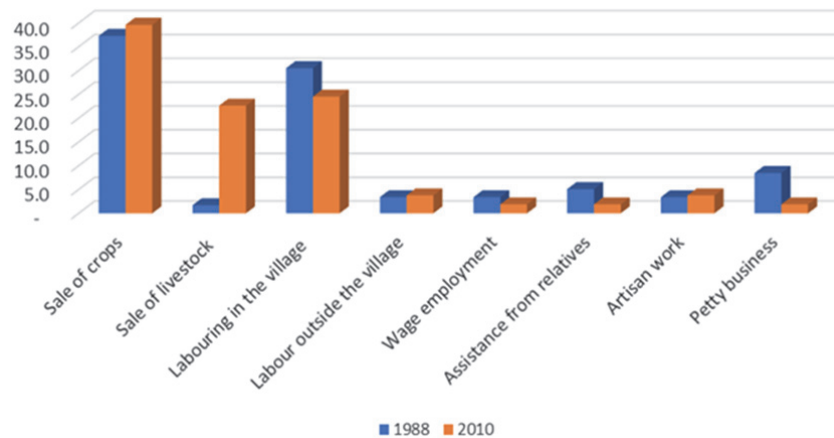
B.5.10 Livelihood strategies

Before the '80s people moved into the Buger area much more than in current days when nearly the whole population was born in the area and had not changed residence. Where people in the past just lived in their area and – besides the migration – hardly travelled, in 2010 there is much more mobility among people and from about 75% of the households, members travelled outside the village.

Sale of crops has remained the major source of income for about 38% of the households. Percentage-wise 'labouring in the village' as major source of income has slightly decreased but with 25% in 2010 remained on the second place. The growing population resulted in average in smaller plots per household. Former pastoral land has been cultivated. Therefore, less land has become available for pastoral use. Consequently, another major change is household's destocking, or for some of the households their outmigration to places where their livestock could get pasture. In conjunction with this, more households combined their agricultural practices with a few cows, goats or sheep. Zero grazing was in-

produced. Improved pastures were grown. People started selling livestock when it was mature and for a growing number of households (nowadays 23%) income from livestock sales has become a major source of income.

Figure B.5.3
Main source of income of Buger households in 1988 and 2010

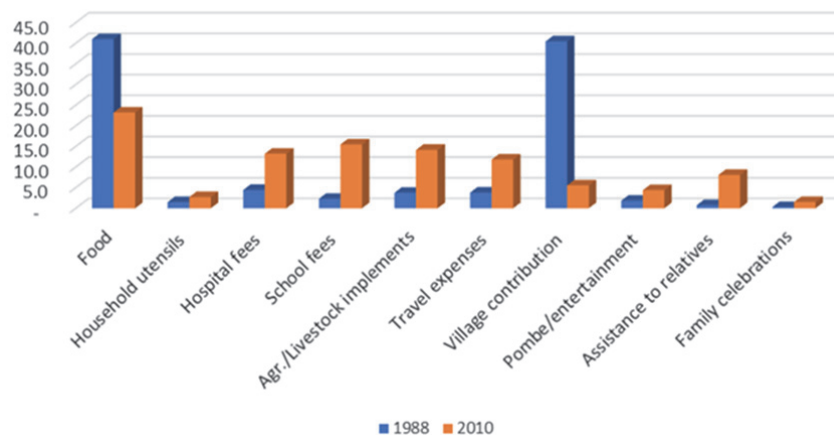


Source: Author

In the '80s people had a very low cash income in comparison to the other villages in the research area but people did not complain about their low income. Nowadays the household income has grown above the Mbulu average (but still far below the Karatu average) and 23% of the households indicate a low cash income as one of their major challenges to be addressed by their hard working and looking for casual work.

In 1988 households spend their little money mainly on food (basic needs) and village contributions. In 2010 only 23% of their money was spent on food and only 6% on village contribution. The major change has been that people started investing in their children's education. Agricultural implements had become available and people invested in improved seeds, fertiliser and equipment. People spent more on travelling. And people spent more on health, as one had to pay their hospital fees.

Figure B.5.4
Household expenditure in 4 weeks before the survey in percentages²⁷



Source: Author

Expenditure on education, health, agriculture and livestock implements and on travelling has increased. Partly as in the past Government contributed in those sectors. Partly as people expect more quality and take more initiative themselves and consequently pay more themselves. Where financial support from relatives outside of the village has decreased since the eighties, the expenditure to give support to relatives outside of the village has increased over time.

With the reduced availability of fuelwood, the increased availability of hurricane lamps and kerosene and the general increase of income, the use of hurricane lamps for lighting nearly has doubled over time. Besides the few households that have access to solar or generator nowadays, nearly the whole population uses hurricane lamps for lighting the house.

Mobility of the heads of household has increased a lot. In 1988 only 3% of the heads of household travelled outside the village, while in 2010 74% of the heads of household travelled that year outside the village. Endabash being the division head quarter is about 15 km away, while from their regular buses and lorries go to Karatu (additional 36km), Mbulu (40 km), Arusha (185 km) or Haydom (120 km).

B.5.11 Livelihood outcomes

Over time people have been able to increase their income from far below the average up to above the average of Mbulu district. However, nowadays one feels to have a low income.

The growth in household well-being in terms of increase in ownership of ox-carts, ox-ploughs, bicycles, radios, hurricane lamps and corrugated iron sheets is above the average.

Percentage-wise one spends less money on food currently; one produces nearly three times as much maize per acre and half as much beans per acre; and yet nowadays a much higher percentage (27%) of the households indicate to feel food shortage than in 1988 when it was less than 7%.

Increased land shortage and increased shortage of pasture led people to improved cultivation practices, destocking, pasture development and zero grazing which indicates a more sustainable use of the available natural resources. In addition, increased fuelwood shortage and increased environmental awareness led to the expansion of tree seedling raising and planting of a variety of trees for soil conservation purposes as well.

B.5.12 Summary

The initial conditions in Buger are described in similar terms as those of Kwermsl with the difference that people settled later over here. In 1988 the majority of the heads of household was born in the area. Traditional consultation among elders takes place here as elsewhere among the Wairaqw. Households – living and cultivating on the same slope – controlled erosion collectively. Primary education started in 1953, with a second primary school constructed in 2004, followed by secondary education in 2006. Educational level increased from below average in 1988 up to above average in 2010. An access road was laid in 1985. A village godown was constructed in 1989. In 1995 an airstrip has been constructed and maintained since then for monthly maternal and child health/MAF services from Haydom. The since 1993 operating village nursery was privatised in 2004. A village maize mill operated from 1999 up to its breakdown in 2007, after which a private maize mill started operating. The cattle dip was handed over to a small group of farmers in 2005, after which they operate it collectively as a private enterprise. Maize production per acre has more than doubled and grew over time from average

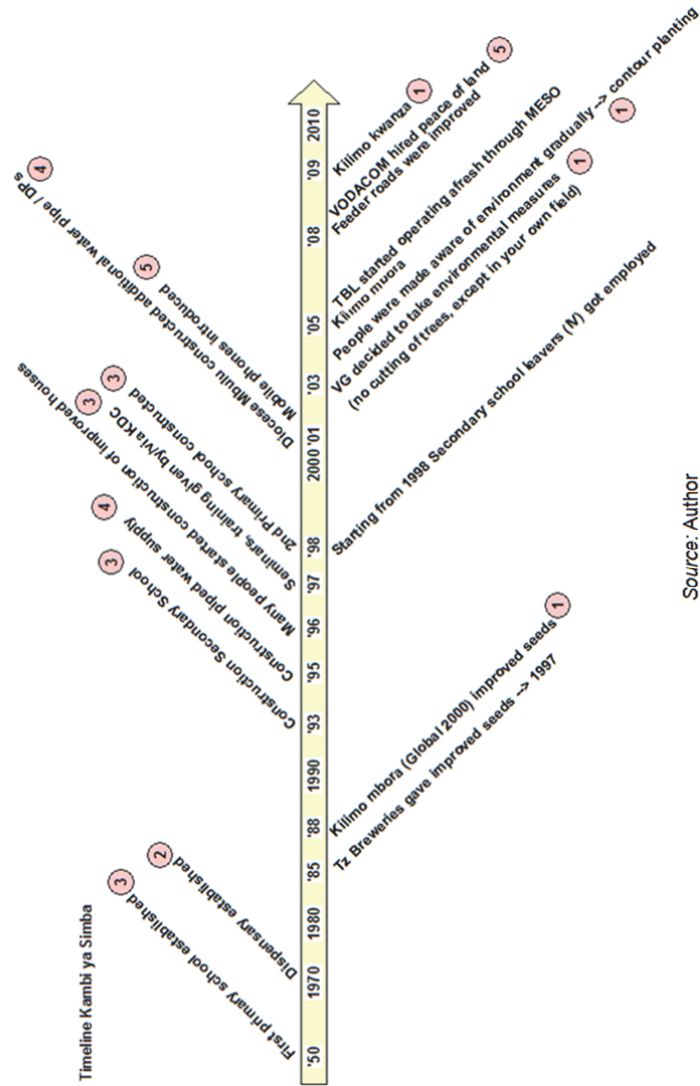
level up to above average level. Although the number of lower local government related committees (15) is just below the average, the number of civil society organisations (20) is just above the average level, while the number of collective actions in the productive sector (23) is far above the average. Coordination structures are there but necessary agency is not there to stimulate people to collect adequate funds and manpower to construct teachers' houses or to construct a dispensary.

B.6 Kambi ya Simba village

Kambi ya Simba has been registered as village in 1976. In 1988 Kambi ya Simba has been described as a catchment area with substantial agricultural surplus, but subject to soil erosion (IRA, 1989). It is situated 21 km north east from Karatu and 18 km north of Lake Manyara. By that time, it was situated in Mbulumbulu ward, Karatu division, Mbulu district, while currently it is situated in Mbulumbulu ward, Mbulumbulu division in Karatu district.

The first primary school has been established in 1950, the second one in 1998 while the construction of a secondary school started in 1993. In a focus group discussion in 2010 village leaders indicated that – according to them – their awareness of the benefits of improved seeds and how to cope with environmental concerns in their area has had major impact on the local economic development. Their early link with Tanzania breweries as both supplier of improved seeds and harvesting equipment (combiners) and being a reliable customer of the cultivated barley gave farmers a reliable income for years. Contour planting in the hilly area has become the norm and people cooperate on *kitongoji* level to operate tree nurseries for people to have access to tree seedlings to plant along the contours. Besides the construction of schools, people cooperated to construct a godown, dispensary, roads and bridges. In the eighties the village government ran economic activities like a petrol station and a village *shamba* as well. The petrol station has been privatised after liberalisation. Since 1995 the village government operated the water supply system, but nowadays its management has been handed over to a village water committee.

Figure B.6.1
Timeline Kambi ya Simba²⁸



Source: Author

The village leaders indicated development in order of priority as: 1) agricultural production; 2) health; 3) education; 4) water and 5) communication. Agricultural production has been emphasised since 1988 through 'Global 2000', when environmental measures were taken in terms of contour planting and with '*kilimo kwanza*'. People see agricultural production in relation to environmental protection, as the area is subject to erosion. Therefore, environmental measures included tree planting and prevention of tree cutting except those that have been planted by people on their own fields. Social sector development started with education (1950), health (1970) and water supply (1995). Communication through mobile phones started in 2001.

In reference to the components of the sustainable livelihoods framework, changes over time are described below.

B.6.1 Cultural capital

With 100% of the population being *Mwiraqwa* their traditions are kept in Kambi ya Simba as well. The council of elders guides the development process just like in *Mama Issara* (Thornton 1980, Snyder 2005), although the population settled in the area more recently.

As in other places, agricultural practices, animal husbandry, environmental control on the slopes, cultural dances, norms and values, feelings of togetherness, cooperation and social control are all aspects of life that in first instance are taught and maintained through traditional family and clan upbringing.

B.6.2 Human capital

The number of households grew from about 400 in 1988 up to 1,042 in 2010 with a stable average household size of about 6.5 and a slightly changing m/f ratio from 117 in 1988 up to 108 in 2010. A working age population as percentage of the total population grew from 48% in 1988 up to 64% in 2010. The whole population has been *Mwiraqwa* over time. In 1988 41% of the heads of household was born in the village, while in 2010 that was 89% of the heads of household. Population get more settled, i.e. there is less in-migration.

A key issue in human capital development is the change in educational level. In 1988 39% of the population and 34% of the heads of household had at least standard seven qualification, while in 2010 those per-

centages were 57% and 93% respectively. The percentage of population with at least secondary education changed from 3% to 12% which – although shown as a major increase – does not reflect the reality as many secondary school graduates left the village for further education elsewhere. However, the employment of its own secondary school graduates in the village has been mentioned as of importance for the development of Kambi ya Simba, despite the fact that a number of vacancies in education (teachers), agriculture and health have not been filled yet.

B.6.3 Natural capital

The average household land size has been about 3.5 acres and did not change over time. One owns the land on basis of customary rights. In 1988 the village authorities indicated soil erosion and inadequate trees as the key issue in the village (van Dijk, 1988). Consequently, people cultivate the slopes intensively along contours and mix various crops with trees and grasses to ensure environmental control and to fight erosion. Kambi ya Simba received the award for environmental control. Since long people do grow a variety of trees individually: both for fruit, fuelwood, poles and timber production. For some time, every household plants a minimum of 50 trees annually. All cooking is based on the use of natural capital in the form of available fuelwood, which in general is cultivated on everyone's own *shamba*. The percentage of households that collect all necessary fuelwood themselves is decreasing from 85% in 1988 to 67% in 2010, while the percentage of households that purchases all fuelwood increased from 0% to 6% over that time period.

The average number of livestock per household changed tremendously from 20 in 1988 to 4 in 2010, with an emphasis on 'zero grazing'. The percentage of households that keep livestock has increased slightly from 64% up to 73%. The goat population has reduced as well, while the sheep population has increased.

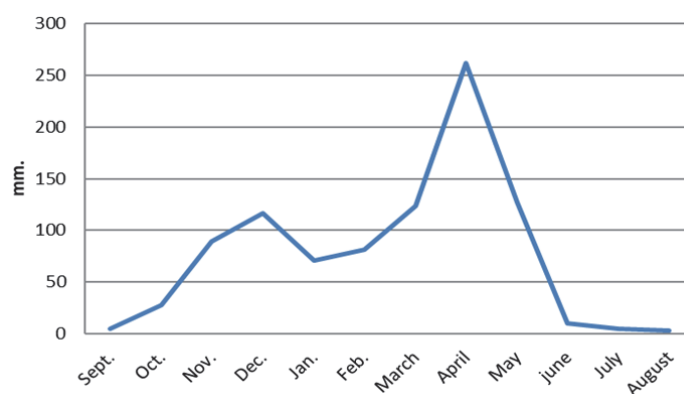
The pasture availability is deteriorating over time, mainly because people started cultivating the land. Not because of increase of cattle. At contrary the number of cattle has nearly been halved. To address the issue, 28% of the households indicate to use crop residuals for livestock feeding. In addition, one recommends getting into 'zero grazing'. Shortage of pasture however is seen by 43% of the households as a major reason for poor animal health.

From 1985 up to 1997 farmers are supplied by Tanzania Breweries with improved barley seeds. Global 2000 distributed improved seeds in 1988. Intercropping has long been common practice. In 2003 contour planting has been emphasised afresh. In 2005 *Kilimo Mhora* was introduced. Since 2006 improved seeds are available locally. In 2009 *Kilimo Kwanza* has been emphasised. Over the years the population has been able to grasp exogenous ideas to add value to its natural resources. As Kambi ya Simba accommodates a bit of irrigation since 1953 the farming calendar reads as follows:

Farming calendar

Rainfed	Planting / Harvesting
Maize (<i>mahindi</i>)	January / July
Beans (<i>maharage</i>)	March / June
Pigeon / Cow peas	January / October
Sunflower (<i>alizetti</i>)	March / September
Wheat / Barley	April / July → September
Irrigation	
Maize	September / February
Beans	September / February

Figure B.6.2
Mean annual rainfall in Mbulumbu (922 mm)



Source: Magoggo (1995)

Major cultivation takes place rain-fed and sometimes the little rainfall jeopardises a good harvest.

B.6.4 Physical capital

In 1988 it was difficult to reach Kambi ya Simba up to the moment that the Manyara–Kambi ya Simba road was improved through labour intensive Mbulu District Council support. Since that time Kambi ya Simba is accessible the whole year round, although the shortcut through Rhotia is difficult to pass during April/May. Since 2008 the village emphasises improvement of feeder roads.

There is regular transport by bus (*daladala*), small cars and motor cycles. Since 1988 about 10% of the households has access to a tractor, which percentage remained stable over time. The percentage of households with an ox-cart rose from 16% to 45 %, while that of those with an ox-plough rose from 49% to 60%. The wheat and barley farmers in the area have long had access to combine harvesters (Raikes, 1975) as the latter ones produce for the beer brewers directly.

Kambi ya Simba accommodates 13 private shops, 14 kiosks, 5 pubs, 6 tailors, 1 bakery, 7 *mgahawas* (tea/coffee shops), 5 fruit/vegetable stands, 4 carpenters, 5 milling machines, a cattle dip which in 2010 was out of order and people sprayed their cattle, two godowns, a petrol station and a monthly market (*mnaada*).

The primary school of Kambi ya Simba exists since the early fifties, with a secondary school operational since 1993 and a second primary school since 1998. Teachers' houses have been constructed, but in 2010 still 7 houses were missing for primary school teachers and 10 houses were missing for secondary school teachers. The primary schools indicated to have seven vacancies each, while the secondary school indicated to have 25 vacancies.

A government dispensary operates since 1970 with some staff houses available. However, in 2010 the dispensary counted four vacancies.

In 1988 water supply has been mentioned as one of the felt needs and piped gravity water supply was established in 1995, while Mbulu Diocese assisted with additional water supply and a number of domestic points. Few people have rainwater harvesting facilities.

Since 1988 towards 2010 individual households gained in average physical capital in terms of ownership of bicycles (from 7% to 56%), ra-

dios (from 38% to 82%), hurricane lamps (from 61% to 75%), watches (from 16% to 56%), mobile phones (from 0% to 73%) and houses with corrugated iron sheets (from 30% to 77%). Few people have access to solar (19 households), generator (8 households) or biogas (6 households) operated energy.

B.6.5 Financial capital

Among the Wairaqw financial capital development is measured in terms of livestock availability or in financial terms in reference to households' expenditure level. Both measurements are not accurate. In addition, financial capital development can be estimated in terms of physical capital development growth as well as done above.

The percentage of households with livestock has increased slightly over time. But the average number of traditional livestock (zebu) per household now has decreased tremendously up to 20% of the 1988 stock. The average number of goats per household has halved as well over time. As livestock nowadays has become part of the production process, it is sold more when it is mature, than in the past when it served as people's 'banking account'.

Financial capital development in terms of household expenditure level could be a proxy indicator for financial capital development. Households' financial capital in 1988 is above the average (more than 50%) within the district. Comparatively to the average growth in Mbulu, it grows a bit slower but remains above the average of the two districts. It falls behind in comparison to Karatu district by itself. In 2010 the average four-week expenditure overview for Kambi ya Simba households as proxy indicator for the household income level has grown just above the average in Karatu district, and about 27% above the combined Mbulu-Karatu household expenditure.

Financial capital development of the village as a whole in terms of growth in the percentage of households owning specific physical capital comparatively to the growth in the total research area is seen over the period 1988 to 2010 through the percentage of households owning bicycles (Kambi ya Simba growth of 8.47% vs. the average growth of 10.75%), owning radios (Kambi ya Simba growth of 2.47% vs. the average growth of 2.96%), owning hurricane lamps (Kambi ya Simba growth of 1.24% vs. the average growth of 1.75%), owning clock/watch (Kambi ya Simba growth of 0.33% vs. the average growth of 0.82%), or owning

corrugated iron sheets (Kambi ya Simba growth of 2.61% vs. the average growth of 2.75%). In comparison to the other villages in the research area the growth is substantial, just behind the average of the research area, but ahead of the national growth. In 2010 Kambi ya Simba advanced comparatively with the highest percentage of households with tractors (10%), ox-carts (45%), ox-ploughs (60%), radios (81%), mobile phones (73%) and corrugated iron sheets (77%).

Access to financial capital has grown with the establishment of the village community banks since 2010. The maximum 30 members per group contribute Tsh. 1,000 to Tsh. 3,000 weekly to the own group funds, on which basis one is able to get access to a short-term loan of currently maximum Tsh. 600,000 for payment of social services or to initiate a profit-making undertaking. Members see the village community bank as a means to enhance their socio-economic development.

B.6.6 Social capital

Socially one helps each other in case of e.g. one faces health problems and one is not able to pay the transport or hospital fee. A *kitongoji* committee checks the ability to pay for those people that need support.

Socially one helps each other with the construction of houses or to organise joint parties (*mchango*).

The neighbourhood (*kitongoji*) is part of the formal local government structure, which means that the chairperson has been elected, while the other *kitongoji* government members have been appointed (by the chair). The chair represents the *kitongoji* in the village government and the village government in the *kitongoji*²⁹.

Roads construction and maintenance is done under responsibility of the *kitongoji* but actually followed up by the *balozji* (the former 10-cell leader). Every *balozji* is responsible for a specific part and will ensure that every household takes part in the road works. Otherwise one gets fined according to the bylaw in force. Such a fine is paid to the village government of which 30% is repaid to the *kitongoji*.

The *kitongoji* operates a tree nursery from where tree seedlings are taken to be planted jointly in the gullies to prevent further erosion in the area. Together one takes care or supervises the construction of contours in everyone's private fields. Ornamental tree planting is done by each household individually.

In the past the village government supervised a few economic activities like the *godown*, the petrol station and the village *shamba*, but in 1997 the petrol station was closed and private enterprise took over the sales of petrol and diesel from 'the drum'. That time the village *shamba* of 114 acres was rented out and only in 2008 it has come back under direct supervision of the village government. Additional income was raised by renting a piece of land to Vodacom.

The construction work of schools, dispensary, bridge or *godown* is distributed among the various *vitongoji*, that in turn distribute the work among its households (*nguvu kazi*), e.g. in making of aggregate for the construction or collection of sand, stones, etc.

A village water committee (VWC) has been founded in 2011, although piped water supply operates since 1995 and Mbulu Diocese supported the water supply in 2000 with additional water points. Nowadays people pay Tsh. 10 per bucket from the taps or Tsh. 20 per 20 litres at the domestic points. The VWC uses the income to maintain the system up to current standard. Current income is not sufficient to expand or to pay as 'own contribution' to attract external funding. Before establishment of the VWC it was the village government being responsible to ensure operation and maintenance. The VWC still feels necessity to be supported by village government, village assembly and council of elders to enforce cooperation of its water users to pay for its use. The VWC itself does not feel strong enough to enforce and maintain such behaviour itself.

B.6.7 Political capital

Although CCM and Chadema operate both in Kambi ya Simba, the majority of the village council is formed by CCM. Within Mbulumbulu ward 78% voted for CCM and 21% of the population for Chadema. There is hardly a political discussion going on at village level. The power is vested in the traditional decision-making by consensus.

B.6.8 Vulnerability context

The percentage of households that indicates to experience shortage of land for individual farming has increased slightly from 59% in 1988 up to 67% in 2010. The percentage of households that indicates to have insufficient land for livestock farming has increased slightly from 54% up to 59% which is mainly explained by the fact that the average number of

cows per household has decreased substantially from 20 to 4 as many households introduced zero-grazing. The percentage of households that keeps livestock increased slightly from 64% to 73% but the total livestock population decreased well. Despite that decrease the percentage of households that indicates not to have enough pasture remained with around 56% stable over time. Since 1988 nobody indicated to have plenty of pastoral land available. While in 1988 that was still explained by the change from extensive grazing towards agricultural cultivation, in 2010 it was not explained any longer as an issue. Small herds and zero grazing have become the common practice.

The fuelwood availability has decreased as well. In 1988 71% of the households indicated to have 'just enough fuelwood' available, while in 2010 that percentage has decreased to 38%. 62% of the households indicated that time to have 'shortage of fuelwood' despite the fact that people have long grown their fuelwood on their *shamba* themselves.

B.6.9 Transforming structures and processes

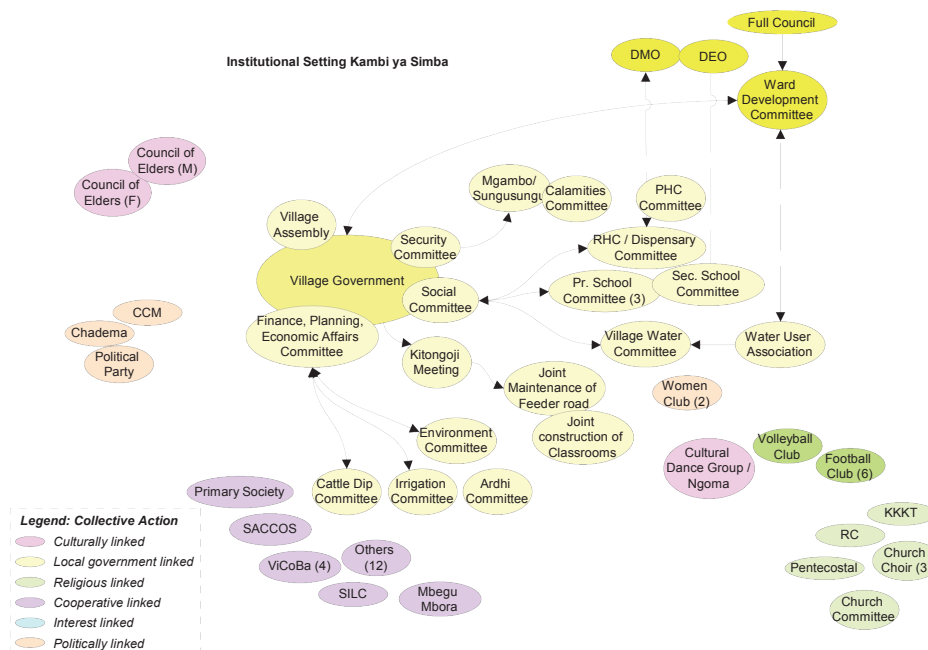
Traditionally people are aware of environmental consequences of agricultural cultivation on steep slopes and work together to establish contours and to raise trees collectively to plant along the contours. Kambi ya Simba has a long history of cooperative development. It learned a lot by trial and error (Raikes, 1975). There has been a long-lasting cooperation among farmers to cooperate with Tanzania Breweries in terms of barley cultivation and joint use of combine harvesters.

The Local Government Act (1982) describes the functioning of the village assembly, village government and its standing committees, while in addition the village government appointed an *ardhi* (lands) committee, an environmental committee, a primary health care committee and a calamities committee. Village government took initiatives to enhance cooperative undertakings in reference to the development of socio-economic infrastructure (schools, dispensary, *godown*, roads, and water supply) and had their services managed through specifically selected committees. Although initially village government took initiative in economic undertakings, nowadays such undertakings either operate independently or have been privatised. Although independent, the primary school committees, the secondary school committee, the village water committee and the dispensary committee have strong links with the vil-

lage government as well. Village government and all related committees are operational.

In reference to predominant cultural, social and political capital and based on existing human, natural and financial capital, people operate collectively, mainly to enhance collectively used physical capital to cope with the given vulnerability context. See Figure B.6.3 for an overview of the current collective action in Kambi ya Simba.

Figure B.6.3
Overview of current collective action in Kambi ya Simba



Source: Author

Collective action and socio-economic infrastructure

It is the responsibility of the neighbourhood (*kitongoji*) to maintain the feeder roads, which actually is followed up by the *balozzi* (ten-cell leaders). Every *balozzi* has its own part of the road to look after. In case one does

not work accordingly, by bylaw one is subject to be fined³⁰. The roads to Kambi ya Simba are passable except in the period March / April when they are less accessible during the rains. It is 21 km to Karatu and 18 km to Manyara and a bus, small cars, *pickypickies* or motorcycles reach Kambi ya Simba the rest of the year. From Karatu and Manyara regular bus services reach Arusha on roughly 150 km distance.

Since 2008 feeder roads were improved up to the level of being 'passable throughout the year' (only a little bit of pushing was required).

Kambi ya Simba counts 13 shops, 14 kiosks, 5 local brew pubs, 1 bar, 6 restaurants (*mgahawa*), 8 milling machines, 6 tailors, 1 butcher and 4 carpenters, all private business. The village ran a petrol station but stopped doing that in 1997. Since that time private business sells fuel 'from the drum'. Kambi ya Simba has a daily market with some 5 '*bandas*' for vegetables and fruits sales. In addition, it has the monthly '*mnaada*'. It has two *godowns*: one that is managed by the village and one that is managed by the primary society.

In the past the village operated a cattle dip, which currently is out of function. People just spray their cattle at the moment.

In the mid-nineties the village constructed piped water supply over a distance of 7 km with public taps and domestic points. In average 69 households make use of one domestic point (DP), while the standard is 14 households per DP. One pays Tsh. 10 per *debbe* (15 litres). In two neighbourhoods (*vitongoji*) one still has to walk for 3 km to have access to clean and safe water. In 2001 the RC Diocese of Mbulu (DMDD) constructed additional water pipe and domestic points. In 2011 additional water supply was constructed in combination with the neighbouring village Kilimamoja for a total length of about 20 km of pipes (3 km into the forest, 5 km to Kambi ya Simba and 11 km to Kilimamoja) and a water committee has been founded. Although the water committee has a vision³¹ to supply water to every household, there are no sufficient connections yet and during the dry season there is not enough water to serve everybody. In addition, the water committee has not yet been able to convince the village assembly to raise the payment per *debbe* to expand the water supply system.

The villages Kambi ya Simba and Kilimamoja cooperate with each other as far as the intake is concerned, but they both have their own water committee to organise the water distribution at village level. Kil-

imamoja has its own water committee. Although there is some understanding concerning the water distribution among the two villages, there is no agreement on what to do in case any of the villages or any of the individuals within the village taps water unauthorised. 'Free riding' is not addressed than only in discussions during the village assembly.

Although piped water supply has been established in 1995, the formal registration of the village water committee took up to 2011. The committee exists of 6 women and 6 men and envision domestic point water supply to each of the 1,500 households within the area covered by the water scheme. Currently that is not the case, as the village water committee has not been able yet to plan for such full coverage. The water committee's income for 2011 was Tsh. 15 mln, while its expenditure was Tsh. 10 mln, which is not enough 'profit' for expansion of the scheme. At every domestic point (DP) somebody is made responsible to collect money from those that use the water. They pay to the treasurer who deposits the money at the bank. S/he reports to the water committee, who consequently reports to the village government. The latter one asks for an audit from the district (KDC), which at the time of the interview (September 2012) had not yet been done. The outcome of such audit will be presented to the village assembly.

Although independent the committee reports to the village government and their decisions are to be endorsed by the village assembly. This actually means that although the village water committee proposed to have people paying Tsh. 10 per bucket, so far the village assembly decided to have people paying Tsh. 5 per bucket only.

Members of the water committee have been elected, but were not trained or capacitated to fulfil their role. Except the secretary who had form IV, all Committee members had standard VII educational level with no additional technical, financial or management training.

The Karatu Development Association (KDA) gave support to measure the water table for borehole drilling (actually to confirm the measurements of 20 years ago), but there has been no planning yet to get water on the Committee's own account and to ensure water in the future as well (via boreholes).

The Committee reports to the village government, which consequently reports to the village assembly (VA). It intends to advice on how much needs to be paid to expand the water system to all, but the VA has not

been convinced. Although the District Water Engineer (DWE) gives advice – mainly on management – the members of the Water Committee did not receive training on leadership and *ufundi*.

During the period January–October people and livestock make use of one of the three rivers, which the rest of the year dries up usually. In addition, they make use of the water from the dam, while it has been proposed to construct another dam.

In 2001 the mobile phone got introduced in the area with the consequence of improved communication. In 2010 about $\frac{3}{4}$ of the households operated a mobile phone. Actually since 2008 VODACOM hired a piece of land for communication poles, which gives regular income to the village government.

In 2010 people indicated to have keen interest in financial services in Kambi ya Simba as it is cumbersome to be dependent on the financial services in Karatu town.

Collective action and civil society

Kambi ya Simba counts 5 churches including KKKT and RC. Currently, it has 2 primary schools and one secondary school. The primary schools were constructed in 1950 and 1998, while the secondary school was constructed in 1994. In total Kambi ya Simba counts 20 primary school teachers for 1,358 pupils which means an average of 68 pupils per teacher. Both primary schools have 7 vacancies. An additional 7 teacher's houses are required as well. The school committee requested for teachers from KDC.

The primary school committee envisions its functioning as helping children to help themselves, meaning that primary education is to ensure that children can survive in current society in terms of (improved) agricultural and livestock development, going for further education (e.g. to become a teacher), and being able to use ATM, mobile phone, etc. The committee itself is there to help the headmaster in e.g. arranging food for pupils' lunch (as in 2010 was done through WFP (maize, beans, oil) support to the whole district), organising parents to pay for the cooks, and following up misbehaviour of pupils. Parents are assumed to pay for water and salt, and for the cook and the watchman. In case parents have specific issues than such could be raised through the kitongoji → headmaster → school committee → ward education coordinator. There is no formal communication among the various primary school committees.

Kambi ya Simba counts 7 secondary school teachers for 715 pupils with an average of 102 pupils per teacher. Secondary school has 25 vacancies for teaching staff. Ten teacher's houses need to be constructed for secondary school staff. The secondary school committee ensures that parents contribute sufficient to have temporary teachers paid (Tsh. 150,000 per month each) and to have the secretary and cook paid as well. In addition, parents pay for pens, firewood, water, kerosene. The committee has been able to grasp external support to have a generator operational, recently to have solar functioning and to have 6 laptops donated. In case of adjustment or specific issues in general, parents are called to get things going. They conclude jointly. Strategies are worked out with the parents. E.g. it was decided that parents pay Tsh. 5,000 for teachers to do practical work on Saturdays (over time). The tasks of the committee are distributed over the members and known generally.

Kambi ya Simba has a dispensary with 4 vacancies in its staff.

The village government required Tsh. 37,400 per household in the financial year 2009/2010 to construct teacher's houses, classrooms, expansion of dispensary and village office. In addition, representatives of each household are requested to give manual support as well (i.e. *nguvu kazi*, like e.g. making of aggregate for construction of school, dispensary or bridge).

In 2010 the village government indicated to see interest of opening a library for its people.

Besides the household contribution towards physical production of social infrastructure, people among themselves and through a *kitongoji* health committee help each other in case of health problems, in case one is not able to pay for the necessary health service. The committee checks the ability to pay for those people that need support.

Collective action and production

Agricultural production is important in the area. In 1985 TBL encouraged the cash crop of barley. Social capital to enhance production or economic performance operated within Kambi ya Simba as primary society Dirangw up to 1988/89. The society constructed its godown, but since the liberalisation of the primary societies and its free membership, it stopped functioning effectively.

Since 1988 Global 2000 introduced improved seeds for food production as well. To prevent soil erosion contour construction has been encouraged in the late eighties on advice of Mbulu District Council, while in 2004 the village government decided to take environmental measures, like no cutting of trees except in one's own field, as well. Contour planting has become the norm. People were made aware of the consequence of their cultivation methods on the environment gradually.

Kambi ya Simba has a few sites where farmers worked together to get water to their land for irrigation purposes. Channels have been dug together while water distribution is done in collective management.

On *kitongoji* level one operates a tree nursery, which in first instance is meant to have an adequate number of seedlings to be planted in the gullies, but which can be planted on the contours as well. Although supervised by social control (at *kitongoji* level³²), it is everybody's own responsibility to make contours in one's own field and to plant trees there.

In 2005 TBL started operating afresh through MESO (Multi environmental Conservation Society) by issuing seeds to MESO and procuring the yields from MESO, for MESO to organise the farmers up to date. *Kilimo mbora* took off afresh as well. In 2009 *Kilimo kwanza* has been embraced.

The village had a village farm of 114 acres of wheat. From 1997 to 2008 it rented the farm out, but since 2008 it has come back to the village. Last year it produced 431 bags of wheat as the rain was insufficient, but normally it could have about 10 bags per acre.

Individually, 150 households use the river for irrigation of in total 92 acres.

In 2010 four village community banks became operational in Kambi ya Simba, each of them having 20 to 30 members. The establishment of these community banks intend to have people enabled to develop their own environment in terms of education and *nyumba bora* in order to develop their local economy. Members are assumed to contribute Tsh. 1000 up to Tsh. 3000 per week for the economic development fund, with an additional Tsh. 600 per week for the social development fund. In both cases people may get a loan up to maximum Tsh. 600,000 for economic or social activities (in case the funds are available in the account). E.g. per 1-1-2012 one of them – Juhudi – had Tsh. 7 mln. in its account

for eleven members to get such a loan (if necessary). Examples as experienced were:

- 1) A loan to buy and sell crops: one bag of maize bought for Tsh. 48,000 (inclusive transport, etc.) is sold for Tsh. 54,000, which means a profit of Tsh. 6000 per bag, which was done 10 times in just one week. That member got a profit of Tsh. 60,000 in one week;
- 2) A loan for the procurement of goats each Tsh. 50,000, which were sold for Tsh. 60,000 with the consequence that the member sold ten goats and had a profit of Tsh. 100,000 in that one week.

In general, there were no problems with repayment of loans, as in case one member was not able to pay in time, his/her 'friends' guarantee repayment.

The 4 village community banks cooperate individually. However, it was discussed – but not sorted out yet – that in case one village community bank starts and needs seed fund, others may assist (to be repaid later), but there is no institutional arrangement yet to take such action. There is no combined account. At this stage³³ there is no evidence that the local leaders are strong/capacitated/able enough to run district village community bank business as there is no institutional arrangement yet.

Since 2010 a savings and credit cooperative society operates in Kambi ya Simba as well, although its members come from all four villages within the ward. All 236 members have their own business on which basis one pays his/her weekly instalment. One pays up to Tsh. 300,000 per year on the NMB account. Business – members are involved in – are e.g.: cultivation/agriculture; hotels/mgahawa; duka (shop) or tree nursery /*mboga*. Members are trained in profit/loss calculation and accountability, while an office has been constructed in Kambi ya Simba. Besides the Board (Chair, Secretary, Treasurer) there is a Loans Committee to assess the reliability of loan's requests and a Committee ya *Usimamizi* that supervises the repayment, accounts for it and reports to the Board which consequently reports to the General Assembly.

Initial fee to become member is Tsh. 10,000. Thereafter one pays an annual fee of Tsh. 50,000. Members are able to get loans from Tsh. 100,000 up to Tsh. 20 mln.

Local institutional embedding

Just like the Mbulu District Council in 1989, in 1997 KDC ensured training of village government leaders.

In Kambi ya Simba a village executive officer and a village treasurer, a *bwana shamba*, 27 teachers and 4 dispensary staff are all employed by KDC, except the treasurer and one teacher which are employed through village contributions by the village and the school respectively. However, there are too many vacancies at the moment. There are insufficient teachers, health workers and agricultural extension workers.

In 1988 *Kilimo mbora* (Global 2000) supplied improved seeds with the consequence that gradually people were made aware of an increased yield by using quality seeds. However, simultaneously many times the *mbegu mbora* sold was not *mbora* and it took people a long time to differentiate between good and bad seeds. Government (or Kilimo) did not have the capacity to guarantee quality of seeds. There was inadequate certification of inputs.

Farmers cooperate together to get water for irrigating their land distributed well. Per irrigated area rather few farmers cooperate to dig the channels and operate the system afterwards.

As mentioned above, the village community banks within Kambi ya Simba share their financial resources in case there is need for, however they do not have institutionalised such cooperation in any kind of formal agreement. Management of current savings and credit cooperative societies has been trained in profit and loss calculations and accountability. Nowadays financial checks and balances seem to be institutionalised more adequately.

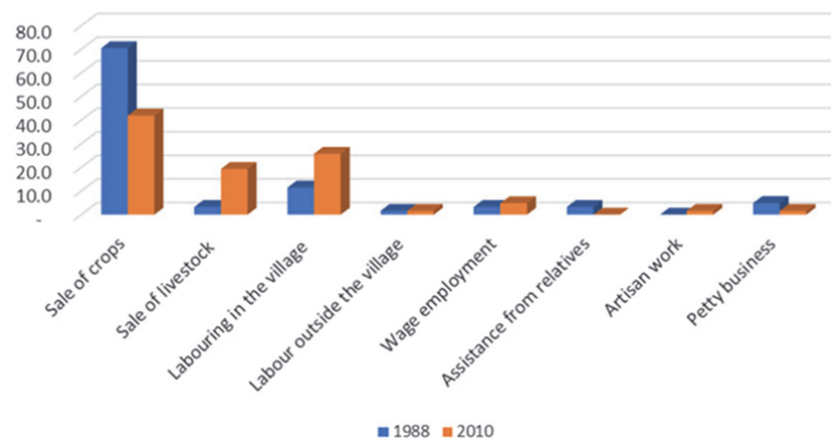
B.6.10 Livelihood strategies

Where in 1988 41% of the heads of household were born in the village, in 2010 that percentage rose to 89% which indicates that in the eighties there was still space to settle.

Since 1985 households grasp agricultural innovations that come along (improved seeds of Tanzania Breweries, Global 2000, *Kilimo Mbora*, *Kilimo Kwanza*) and declare them as key strategies towards development. Maize production per acre has doubled over time. Although agricultural cultivation remained important as economic activity and still remained the major source of income, other sources of income developed as well.

Households earned income from labouring in the village and through sales of livestock, which both gained importance over time. See Figure B.6.4.

Figure B.6.4
Main source of income of Kambi ya Simba households in 1988 and 2010



Source: Author

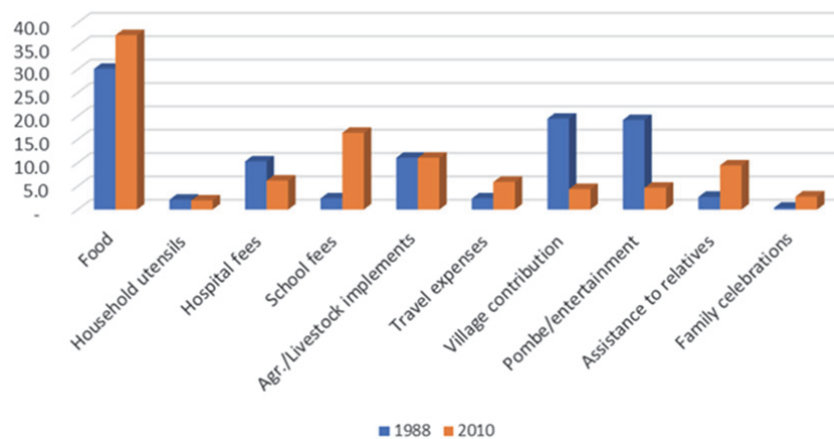
People realise that collective action and cooperation is necessary but requires specific attitude and skills. One seeks education and capacity building to be able to cooperate in a transparent and accountable way. Village government leaders were trained accordingly. Members of savings and credit cooperative societies organised to be trained in profit/loss calculations and accountability.

People's expenditure on education has increased a lot from 2% in 1988 to 16% in 2010 of its monthly expenditure. Financial assistance to relatives has increased substantially as well from 3% to 9%. On the other hand, people's expenditure on village activities and beer drinking has reduced in the same period from roughly 19% to 4.5% each of the monthly expenditure.

The employment of secondary school graduates at village level is seen as one of the key steps towards development.

The expenditure on drinking *pombe* and entertainment has been reduced substantially. See Figure B.6.5.

Figure B.6.5
Household expenditure in 4 weeks before the survey in percentages³⁴



Source: Author

Households addressed their shortage of pastures with destocking, change towards dairy cattle, zero-grazing and partly by cultivation of improved pastures and the use of crop residues as cattle fodder. Cattle dipping has been no issue any longer as people apply hand-spraying to fight ticks and to prevent diseases.

As the consequence of the village government decision to forbid cutting of 'natural' trees for fuelwood consumption, people have planted inter alia their own fuelwood trees, sometimes even for business or charcoal making. Where in 1988 still 100% of the population used fuelwood for cooking, in 2010 that percentage reduced to 75%.

The *mobility* of the population has increased. In 1988 only 3% of anyone in the household travelled outside the village in the year before. Nowadays it is in 76% of the households that somebody travelled outside the village.

B.6.11 Livelihood outcomes

I conclude that increased level of education made people aware of their vulnerable situation and did them change their farming systems in reference to tree planting, livestock reduction and change towards zero-grazing, ensuring a more sustainable use of their natural resource base. Agricultural cultivation has been intensified with the consequence that maize production per acre has doubled from 11 to 22 bags per acre, just keeping track with the population growth to ensure food security.

The growth in households owning all kinds of assets may be less comparatively than the other villages, however, the percentage of households that own tractors, ox-carts, radios, mobile phones and corrugated iron sheets is the highest in Kambi ya Simba in comparison to the rest of the research area, and the ownership of some of the other assets is far above the average. In that sense the households' well-being has increased substantially.

B.6.12 Summary

Starting from the '50s government policy facilitated large African farmers to get easy access to credit to purchase mechanised equipment to cultivate land that had been tsetse-cleared around Mbulumbulu (Raikes, 1975). Road infrastructure has been laid down accordingly. The initial conditions in Kambi ya Simba are described in terms that ordinary people settled in the area thereafter and redistribution of land took place during the villagisation process. In 1988 about 40% of the heads of household was born in the area, while that percentage rose to 90% in 2010. Traditional consultation among elders takes place. Households – living and cultivating on the same slope – controlled erosion collectively. Primary education started in 1950, followed by secondary education in 1994 and a second primary school constructed in 1998. The educational level increased and has always been above average level, with a number of secondary school leavers finding employment in the village. From 1985 onwards, Tanzania Breweries supported farmers with improved seeds. The access road was rehabilitated in 1988 up to 'all weather' condition. Agricultural programmes like 'Global 2000' distributed improved seeds since 1988 for some time. The village cooperative operated well and a village godown was constructed in 1989. Although the number of lower local government related committees (17) is on average level, the number of civil society organisations (17) is just below the average level,

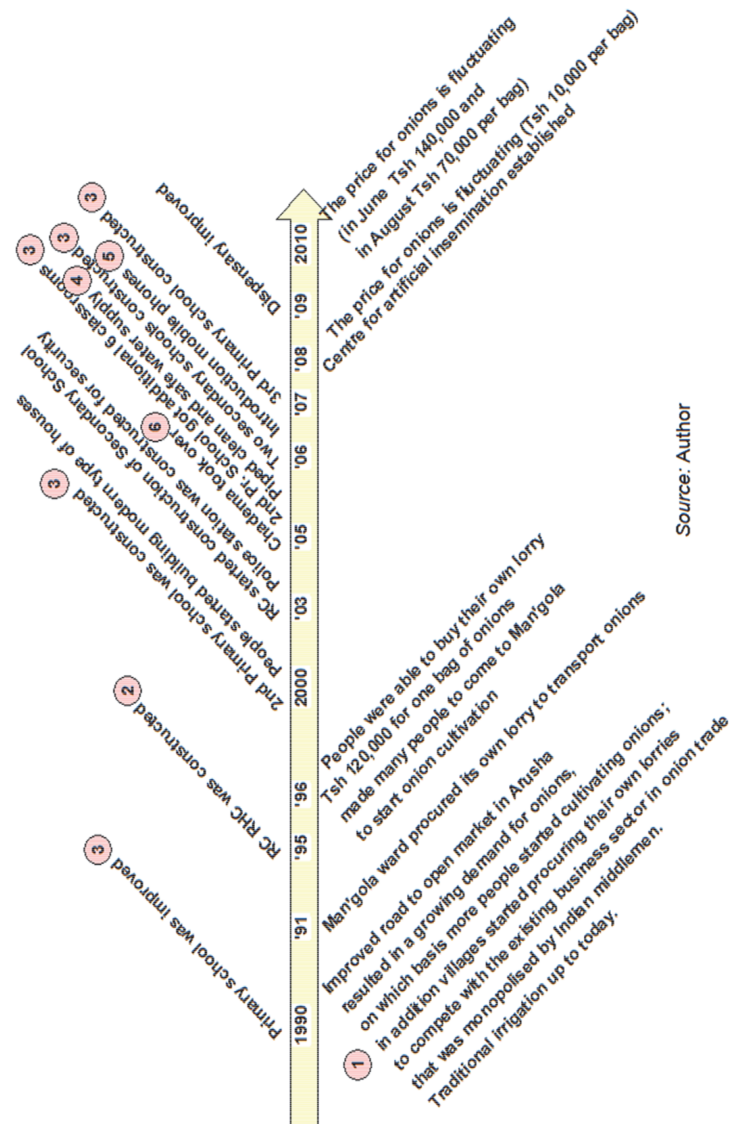
while the number of collective actions in the productive sector (26) is far above the average. Besides the *nguvu kazi*, every household pays the village government to facilitate the construction of teacher's houses, classrooms, expansion of dispensary and village office, although such is not sufficient yet to address the current needs. The village water committee cooperates with the neighbouring village and ensures adequate water supply to those that are connected, but does not manage to gain sufficient income to expand the water supply to all households. The committee depends on the approval of the village assembly to raise the water fee.

B.7 Mang'ola Barazani village

Mang'ola Barazani is situated east from Lake Eyasi. It is said³⁵ that the Barabaig moved into here first in the late 19th century, after which others from surrounding tribes followed. Only in the 1940's some settlement took place. In 1978 Mang'ola Barazani has been registered as a village with at that time 230 households (409 men, 317 women and over 500 children in the primary school age). In 1988 Mang'ola has been described as an area with irrigation potential for onion and paddy production, as it is located along the shore of Lake Eyasi. However, that time there was no substantial agricultural surplus. It was inaccessible due to the poor state of the road (IRA, 1989). By the time of registration Mang'ola was inhabited by Wairaqw, Barabaig and some others. Except the Barabaig and the Hadzabe, which lived there for a long time, the others were coming in mainly to make use of the available water sources. In the eighties Mang'ola developed as a rural settlement with people settling in the area as there has been a vast irrigation potential, which development started in the sixties, but which really expanded since the eighties. By that time Mang'ola Barazani was situated in Mang'ola ward, Karatu division, Mbulu district, while currently – since the latest administrative re-division in 2010 – it is situated in Mang'ola Barazani ward, Eyasi division, Karatu district.

The irrigation potential, the early development of a primary school, and the opening up of the Mang'ola area through an access road to the open market in Arusha enabled farmers to produce (mainly) onions against competing prices. The improved link to the open market in Arusha in 1990, which is about 200 km from Mang'ola, resulted in a

Figure B.7.1
Timeline Mang'ola Barazani³⁶



growing demand for onions, as businessmen from as far as Nairobi operated on the Arusha market. As a consequence, in 1991 Mang'ola and other villages around purchased each their own lorry to compete with the middlemen from Arusha that monopolised the onions' transportation those days. This market outlet is seen by the current village leaders as a major cause of current development in Mang'ola area. Secondly the establishment of the RC health centre is identified as of development importance, together with the construction of primary schools. As Mang'ola has grown enormously over time, the number of schools expanded as well. Within the last 20 years three primary schools and two secondary schools were established.

Although water has always been available, piped 'clean and safe' water has been established in 2005 only and currently operates on paid basis through a number of domestic points. The introduction of mobile phones in 2006 to improve communication is considered too as supportive for the development. Lastly, the political openness in the country away from the '*old party dogma and hierarchy*' gave people '*energy*' towards development and – as was said³⁷ – *improved the local democracy*.

In reference to the components of the sustainable livelihoods framework changes over time are described below.

B.7.1 Cultural capital

Besides the Wairaqw, the Wairamba, Wadatoga (inclusive the Maangati), Warangi, Wanyaturu, Wanasanyu and many others settled in the area, while the original Hadzabe and Barabaig gradually withdrew towards Yaeda Chini and Matala, as for their original life style there was no space any longer in Mang'ola. In 1988 about 60% of the heads of household indicated to be Mwiraqw, while in 2010 that percentage rose to 80%, which has been the lowest in the research area outside Mongo wa Moono. The council of elders, as initiated among the Wairaqw, opened up for 'all' elders and operates to reconcile potential conflicts. In a similar way do women perform the 'rain dances' as is common among the Wairaqw.

B.7.2 Human capital

Within the research area of the two districts the population has doubled. However, in Mang'ola the population has grown with a factor eight from 1,046 people in 1988 up to 8,523 people in 2010. The number of house-

holds grew from 249 in 1988 up to 1,518 in 2010 with an average household size growth from 4.2 in 1988 up to 5.6 in 2010 and a substantial changing m/f ratio from 143 in 1988 up to 87 in 2010. In the eighties many single men (over 25% of the households) migrated to Mang'ola to work in irrigation related activities. An even more substantial m/f ratio change of the working population grew from 186 to 78, with a stable working age population as percentage of the total population of 56%. Nowadays the female population is dominant in the area. Village population statistics do not keep track of all seasonal labour migration.

As a rural settlement people came from everywhere with only 5% of the heads of household born in Mang'ola in 1988 and 56% in 2010. In 1988 62% of the heads of household were Wairaqw and 45% of their wives, while in 2010 those percentages were 80% and 85% respectively.

A key issue in human capital development is the change in educational level. In 1988 33% of the population and 24% of the heads of household had at least standard seven qualification, while in 2010 those percentages were 60% and 92% respectively. In 2010 only 3 % of the heads of household indicated not to have attended any formal education, which is the best in comparison to the two districts, while in 1988 over 40% of the heads of household indicated not to have attended formal education, which was the worst in comparison to the whole baseline survey. The educational level has improved a lot in Mang'ola area. The percentage of population with at least secondary education grew from 0 to 11% which – although shown as a major increase – may not reflect the reality as many secondary school graduates left the village for further education and employment elsewhere.

B.7.3 Natural capital

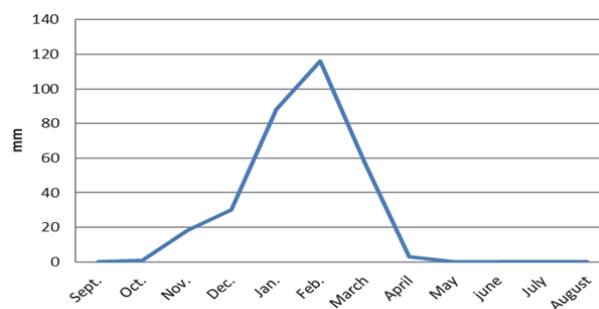
The average rainfall in Mang'ola area of roughly 300 mm³⁸ annually (see Figure B.7.2) is below what is required for ordinary cultivation, but the availability of Mang'ola and Barai rivers and a number of springs enabled farmers to irrigate their lands. The source of Mang'ola river is from the Quangdend spring in the neighbouring village, while the water from the Barai river originates in Endabash (close to Buger) and Oldeani, i.e. the Ngorongoro forests. The Barai river is nearly without water during the dry season, but full of water during the rainy season. First irrigated agriculture is known from the 1930s onwards. Since the start of *Mradi ya Kawawa* in 1968 people practice 'traditional' irrigation in the area in a more

structured way up to date. People are attracted through the availability of water throughout the year, as in other places one depends on rainfed agriculture. Until 1992 it was rather easy to get land for free. The average household land size has been just around 2.5 acres and did not change much over time. The area is attractive for casual labourers as well. Farmers own the land on basis of customary rights. Through irrigation Mang'ola has become a major exporter of onions towards as far as Kenya and southern Sudan. Some farmers are able to harvest onions three times a year. The onion production is seen mainly as cash crop and economically is the most important crop in the area. Onions and paddy are both under irrigation. Maize cultivation increased in average from just 5 to over 13 bags per acre over time. Beans are grown in two periods, as indicated in the agricultural calendar below.

Farming calendar

Rainfed	Planting / Harvesting
Onions (<i>vitungu</i>)	Throughout the year (2 to 3 times)
Paddy (<i>mchele</i>)	November / May-June
Maize (<i>mahindi</i>)	November / May-June
Beans (<i>maharage</i>)	February/May - July/September
Sweet potatoes	September / December-February

Figure B.7.2
Mean annual rainfall in Mang'ola (313 mm)



Source: Magoggo (1995)

In the past there were still some pastoralists in the area but that has been reduced up to only 2% of the households in 2010. Nowadays more households keep a few cows as well. In 1988 24% of the households kept in average 22 cows each, while in 2010 43% of the households kept 8 cows each. Measured over the whole village the number of cows per household changed in average from 5 to 3 over time, while the average number of goats per household increased from 2 to 4 the same time.

In 1988 about one third of the population indicated that one had plenty of fuelwood available and one third indicated to have sufficient access to fuelwood and nearly all cooking, heating and brick burning was done through fuelwood use, while even for lighting that time still 36% of the households used fuelwood. Nowadays over 70% of the households indicate to have shortage of fuelwood and only 80% of the households indicate to use fuelwood for cooking. Within Mang'ola itself every household is encouraged to plant trees every year during the rainy season and cutting of local trees is not allowed by bylaw. Fuelwood needs to be collected (by bicycle) on a distance of 10 km. Charcoal is purchased from there as well. It is even made for export to Karatu. 30 households use solar. About 100 households use a generator for electricity and 20 households started bio-gas plants for cooking. The Mission uses solar in combination with wind to generate electricity.

B.7.4 Physical capital

Although initially inhabited by mainly the Barabaig pastoralist, since the forties of the last century the Wairaqw started settling in the area to cultivate land by means of traditional irrigation. Since 1968 about 10 km of irrigation channel was dug. An irrigation committee supervises the distribution of water since the late eighties. The irrigation scheme covers 3,360 hectares which is partly suitable and partly (79%) moderate suitable for onions. It is partly (8%) suitable, partly 21% moderate suitable and partly (71%) marginalised suitable for maize cultivation. The 1989 soil survey (NSS, 1989) recommended that drainage could be improved, flood control established, erosion control on the hill slopes enhanced, sodic soils reclaimed, crops diversified and fodder crops planted.

A self-help road was constructed in 1979 to connect Mang'ola with Oldeani and Karatu. However, during the '80s Mang'ola was poorly accessible in particular during the rainy season. In 1988 the village authorities emphasised the poor supply of agricultural and livestock implements

(Van Dijk, 1988). It took actually up to the early nineties when a rather reliable road connection was established and that the open market of Arusha resulted in a growing demand of onions and a vast expansion of the area under irrigation.

In the early '90s the village bought its own lorry to compete with the existing business sector in onion trade that those days was monopolised by businessmen from Arusha. In the late '90s people were able to purchase their own private lorries with the village lorry becoming redundant. Nowadays the main road is well maintained and people have lorries, buses, cars and motorcycles. Since the growth of onions' production Mang'ola Barazani has expanded as a rural settlement tremendously.

Regular transport to Karatu (58 km) takes place seven times a day. The feeder roads to the shamba and irrigation channels are inadequate still.

Private shops started operating since 1979, while in 2010 Kwermusl accommodated 37 shops and many kiosks, 6 tailor shops and 8 butchers. There are no formal bakeries, but everybody makes cakes. Mang'ola accommodates 4 carpenters, 13 milling machines and a weekly market on Saturdays. It has over 20 local brew pubs and 3 formal bars. Fuel is sold from the drum at seven stations. It does not have a village *godown*, but over 100 households have their own onion storage. It has 4 guesthouses, over 30 *mgahamas* and 7 hair saloons (5 for men and 3 for women). A cattle dip is operational.

Mang'ola's first primary school was constructed in 1956, while in 1988 the village authorities indicated the inadequate availability of building materials and corrugated iron sheets and consequently the inadequacy of classrooms and teacher's houses (Van Dijk, 1988). The second primary school was constructed in 2000 and the third one in 2007. The first secondary school was constructed in 2003 and the second one in 2007. However, Mang'ola still has inadequate number of teachers, classrooms, tables, chairs, desks and books.

In 1995 a RC rural health centre was constructed while in 2010 a village dispensary was constructed as well.

In 2003 a police office has been opened.

Mang'ola gets its water through 8 km long pipes from a spring in Quangdend, while it has 24 domestic points for water collection and over 80 private taps. People pay for their water which is shared between

the water user group (40%) and the supervisor of the specific point (60%). Water is not seen as a problem in Mang'ola, although many people still get their water from open springs or take it from the canals.

Since 1988 towards 2010 individual households gained in average physical capital in terms of ownership of bicycles (from 5% to 57%), radios (from 19% to 77%), hurricane lamps (from 30% to 84%), mobile phones (from 0% to 66%) and houses with corrugated iron sheets (from 5% to 37%). Very few people (the RC church, the secondary school and 5 households) have access to solar, wind or generator operated energy.

Ox-drawn equipment has increased in the area. The number of ox-ploughs has multiplied with five from 1988 to 2010. The percentage of households with an ox-cart has grown from 3% in 1988 up to 13% in 2010. The percentage of households with a tractor has grown from 0% to 2%. In absolute figures 59 tractors have been registered at Mang'ola.

B.7.5 Financial capital

As many farmers have their own godown to dry and store onions up to the moment that the market offers them an attractive price, they are able to sell their produces at the most favourable time. Onion prices, just like those of other crops, fluctuate over time. In 1996 one could get Tsh. 120,000 for a bag of onions, while in 2008 one only got Tsh. 10,000 for such a bag. In the latter case by having storage facilities one has been able to wait for prices to go up. In 2010 the onion prices were fluctuating between Tsh. 70,000 and Tsh. 140,000 per bag.

Financial capital development in terms of household expenditure level could be a proxy indicator for financial capital development. Households' financial capital in 1988 is at the average within the district, but grows much faster comparatively to the average growth in Mbulu and Karatu, which grows faster again than the national growth. In 2010 the average four-week expenditure overview for Mang'ola households as proxy indicator for the household income level has grown twice as fast as in the combined Mbulu-Karatu area and nearly 1.75 times the Karatu household expenditure. In that sense Mang'ola has been leading in the research area.

Financial capital development of the village as a whole in terms of growth in the percentage of households owning specific physical capital comparatively to the growth in the total research area is seen over the

period 1988 to 2010 through the percentage of the owning of bicycles (Mang'ola growth of 10.50% vs. the average growth of 10.75%), owning of radios (Mang'ola growth of 4.06% vs. the average growth of 2.96%), owning of hurricane lamps (Mang'ola growth of 2.81% vs. the average growth of 1.75%), or owning of corrugated iron sheets (Mang'ola growth of 6.80% vs. the average growth of 2.75%).

Many farmers are member of one of the three to four savings and credit cooperative societies in Mang'ola and are able to borrow money up to sometimes Tsh. 2 mln. at an interest rate of 12% per annum to purchase agricultural implements or to transport agricultural products to the market. Repayment takes place after sale of the agricultural products (onions, etc.) in Arusha, Nairobi or even further away.

Access to financial capital has grown with the establishment of the village community banks since 2010. The roughly 30 village community bank members per group contribute Tsh. 1,000 up to Tsh. 3,500 weekly to the own group funds, on which basis one is able to get access to a short-term loan of currently maximum Tsh. 300,000 to initiate a profit-making undertaking. One pays 5% interest for 3 months or in some cases 10% interest for 6 months

B.7.6 Social capital

The council of elders operates as a local court intending to reconcile opposing views to ensure friendly encounters in the future. It is socially embedded and emphasises harmony within the community. It is invited regularly to assess in case of conflicting interest.

The *mgambo* or *sungusungu* operates under authority of the village government. It ensures security in the village. In case village leaders need people to pay their taxes, etc. they use the members of the *mgambo* to call the villagers concerned. The *mgambo* gets paid Tsh. 5 to get somebody to the office (or wherever one needs the person concerned to be). A commander is elected among the *mgambo*. The *mgambo* themselves are trained locally (for three months) at their own costs and they buy their own uniform. Only in case one – e.g. the commander – is invited for further training than those trainers and training material are paid for by government, while the other costs are taken care of by the trainees themselves. The *mgambo* is motivated to serve as his/her physical exercises keep him/her fit; one is able to help and secure society; one gets trained which is good for someone's career; and one is trained even to use weapons.

Since 2006 football is organised in strong competition and its leaders see it as an economic activity, as one feels that finally one may play professionally. Football is seen a team sport to make you working together as a team. On village level one competes with 10 clubs in the village league, while on ward level one competes with 10 clubs in the 'league ya diwani' (councillor) as well. Members cultivate onions, paddy and/or maize individually to be able to pay for the football activities. Members pay for their own transport to play in competition at village, ward and division level.

B.7.7 Political capital

Up to 2005 CCM was supreme, but since that time Chadema is leading in Mang'ola. According to its leaders, participation and democracy has improved since then. Within the ward during the last elections of 2010 the majority of the people (54%) voted for Chadema with 45% for CCM.

B.7.8 Vulnerability context

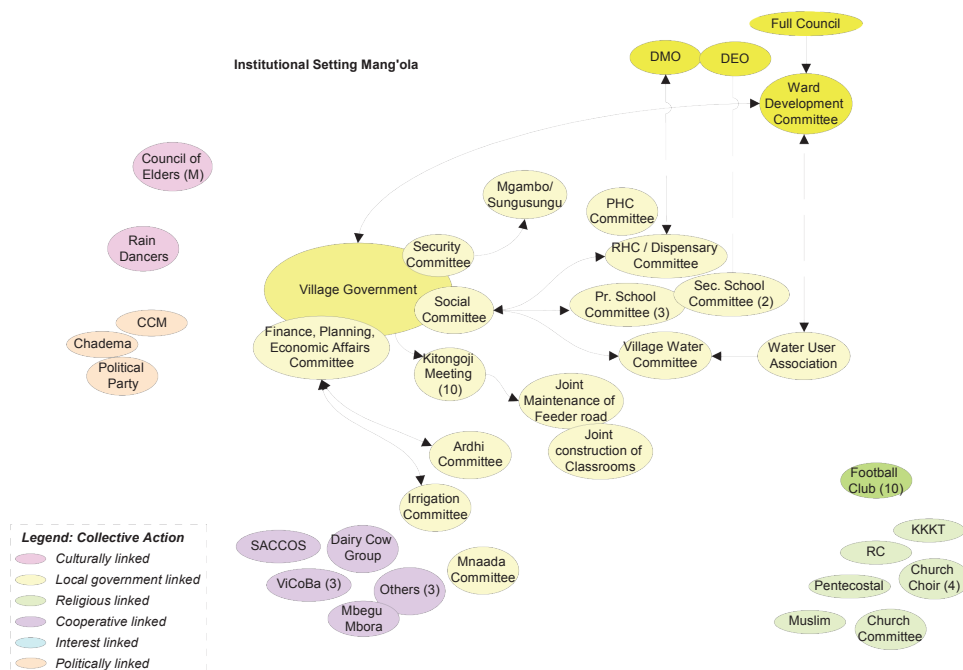
Farmers in Mang'ola are depending on irrigation. Land shortage is defined here as the shortage of land that is accessible by irrigation water. Although the area under irrigation is expanding, the population grows as well. Consequently in 1988 57% of the households indicated to have shortage of land for individual farming, while in 2010 that percentage grew to 79%.

Pasture is not an issue for the majority of the population as one does not keep livestock. For those that keep livestock in 1998 about one third indicated that one did not have enough pasture with another one third that even indicated to have plenty of pasture, while in 2010 those percentages have grown to 90% and 0% respectively. For those that need pastures destocking and/or outmigration are mentioned as the major consequences.

The availability of fuelwood has deteriorated over time as well. In 1988 about one third of the households indicated to have shortage, one third indicated to have just enough and one third indicated to have still plenty of fuelwood. In 2010 these percentages changed towards 71%, 29% and 0% respectively, indicating the growing scarcity of fuelwood. In 1988 about 90% of the households collected their fuelwood themselves. In 2010 that percentage decreased up to 33% with 43% of the households buying fuelwood. While in 1988 still 36% of the households used

fuelwood for lighting, that percentage decreased to 0% in 2010 with the use of kerosene for lighting changed from 61% to 98% over that period

Figure B.7.3
Overview of current collective action in Mang'ola Barazani



Source: Author

B.7.9 Transforming structures and processes

In reference to existing cultural, social and political capital and based on current human, natural and financial capital, people operate collectively, mainly to enhance collectively used physical capital to cope with the given vulnerability context. The organisation of digging of irrigation channels and the distribution of water are key examples of local collective action. Joint construction of classrooms, teacher's houses and dispensary and consequently the supervision of the management of the service delivery are examples too. Outside of the village government structures and

related committees the council of elders operates and has taken over the role of the village assembly. As a rural settlement with people coming from different corners, the local government and its committees operate as indicated in the Local Government Act without the informal cultural links that are existing in other parts of the district. People indicated that the change in power from one political party to another one as majority in the village government changed the agency of the council tremendously. See Figure B.7.3 for an overview of the current collective action in Mang'ola Barazani

Collective action and socio-economic infrastructure

As mentioned above the road to Oldeani/Karatu has been constructed on basis of 'self-help' during the late '70s/early '80s to open up the area for getting its onions to the market. Village and ward lorries were purchased in the early 1990s as by that time one intended to beat the private transporters from Arusha that offered too low prices for the onions. With the village lorries farmers hired this 'communal' transport but were able to keep control on the onions' sales themselves. During the mid-1990s individual farmers were able to start operating their own lorries and since that time the transportation of agricultural produce has become a private undertaking of people of Mang'ola themselves. A major reason for farmers to keep control of their onion sales themselves is that there is no price control for onions and there is no guarantee for quality. In case of inadequate care onions can turn bad easily.

The major collective action in socio-economic infrastructure is the initial digging and thereafter the operation and maintenance of the irrigation infrastructure. Since 1968 about 10 km of irrigation channel has been constructed, initially called *mradi ya Kawawa*. In the late eighties Government constructed an intake that collapsed shortly afterwards. By that time farmers did not feel responsible for the construction of irrigation infrastructure outside what they could manage among themselves traditionally (Martens, 1989: 91-3). Irrigation infrastructure is still traditionally operated (with high water losses). Since the late eighties an irrigation committee operates the distribution of irrigation water. It intends to take care of water distribution at times that one gets more people and less water. It is assumed that there are 880 ha under irrigation of which since 2006 only 30 ha seem to be improved through the Participatory Agricultural Development and Empowerment Project (PADEP). Offi-

cially the Irrigation Committee has been registered in 2011 only. The water is for all, but there is no regulation yet to safeguard water use. Collective action so far is to clean the channel, to plan the water distribution together and to make regulations to follow up any misuse. One is fined in case one does not join in the work or otherwise has been reported to village government (with the consequence of paying up to Tsh. 30,000 fine). Production is done individually. One grows 50 to 80 bags per acre.

Farmers along every main channel elect their own committee which is responsible for the water distribution to have the crops well irrigated. Every committee member (sometimes called '*bwana* or *bibi maji*') looks after a particular part of the irrigation system. One meets with the farmers concerned every week, while once a month one meets with the Irrigation Committee of Mang'ola Barazani. In case of misuse one gets fined or is even excluded from water. Although the Committee has been registered, one still is in the process to have the water distribution institutionalised well. No adequate regulation has been agreed upon yet to safeguard water use. Water distribution takes place on basis of decision-making among farmers themselves and are based on local norms and values. The irrigation scheme is part of the Internal Drainage Basin, established in 2003, which has its office in the neighbouring region Singida (IDBWB, 2013). Water distribution takes place to ensure water in the main channels and in addition adequate water distribution is organised per sub-channel so that all farmers along the channels are well served. Although water distribution is well organised, not everybody gets water as required and a number of cases have been documented where farmers or employees of farmers intend to bribe the guards or to steal water at night by diverting the water when the guards are sleeping. (Kramm & Wirkus, 2010).

Since 2009 it has been decided that farmers should pay for water and one is to start paying per year per acre. The bylaws have been endorsed by the villages involved, by the ward, the district and the zonal water office. Every farmer within the water reach pays the same amount per acre per year and is assumed to get always its daily water share.

In 2012 advice was requested from the Internal Drainage Basin Office Singida. Bylaws have been established in relation to e.g. water distribution, coverage, use of chemicals, or washing of clothes in the channels and are maintained by the *bwana/bibi maji*. As one realises that traditional irrigation allows a lot of seepage, one thinks of lining the canals and con-

structing concrete intake and distribution boxes to enlarge the area under irrigation, but so far one has not been able to organise the funding of such an undertaking.

The growth of the irrigation scheme has changed the governance structures of water distribution upstream and downstream, along main channels and sub-channels and among villages, wards, districts and regions in the whole Internal Drainage Basin continuously. Simultaneously the bottom-up governance among farmers along a channel has been structured and restructured as the consequence of top-down water authority, government and local government structuring and restructuring. Where the bottom-up governance among farmers is based on daily negotiations and sometimes on daily disregard of what has been agreed upon, which in turn is dealt with by the council of elders in reference to customary law considerations (Kramm & Wirkus, 2010), is the top down governance subject to establishment of new administrative boundaries and/or the recent establishment of the water authority for the Internal Drainage Basin with its head office in Singida. There where the two types of governance – bottom-up and top-down – meet each other, continuous negotiations are required to tailor the top-down theory to the bottom-up practice.

Initially water has been *free of charge* with hardly any governance for its distribution. Nowadays people pay for water. Since 1998 a village water committee exists that intends to supply water to every household. However, it does not have a planning and budget for it. People pay Tsh. 50 per bucket of which Tsh. 20 is for the Water Group and Tsh. 30 for the ‘owner’ of the water point. With the self-help establishment of a water supply system with support of an external donor, the operation and maintenance costs are covered by allocating water points to individuals allowing them to raise money to ensure sustainability. The ‘owners’ of the water points have been challenged to give service and consequently are paid as being it a ‘private enterprise’ from the point of view that water services are guaranteed. On 1st January 2012 the village water committee had Tsh. 4.8 mln. on its account, which money is used for paying a monthly salary of Tsh. 100,000 for the fundi, while the chairperson, secretary and treasurer get some ‘*posho*’ (Tsh. 70,000) monthly³⁹.

The actual construction and operation and maintenance of socio-economic infrastructure is organised under the umbrella of the neighbourhood (*kitongoji*) concerned. E.g. *Kitongoji Mswakini* has been respon-

sible for 3 kms of road works, for 2.5 kms of channel digging; and for 3 kms of water pipe laying since its foundation in 1993. In 2012 it indicated to plan for a primary school in 2013 together with a neighbouring *kitongoji*. Together one cultivates a small piece of land, harvesting 15 bags of maize @ Tsh. 90. per kg to have some income (Tsh. 135,000) for the *kitongoji* to facilitate its operations.

The members of the *kitongoji* meet every month to see joint benefit e.g. to have its agricultural produce transported well over the roads maintained.

In the very past there has been a cattle dip, but for a long time it does not operate. People spray their livestock against ticks.

Mang'ola has a weekly market operational on every Saturday.

Mang'ola nowadays is quite well accessible with seven times a day public bus transport, while additionally lorries, private cars and motorcycles connect Mang'ola with mainly Karatu on a distance of 58 km. On the Maswa side there is Matala on a distance of 138 km but that one is less accessible, just like the feeder roads to *shambas* and channels, which are inadequate as well.

Collective action and civil society

Mang'ola has 11 churches and one mosque. It counts 3 primary and 2 secondary schools. The first primary school was constructed in 1956, the second one in the year 2000 and the third one in 2007. In 2003 the Roman Catholic church started the construction of a secondary school, while in 2006 the construction of a second one started. In 2010 construction of classrooms for one of the secondary schools had been in process in addition to the establishment of piped water supply to the school.

Initially, parents envisioned that only a few children may go to secondary school and consequently to university, while most of the children were thought to remain in Mang'ola and stay/work as casual labourer. Nowadays some parents expect that the majority goes to secondary school and intends to get a job as government officer, while many parents, that work as labourer, still think that their children will be labourer as well (which they do nowadays already), so they question themselves why bringing children to school, as they become labourer afterwards. Many parents do not have sufficient funds to pay school fees for their

children, while these children – currently being labourer – bring in a lot of money.

The school sees its mission to have pupils learning to read, write and calculate with in addition ensuring that all jobs (livestock, fisheries, irrigation, apprenticeship) remain within reach (even though the school does not have tools, sewing machine or electricity). The PTA intends to ensure food (lunch) for the children, but according to the teachers the parents/committee do not have much force to organise things. Teachers think that parents do not own the school. One of the schools is in need for an additional six (voluntary) teachers but no action is taken to have funds raised to get them employed. Although it differs per school, parents are assumed to pay in between Tsh. 10,000 and Tsh. 20,000 per pupil annually. Parents are not always able to pay 100% of the indicated amount. If one does not pay, one is reported to the Village Secretary, who needs to follow up adequate payment, but follow up of such non-payment is not done well.

As far as finances are concerned checks and balances are adhered to. The chairman signs, the headmaster purchases, and the treasurer reports to the school committee which report is sent to the village government. Together one looks after the school. The PTA knows some sub-committees like education committee, food committee and project committee.

If teachers do not function, they are addressed by the headmaster. The headmaster is followed up by PTA/school committee that monitors quality of education. In case the school committee does not function, it will be addressed by the village government. However, the way parents and management are in control of the quality of education is not very clear.

Dommel secondary school has been established in 2007 from the perspective to have *'our children educated as anywhere else in the world'*⁴⁰. Construction of classrooms, administration blocks and teacher's houses take place since then. Besides the Board there are 3 committees with specific responsibilities: Committee *Ujenzi* to supervise school infrastructure; Committee *Taluma* (Academics) to review curricula and teaching material including the books for pupils; and Committee *Midamu* (responsible for discipline). In general, the teacher is supervised by the Headmaster, who reports to the Board, who reports to the village government, which through the ward education coordinator and education officer is super-

vised by Karatu District Council under supervision of the Regional authorities. Besides the central government contribution, one pays Tsh. 160,000 per pupil annually.

Mang'ola knows one rural health centre established in 1995 by the RC mission, together with a medicine shop (*duka la dawa*) and one dispensary established by KDC.

In 2010 a maternal and child health dispensary was constructed under supervision of the Dispensary Committee. It intends to give good services to the people irrespective their background. The Committee itself intends to follow up the construction of the dispensary and – when necessary to meet and discuss matters that have been brought up by the people (complaints, etc.). Initially KDC gave support and thereafter people contributed in cash and in kind. The Committee found it difficult to enforce its decision to have people contributing to the accomplishment, although it was decided by the village government that those that do not support get fined Tsh. 3,000. The Committee supervises the work of the doctor. The village government supervises the work of the Committee. Nowadays the doctor represents the dispensary during the village government meetings.

The dispensary is small (only one doctor since last year, 3 nurses, a small building and no accommodation). The people pay for the askari. People constructed up to lentil level and have new buildings (doctor's house + new maternal and child health ward) entered in the district planning. Major health problems have been identified as malaria, pneumonia, diarrhoea, typhoid and cancer.

Since 1998 Maji ya Nyumbani has been established to have all households connected, but by that time there was no planning and budget yet to get there. With support of 'Ingenieria sin fronteras' (ISF) from Spain in 2005 the water supply system is organised through the village with the fundi to maintain the system, inclusive the O&M being paid for by the village people. 8 km of water pipe has been laid down from the spring in Quandend to the village with 24 domestic points and over 80 private taps are connected. Those responsible for a domestic point collect fees.

People make still use of the river and small open springs as well for drinking and domestic water use. In general water is not seen as a problem in Mang'ola.

Some people see football (soccer) as an economic activity as one can grow to become professional. Soccer is good for one's health (as one is exercising). Soccer is a team sport to make one working together as a team. The soccer team intends to teach youngsters modern football. It intends to find a coach and to convince parents that soccer is good for the future of its youngsters (not to be afraid that accidents may happen during soccer). The team under discussion has reached the status to be number 3 out of 10 within the ward. Besides the health exercise, soccer is an instrument to cooperate with others as a team (besides impressing on the girls).

Collective action and production

In the '80s the cooperative movement existed in theory but did not function in practice. Checks and balances were not well structured. Trials of local government to purchase village lorries for transportation of onions did not sustain, mainly because of poor management. Such transport is taken over again by the – now local – private sector. Up to 1988/89 the primary society Eyasi (4839), including the villages Mang'ola Barazani, Jobat, Dumbechand, Malekchand, Endamaghang, Quandend, Laghangarar and Matala operated, but did not produce anything in surplus. Onions were not traded through the primary society and food crops were cultivated mainly for people's own consumption. Nowadays collective action initiatives emerge with members eager to ensure adequate checks and balances to keep control. Collective research, micro-finance and/or input arrangements are undertaken in manageable units wherein the members oversee what is going on.

A number of farmer groups have been established since 2007. One women group focuses on the construction of bio gas plants through support of Karatu Development Association (KDA). People themselves contribute chicken wire, aggregate, sand, stones, cement, etc. (worth Tsh. 6 mln.) while KDA supports a *fundi* to construct the plant. Every member cultivates ½ acre. One discusses beforehand what to grow and what fertiliser, etc. to use and afterwards one evaluates what the yield has been, and what problems have occurred.

Another more gender balanced group (savings and credit cooperative society) got a loan of Tsh. 3.6 mln. in 2009 to buy 49 bags of fertiliser. The individual members repaid, but as group one did not repay, so one was not able (yet) to get new loans for e.g. paddy or maize.

A third group focussed on joint research in 2009 to figure out which seeds are doing well to get development in agriculture and afterwards to get to the market (Karatu, Arusha, Nairobi, Farm concern Arusha). Actually, everybody worked for himself to get to the market. One conducted the research on the joint *ujamaa shamba* (1/2 acre) by one farmer (with advice of *bwana shamba*) for other farmers to observe. One got joint education and one got joint access to e.g. fertiliser, seeds, vegetables, maize, and/or support from *bwana shamba*. Through a loan from savings and credit cooperative societies 2 farmers were able to sell 400 bags of onions in Nairobi (for Juba).

A fourth group started in 2009 as well and intends to upgrade the standard of living of its members through good education, good housing and doing business (e.g. to sell 'medicines' in the shop). It intends to get everybody to the market, although actual marketing is done by people themselves. Onions are sold in Arusha. Paddy is sold in Mang'ola, just like *mabindi* (maize). One is not aware whether one gets the right market for his/her products. The group is in discussion with the *Tarafa* (division) to get water to the house. Membership fee is Tsh. 8000. For every specific task or activity one decides jointly how much members have to pay.

Since 2007 a savings and credit cooperative society with about 130 members aims to assist members in savings and getting credit to purchase fertiliser, medicines jointly, as it is more difficult for individuals to get such items. Savings and credit cooperative societies initially received a loan of Tsh. 60 mln, which has been issued as loans to its members. Currently⁴¹ the initial loan has been repaid and the savings and credit cooperative society itself has a capital of Tsh. 70 mln, that is outstanding for loans among the members. The savings and credit cooperative society covers the whole ward, although people from outside of the ward may join as well to get a loan.

There are a number of village community banks functioning in Mang'ola of which some are in support of social development and others in support of production. One village community bank intends to improve the livelihood of people or actually to improve the livelihood of the group. It describes its mission as to bring benefit to its members in terms of education (to pay school fees) and health (in case of sickness). In such cases the loan is paid back with selling of e.g. water by getting water to the houses (to sell water), selling beans or selling paddy. So ac-

tually, the example shows that the loan has not been used for an economic activity but for sudden social investment, while the repayment is done through production. One person gave the example of spending the money on agriculture (Tsh. 300,000) with partly repayment of Tsh. 225,000 through the selling of water. In the period 2010 – 2012 this village community bank gave loans for Tsh. 11,600,000; one had expenses of about Tsh. 240,000 and profit of Tsh. 600,000. Members of another village community bank got involved in business; opening of shops; buying materials in Karatu or Arusha to sell in Mang'ola. Or e.g., to buy material to grow onions or paddy (fertiliser, *dawa*) which needs more time to be repaid. For such investments one may get some grace period (i.e. longer than 3 months) to repay the loan with 5% interest. Another village community bank works in the same area but requires repayment of loans after 6 months with 10% interest. In all three examples the majority (roughly 80%) of the members exist out of women.

In June 2010 an Agricultural Marketing Cooperative Society (AMCOS) was formed but registered only very recently. It has not started operating yet. First thing is to have a godown constructed, but one doesn't have capital yet. The plan is that AMCOS will buy the crops for a fair price and afterwards will sell them on the market. At the end of the year the profit is shared among the members. When the price is low AMCOS will keep the crops for some time in the *godown* to sell them when the price is okay (high). Selling is done by informing the market that crops are available (for certain price), like is done by MVIWATA. E.g. one is able to sell for Tsh. 60,000 to Tsh. 80,000 at farm gate at harvest time, while the market price maybe Tsh. 120,000.

Mang'ola has a village farm of 17 acres but has rented it out to individuals for Tsh. 80,000 per acre. Except for the irrigation scheme people run their business individually. Mang'ola has 37 shops registered and there are many kiosks. Farm implements and inputs, like hoes, ox-ploughs, improved seeds and fertiliser (urea) are normally available in the local shops.

The HIV group got a tractor from Spain (RC) to cultivate their *shamba*.

Mang'ola has over 20 local brew pubs and 3 bars. There are 13 milling machines, 3 butchers, 6 tailors and 4 carpenters and people sell fuel 'out of the drum'. Mang'ola counts five male and 2 female salons. There are no bakeries, but nearly everybody makes cakes. There are four guest-

houses and over 30 *mgabawas*. There is no cooperative godown but there are more than 100 onion storage places

Local institutional embedding

Mang'ola has a village executive officer, while the WEO operates from Mang'ola as well. It has two agricultural extension and 3 animal husbandry officers. There is one forestry (environmental) officer available. There are 8 health workers operational and 33 teachers. 31 teachers work for 2,489 pupils at the 3 primary schools. Two teachers are employed in the secondary schools while an additional 6 volunteers work there as well for in total 144 pupils (82m/62f). It is clear that one faces an inadequate number of teachers, while in addition there are insufficient classrooms, tables, chairs, desks, books. People pay for volunteer teachers, a cook and the *mlinzis* (watchmen). They constructed 5 classrooms recently and collect annually Tsh. 5,000 from everybody above 18 years of age (by-law).

Since 2003 Mang'ola has a police station, which was established to safeguard security.

The members of the *mgambo* or *sungusungu* assist to get people to the office, that are called but don't come by themselves. Such members are paid Tsh. 5 to get people to the office. One has been taught how to use a gun, shotgun, machine gun, etc. One got training for 3 months, after which one got back to the village. The stay for the training is paid for by people themselves. One even pays for its uniform. Government only contributes for the teachers and the materials (machine gun, etc.) which are used during the training. The *mgambo* organisation resembles a military hierarchy, although the commander is elected by the *mgambo* members. Officially the commander operates under the village government.

B.7.10 Livelihood strategies

In 1988 only 6% of the heads of household were born in Mang'ola Barazani as the irrigation scheme was developing, while in 2010 that percentage rose to 56% with the irrigation scheme using the water source in a nearly optimum way. Only in case the channel system will be aligned fully, water losses will be reduced further.

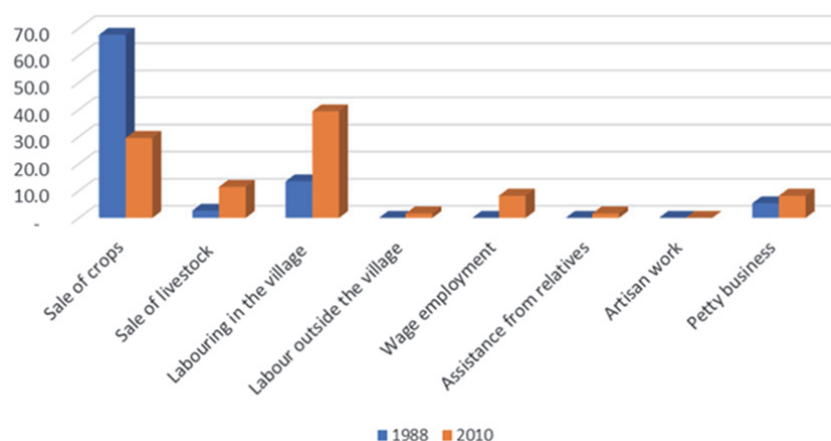
Mang'ola has grown from an average village to an above average village, which I conclude as being the result of above average education in 1988 in combination with reliable natural resources in terms of irrigation

water. These reliable natural resources were attractive initially for mainly migrating men to cultivate land where it was available.

For the whole survey period under investigation Mang'ola did not face any food shortage. However, as many people are labourer without a shamba, they just cannot pay for food in case they don't have work and therefore do not have an income. People have to invest Tsh. 800,000 in an acre of onions and Tsh. 200,000 in an acre of maize. Although agriculture is still the major economic activity the number of households that combines agriculture with livestock is growing. The percentage of households that is depending fully on pastoralism has nearly been reduced to zero. Gradually permanent employment or working as casual labourer has gained economic importance. Financially 'labouring in the village' has become a major source of income for nearly 40% of the households. See Figure B.7.4

Although hardly anybody is still involved in hunting or gathering there are some tourists' camps in the neighbourhood where people earn themselves a living. In the period February–April people are involved in fishing from Lake Eyasi.

Figure B.7.4
Main source of income of Mang'ola households in 1988 and 2010



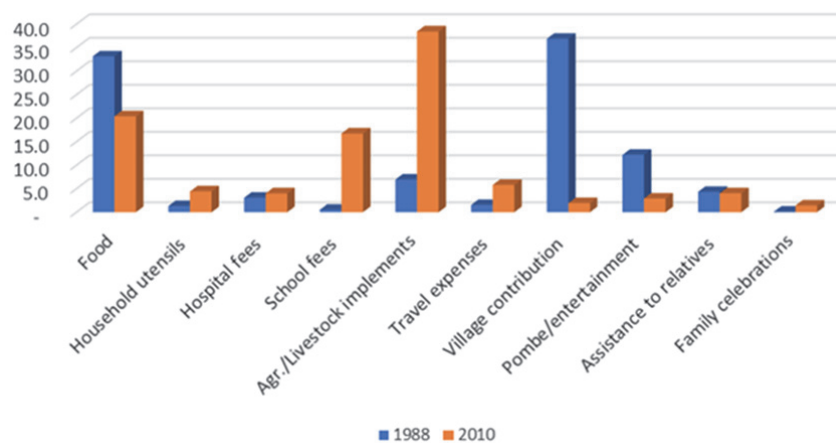
Source: Author

Over time the number of households, that indicated ‘sales of crops’ being their major source of income, has decreased from roughly 70% to 30%. Initially people entered Mang’ola to grow agricultural crops themselves, but later on some farms were leased to others, while additional people came as casual labourer or being employed in related businesses.

The number of those that receive their income mainly through labouring in the village has increased from a bit more than 10% up to nearly 40% with another 8% being wage-employed. Nowadays many people have come to Mang’ola while they cannot find work any longer.

Another change to be seen is that livestock over time has become an economic good. Where in the past people had cattle but hardly got income from it, nowadays over 11% of the households mention livestock as a major source of income, while the average number of livestock per household has decreased. Diminishing pastures made pastoralists to migrate and farmers to destock and change towards zero grazing. A number of them changed towards bio-gas addressing their fuelwood scarcity at the same time.

Figure B.7.5
Household expenditure in 4 weeks before the survey in percentages⁴²



Source: Author

The expenditure pattern changed substantially over time. In 1988 in average over one third of the expenditure was spent on village contributions, while over 10% was spent on drinking and entertainment. In 2010 those percentages were reduced to nearly zero, with nearly 40% of the much higher expenditure being directed towards procurement of agricultural and livestock implements (which in 1988 were hardly available), and over 15% being spent on education, which in 1988 was close to zero. See Figure B.7.5.

The *mobility* of the population has increased tremendously. In 1988 in only 8% of the households there was somebody that had travelled outside the village in the year before, which in that time was about twice the sample's average over the district. Nowadays it is just 67% of the households that had somebody travelling outside the village, which is just equal to the average of the whole sample.

B.7.11 Livelihood outcomes

Education in conjunction with reliable natural resources led people from just an average standard of living to speed up to comparatively the highest standard. Educated innovative people from all corners explored the natural resources well and managed to proceed ahead of the others. In average income grew well and well-being increased. Collectively one has been able to address Mang'ola's vulnerability. Unavoidable cooperation was done effectively and efficiently as in the case of water distribution for irrigation or water supply for household consumption. Where necessary, one sought cooperation outside the village, the ward and even outside of the district and region to ensure more sustainable distribution of water. Otherwise private enterprise fills the gap of service delivery where one is in need of.

B.7.12 Summary

The initial conditions in Mang'ola Barazani are described in reference to the availability of perennial streams used for irrigation which first attracted people to settle there, while afterwards it attracted people to go there as casual labourer. The construction of a primary school started in 1956 with a second one in 2000 and a third one in 2007. Secondary education was established in 2003, while a second secondary school was constructed in 2006. In the eighties less than 10% of the heads of household that resided in Mang'ola was born there, while in 2010 that percentage has

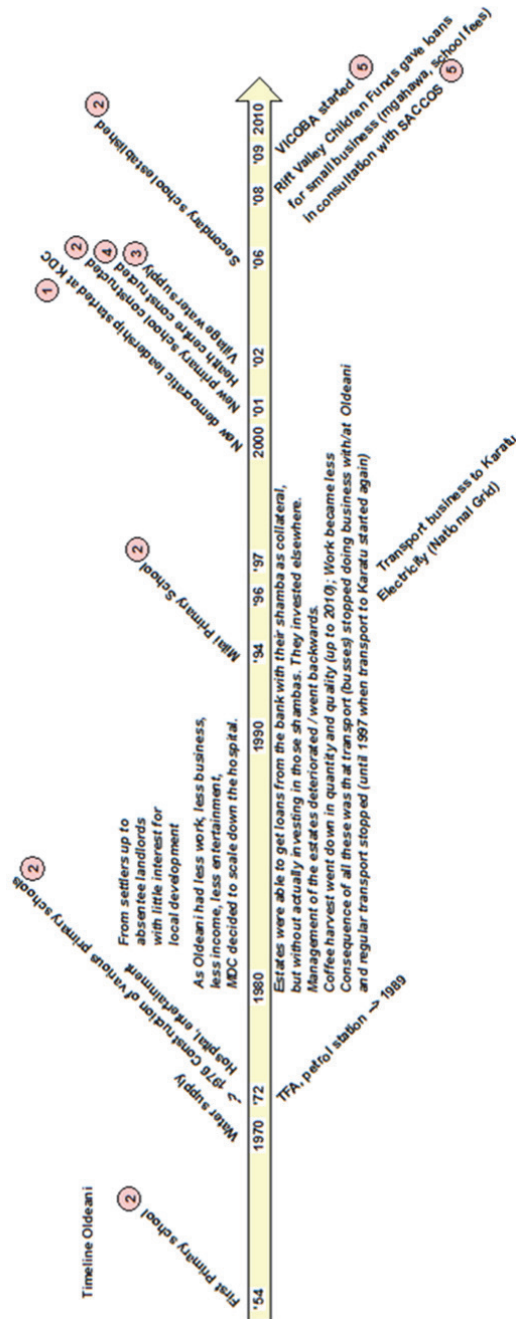
risen above 75%. In 1988 the area was poorly accessible, but the opening up of Arusha market resulted in a growing demand for onions, a growing demand for land to be irrigated and consequently for a more efficient distribution of river water for irrigation. In addition, the village organised itself to purchase its own lorry in order to compete with the transporters from Arusha. Since 1996 individual farmers operate their own lorry. The village irrigation committee operates officially since 1980 but has registered in 2011 only. Each major channel has its own committee, which although long operational, has not been registered yet. Although in 1988 the educational level was around the average, in 2010 the educational level has grown far above the average.

Although the number of lower local government related committees (20) is above the average, the number of civil society organisations (24) is above the average level as well, while the number of collective actions in the productive sector (12) is just below the average with in addition many private sector activities. Coordination structures are there and their leaders are able to stimulate people to pay for construction and maintenance of socio-economic infrastructure.

B.8 Oldeani village

Oldeani has been established as a German trading centre in the 1920s. Its first primary school was established in 1954. Water supply and a hospital were established in the '70s. TFA operated a petrol station. In 1988 Oldeani has been described as an area located in the lower edge of the Ngorongoro crater highlands, dominated by estate farms leased by mainly European settlers for 99 years, hence with a predominance of estate labourers (IRA, 1989). By that time Oldeani village together with four other villages was situated in Oldeani ward in Karatu division, while nowadays Oldeani village is situated in Oldeani ward, Karatu district, while the original Oldeani ward has been split in two wards. Current Oldeani village has been registered in 1993 only.

Figure B.8.1
Timeline Oldeani⁴³



Source: Author

Up to the mid-eighties Oldeani was equipped with well-functioning socio-economic services. With the departure of the European settlers, business and employment opportunities diminished and the socio-economic service delivery deteriorated as well. The access tarmac road through the valley has not been maintained since then and has become a dirt road again, hardly passable during the rainy season.

Current village leaders see democratic leadership as key in development. The construction of education facilities, water supply and health facilities, together with the organisation of savings and credit have been appreciated as of major importance in the current development process.

In reference to the components of the sustainable livelihoods framework changes over time are described below.

B.8.1 Cultural capital

Oldeani has a long history as a German trading centre, which was established in 1926. Consequently, the local government structure was set up and maintained by the settler population. Currently, the population is mainly formed by estate labourers, mainly not born within the village, and of which many only work as seasonal labourer, having their own shamba somewhere else in the district. In 1988 about 70% of the heads of household indicated to be *Mwiraqu*, while in 2010 that percentage rose to 85%, which has been the second lowest in the research area outside Mongo wa Moono. Although still *Wairaqu* by majority, as a rural settlement it does not have a council of elders, like the other villages in the research area. From cultural perspective it has a *ngoma* only.

B.8.2 Human capital

The number of households grew from 432 in 1988 up to 1,518 in 2010 with an average household size growth from 4.6 in 1988 up to 5.6 in 2010, with a changing m/f ratio of the working population from 87 in 1988 up to 107 in 2010, and a slightly growing working age population as percentage of the total population from 53% in 1988 up to 60% in 2010. The population has been *Mwiraqu* mainly with a changing *Mwiraqu* heads of household population from 74% in 1988 up to 85% in 2010. In 1988 14% of the heads of household was born in the village, while in 2010 that was 39% of the heads of household, which comparatively is very low.

A key issue in human capital development is the change in educational level. In 1988 35% of the population and 39% of the heads of household had at least standard seven qualification, while in 2010 those percentages were 51% and 70% respectively. The educational level of the population grew in line with the district's average. The educational level of the heads of household in 1988 however was well above the average district level, while in 2010 the level of their education was well behind the average level. The percentage of population with at least secondary education changed from 2% to 11% which – although shown as a major increase – may not reflect the reality, as secondary school graduates leave the village for further education elsewhere.

A rather stable percentage of the heads of household of just about half of them works in the agriculture and livestock sector, while just below half of them work as casual labourer or sometimes in business. Casual labourers actually work only four months per year in Oldeani. The rest of the year they try to work elsewhere.

B.8.3 Natural capital

Oldeani exists of estates. In the past they were mainly owned by 'colonial' settlers, while nowadays they are mainly owned by absentee landlords that live in Arusha. Ordinary people have a small piece of land only. In 1988 the village authorities indicated unavailability of space for cultivation as the major felt need (Van Dijk, 1988), an issue still mentioned – and even worse – in 2010 as well. The average household land size was less than one acre in 1988, while it decreased up to less than half an acre in 2010. While 38% of the male headed households own some land, only 21% of the female headed households own land. The village itself covers 156 acres only for residential and farming purposes, with only 6 acres available for grazing. Most land in the area is occupied by coffee estates, of which the total area is not known. In the late '80s the estates deteriorated and labourers were allowed to cultivate part of it temporary, which was stopped again in 2001. Since 2008 the village government opened the discussion again to issue land back to the village/villagers that is not in use by the estates.

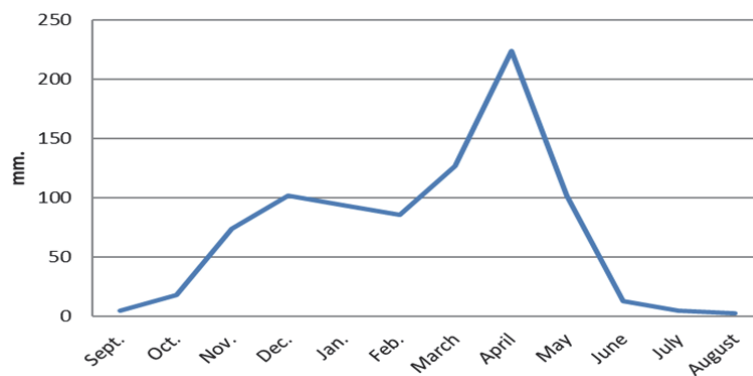
About 100% of the cooking is based on the use of natural capital in the form of available fuelwood. A lot of fuelwood is obtained from trees that are pruned on the estate land or purchased from outside.

Over time on the little land available there has been some shift in agricultural practices with relatively more households concentrating on agricultural activities only and few households do so in combination with zero grazing as major activity. Tree planting and contour making is encouraged. Hardly any of the households depends financially on agricultural or livestock practices as they depend on labouring or petty business. And although one indicated that the yield per acre increased substantially over time, actually it was and still is far below the average in the research area. The agricultural calendar and rainfall pattern are indicated as follows:

Farming calendar

Rainfed	Planting / Harvesting
Maize (<i>mahindi</i>)	January / May
Beans (<i>maharage</i>)	Nov / March & Apr / August
Wheat (<i>ngano</i>)	March / September
Coffee	July / November

Figure B.8.2
Mean annual rainfall at Kongani estate (853 mm)



Source: Magoggo (1995)

In 1988 households kept 13 heads of cattle in average, while in 2010 that number has reduced to less than one. Only 2% of the households indicated to have adequate pasture for its cattle.

B.8.4 Physical capital

Up to the '80s Oldeani could be reached through the valley via a tarmac road which was constructed at the time that the European settlers looked after their lands. After change of ownership to absentee owners from Arusha the coffee estates deteriorated. The road was not maintained any longer and disappeared gradually and nowadays it is difficult to reach Oldeani during the rainy season from March to May. The daily transport between Oldeani and Karatu stopped in 1989 and was reopened in 1997 only. Since then outside the rainy season a daily bus service operates between Oldeani and Karatu on 20 km distance.

Up to that time Oldeani was larger than Karatu and accommodated the district hospital, a distribution centre of the Tanzania Farmer's Association (TFA) and a petrol station, which all deteriorated and were either down-sized by the Mbulu District Council (the hospital became health centre) or stopped operating (in 1979). The main reason for this was that the estates were sold by settlers that lived in the area to absentee landlords living in Arusha. The latter ones were less interested to invest in local collective socio-economic infrastructure. So Oldeani does not have a village *godown*, but all of the 13 coffee estates have their own coffee store. Most estate labourers are accommodated in estate residences.

In 2010 Oldeani accommodated 15 shops, a bar, 8 tailor shops, 2 butchers, 2 carpenters, 10 milling machines, a weekly market on Sundays, many tea/coffee rooms (*mgabawa*) that all make their own cakes, a post office and a police office.

Oldeani operates its first primary school since the early '50s. In 1976, 1994 and 2001 three additional primary schools have been constructed. In 2006 a secondary school has been established, which in comparison to other villages is rather late. Although the village government planned to have an adequate number of teacher's houses, so far there are insufficient houses and consequently some government staff commutes from Karatu daily.

Water supply is available through an 8 km long pipe from some rivers in the forest since the early '70s with 15 domestic points, 74 private

points and 24 water points on the 13 estates, but during the dry season those rivers do not have much water in their bed and people indicate to have regular water problems.

Since 1988 individual households gained towards 2010 in average physical capital in terms of ownership of bicycles (from 5% to 18%), radios (from 39% to 71%), hurricane lamps (from 55% to 69%) and mobile phones (from 0% to 58%), but lost in average as well in terms of watches (from 40% to 20%) and houses with corrugated iron sheets (from 34% to 23%), while e.g. the percentage of households with ox-ploughs (4%) or charcoal burners (25%) remained stable over time. In 1996 one *kitongoji* was connected to the national electricity grid.

B.8.5 Financial capital

Financial capital development is measured traditionally in terms of livestock availability or in financial terms in reference to households' expenditure level and although in general both measurements are not accurate, in relation to Oldeani the livestock availability is not taken as measurement, as people mainly work as casual labourer. It is true that in 1988 in average the household herd counted 13 heads of cattle which in 2010 has reduced to nearly zero, but in 1988 those cows were owned by only very few farmers and those farmers stopped other farmers to keep cattle within the village boundaries.

The major source of income for over 70% of the Oldeani households is 'labouring' on any of the estates, although they may only work four months a year as casual labourer. Households' average expenditure is about 40% above the average of the research area and spent on food for about 60%. The average expenditure in comparison to the rest of the research has remained stable over time, although in comparison to Karatu district, it grew less fast. The percentage spent on food reduced up to half, while the expenditure on education grew from less than 1% to 26% of the household expenditure, which comparatively to the rest is substantial.

Financial capital development of the village as a whole in terms of growth in the percentage of households owning specific physical capital comparatively to the growth in the total research area is seen over the period 1988 to 2010 through the percentage of owning tractors (Oldeani growth of 1.07% vs. the average growth of 1.58%), bicycles (Oldeani growth of 3.91% vs. the average growth of 10.75%), owning radios

(Oldeani growth of 1.83% vs. the average growth of 2.96%), owning hurricane lamps (Oldeani growth of 1.24% vs. the average growth of 1.75%), owning clock/watch (Oldeani growth of 0.49% vs. the average growth of 0.82%), or owning corrugated iron sheets (Oldeani growth of 0.68% vs. the average growth of 2.75%). I conclude that the actual financial capital development growth is little in comparison to the other villages.

In seven out of ten *vitongoji* the majority of the working population works as casual labourer with little income (daily pay in 2010 was Tsh. 2,700) from which it is difficult to raise money for the village to take initiatives, while the estates themselves pay their taxes to central government.

In the past estate owners were able to get loans from the bank with their estate as collateral. In the past the settlers used loans to invest in the area to operate more economically and to improve their well-being. Nowadays current estate owners still acquire loans from the bank with their estate as collateral, but invest the money in their additional business in other parts of the country (mainly Arusha).

Based on their 99 years lease contract, the estate owners pay their taxes directly to the central government and the village government does not get anything 'special' in return from the central government. The village government cannot force estate owners to distribute non-utilised estate land to villagers to enhance production and consequently to enhance local economic development.

Access to financial capital has grown with the establishment of the village community banks since 2010. The roughly 30 village community bank members per group contribute nowadays Tsh. 1,500 weekly to the own group funds, on which basis one is able to get access to a short-term loan of currently maximum Tsh. 100,000 to initiate a profit-making undertaking. E.g. out of Tsh. 100,000 loan one cultivates tomatoes and gets income of Tsh. 600,000. One repays the Tsh. 100,000 plus Tsh. 5,000 interest and pays the cost for cultivation. Another example e.g. is that out of the Tsh. 100,000 loan one buys clothing material and prepares *vitenge* which are sold for Tsh. 300,000 or one makes clothes in addition to earn another Tsh. 200,000. One repays the loan plus Tsh. 5,000 interest.

B.8.6 Social capital

Oldeani does not accommodate a council of elders, which means that collective action is not guided by the advice of such council, but by the village government leaders only. The village government intends to organise 'self-help labour' to collect sand, stones, aggregate and water to construct teacher's houses, water supply or to maintain the feeder roads. The work is organised per *kitongoji* under supervision of its chairperson. Both village and *kitongoji* leadership encourage individual households to participate in joint planning and implementation through *nguvu kazi*, besides the improvement of their own living environment in terms of accessing water harvesting, bio-gas or solar. They supervise the distribution of improved seeds under *mbegu mbora* and encourage agricultural extension to ensure that people increase their harvest.

Like the *ngoma* from traditional point of view entertains people, there are various choirs (5) from religious point of view that in first instance operate during the church services, but as group cooperate to educate people (norms and values) as well. The *sungusungu* in Oldeani is well organised too in order to maintain security and where necessary operate under the village government to maintain law and order.

B.8.7 Political capital

Both CCM and Chadema are represented in Oldeani, but currently Chadema (52%) has the majority in the village government. It has been mentioned during the focus group discussion in 2010 that the change in political leadership got the highest recognition in reference to the development process in Oldeani.

B.8.8 Vulnerability context

The percentage of households indicating to have land reduced from 48% in 1988 to 33% in 2010. For 75% of the households the question concerning pasture availability did not apply in 1988, neither in 2010, as one does not have livestock that is in need of it. Where in 1988 still 9% of the households indicated to have just enough pasture, nowadays that percentage has come close to 0%, while the remaining part indicates not to have access to sufficient pasture. The little grazing area that was there in the past has been taken over for agricultural cultivation. The percentage of households that keeps livestock increased slightly from 12% to

16%, but the total livestock population decreased substantially in average from 13 heads of cattle to 0.4 per household.

The fuelwood situation has not changed much over time with about half of the households indicating to have a shortage on fuelwood, while roughly 40% indicates to have just enough access to fuelwood. The majority of the people use fuelwood for cooking and kerosene for lighting. Roughly 10% use charcoal from Mang'ola for cooking and only one kitongoji has access to the national electricity grid. Three households have access to solar for electricity. Although half of the population indicate that there is just enough fuelwood available, people are not allowed to cut, only to prune and the pruning is nearly always from trees owned by the estates (which actually is stealing). Therefore, one has to buy fuelwood. There is hardly fuelwood available for 'own' cutting as there is no free space for 'own' planting. Tree planting is done on the contours that farmers are encouraged to make as environmental measure to prevent erosion.

The existence of the estates causes 67% of the people to indicate that land shortage is a major problem, but actually this has long been a given. Gradually people see it less as a problem, as one depends on other sources of income. People have been attracted by the estates to get employed. Therefore, the vulnerability of the area is less depending on the natural resources but more on the availability of effective and innovative management of the estates ensuring that the available labour is used (and paid) the whole year round. Too many people depend on seasonal labour demand, which results in low cash income and consequently in the inability to buy food when the maize price is high. Food shortage than is mentioned as a major problem.

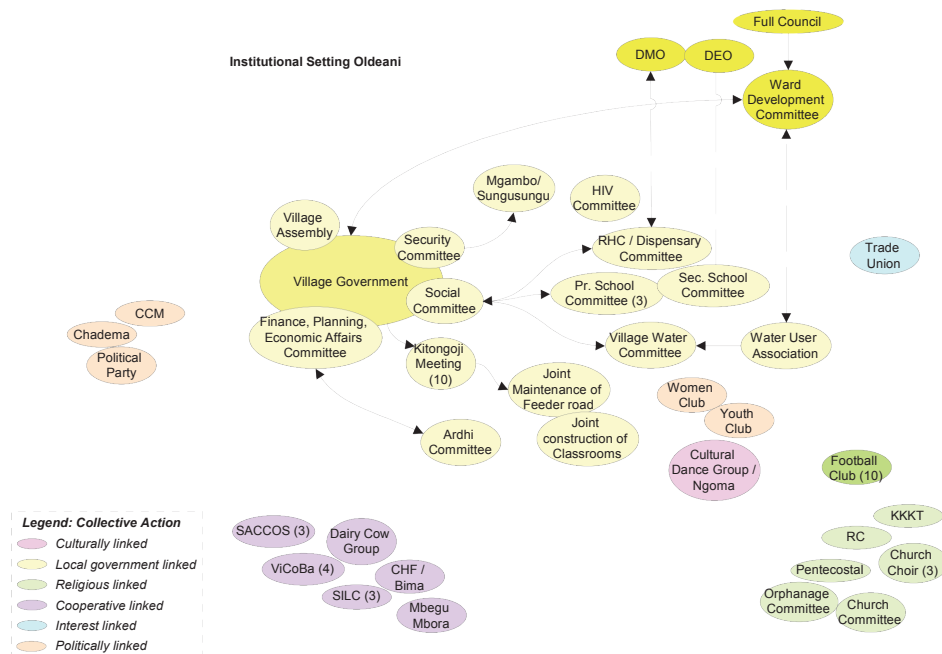
B.8.9 Transforming structures and processes

As Oldeani has been established originally as a German trading centre with estates that mainly grew coffee, the original governance of the area and its socio-economic service delivery has been influenced by the settlers up to Independence, while the settlers remained interested in good service delivery up to the eighties (Iliffe, 1979, Coulson, 1982).

Casual labour that came to work on the estates initially did not have traditional roots in Oldeani area as they came from other parts of the district, and no council of elders exists in the area up to date. Local government and its related committees operate since Oldeani has been regis-

tered in 1993. Village government and *kitongoji* boundaries have changed since Independence. See Figure B.8.3 for an overview of the current collective action in Oldeani.

Figure B.8.3
Overview of current collective action in Oldeani



Source: Author

*Collective action and socio-economic infrastructure*⁴⁴

In 1954 the first primary school was erected. In 1970 Mbulu District Council established piped water supply. From 1972 to 1976 a few other primary schools were constructed around Oldeani, including the Changarawa one.

Those days, up to the mid-eighties, Oldeani was bigger than Karatu. By that time there was a district hospital, entertainment, a distribution centre of the 'Tanzania Farmers' Association (TFA), a petrol station and to pass the valley towards the hilly part there was a tarmac road. However, the European settlers left the area gradually with their estates being taken over predominantly by businessmen from Arusha that operated the estates mainly as 'absentee landlords'.

As since the early nineties Oldeani had less work, less business, less income, less entertainment, the Mbulu District Council decided to scale down the hospital. Consequence of all these was that transport (busses) stopped doing business with/at Oldeani and regular transport stopped until 1997 when transport to Karatu started again.

In 1996 the National Electricity Grid came to part of Oldeani.

Nowadays Oldeani is managed by the people (mainly casual labourers at the estates), while the current (absentee) estate owners are less interested in the development of Oldeani as a society, but interested in their own profit only. They do not live on the estates any longer.

Currently Oldeani has a market every Sunday. It has 10 milling machines, 15 shops, many *mgahawa*, 8 tailors, 2 butchers, 1 local brew pub, a post office and a police station. There is no bakery, but everybody makes its own mandazi. There is no operational village godown, but all 13 coffee estates have their own coffee stores. Oldeani never had an adequate village office. Oldeani has an inadequate number of staff houses for village executive officer, teachers, etc. and consequently staffs go back to Karatu every day. The village government planned to construct a village office, teachers' houses, a food store at primary schools, a fourth primary school, a mortuary at the rural health centre and feeder roads.

Currently, water supply is available for human and livestock consumption through 8 km pipe, 15 domestic points, 74 private points and another 24 water points on the 13 estates. In addition, people and livestock have access to 3 rivers, but during the dry season these rivers hardly have water in their bed. People indicate to have regular water problems.

After people dug for laying the pipes from the forest (*nguvu kazi*) individual households paid Tsh. 30,000 for house connection, like in Ngamba kitongoji. One pays Tsh. 5 for 20 litres. Kati kitongoji in cooperation with another 2 *vitongoji* has a number of domestic points (DP). Each DP

has its own committee with representatives in the village water committee of the village. Together with the neighbouring villages Changarawe, Qurus and Bashay, Oldeani established a water board through the election of one male and one female representative per village, not necessarily a village leader. In case of problems, the Board (manager, treasurer, *fundi*) send a *fundi* to follow up.

At Miali Primary School, which was constructed in 1994, people still have to walk 3 km for getting water. The village wants to start a nursery for tree planting but does not have access to water. Livestock does not have water during the dry season. Individuals have started with roof water harvesting, while in addition the water board and KDC have been requested to give support to establish additional water points.

Since 2006 Oldeani has its own secondary school.

The tarmac road from the past has not been maintained with the consequence that during the rainy season from March to May Oldeani is difficult to reach. The rest of the year there is a daily bus service to Karatu on 20 km distance: one bus a day; departure at 08.00 hrs., return at 16.00 hrs.

Collective action and civil society

Currently Oldeani knows 5 churches (KKKT, RC, Sabbatical, Pentecostal, TAG), a mosque and the missionary centre 'Shamba la Brother'.

It has 3 primary schools, a secondary school and a rural health centre. In 2010 the primary schools together had 1,744 pupils, while the secondary school had 206 pupils. All schools have insufficient classrooms and teacher houses. As the income of casual labourers is low (in 2010 daily pay is Tsh. 2700) it is difficult to raise money from the villagers, while the estates are not interested to contribute much. However, the school board intends to achieve good education with access to library, computers, water and lunch. With support of the *kitongoji* chairman it intends to ensure school infrastructure, including classrooms, toilets, teachers' houses, lunch for the pupils and enough teachers. It encourages as well to have children getting into 'kindergarten' before primary school in order to have them on the right quality at entry point. The last two years one managed to have a kindergarten, dining hall for 350 children, food storage, kitchen and water harvesting infrastructure constructed besides the procurement of eight computers connected to solar energy. Two *vitongoji* gave support to have a water bowser hired for which households

contributed Tsh. 3,500 each. In 2010 the school committee organised a seminar with other school committees on 'how to run schools'.

Oldeani cooperates with Changarawe, Qurus and Bashay to ensure water supply. Each village elects two representatives (one male, one female) in the Board to have water service delivery well established, payment taken care of and in case of problems to direct the fundi to address the issue. The actual construction of the water scheme has been done through *nguvu kazi*, i.e. self-help labour in which the households of each kitongoji contribute (or pay that time Tsh. 7,000 in case one does not contribute, so that labour is paid for). For operation and maintenance of the domestic points a small committee has been elected which is represented in the village water committee, which consequently has its representatives in the water board.

Collective action and production

Social capital to enhance production or economic performance operated up to 1988/89 as primary societies Daa (4713), including the villages Changarawe and Mang'ola Juu, by that time part of Oldeani ward, and from 1987/88 onwards as Daa (1987, AR 79) for Changarawe only, while Mang'ola Juu went on as Yudeck AR 83.

Current local government leaders indicated that the 'absentee landlords' have a different way of operating the estates than the settlers of the past. Since they took over, the coffee harvest deteriorated. They grow wheat as well which is transported to Kenya. Although estate owners were able to get loans from the bank with their *shamba* as collateral, they actually did not invest in those *shambas* in Oldeani. They invested elsewhere. Management of the estates deteriorated and production went backwards. Coffee harvest went down in quantity and quality. Consequently, work in terms of employment and casual labouring became less. Since the mid-nineties labourers were allowed to cultivate areas on the estates that were not cultivated for coffee and they grew maize, beans, etc. for their own consumption. In 2001 the estate owners stopped labourers cultivating part of the estate for their own food consumption with the consequence that people were chased from the estate areas and started their petty business (*mgahawa, duka*) in Oldeani.

Since 1992 a group of 40 women support each other in dairy farming. Besides giving extension on the good use of milk products, members work together to organise fodder. Members indicated that their cows

calve every year through which they gain income, which nowadays is kept with the village community bank. One agrees on the price of milk. One educates each other to improve their animal husbandry. Collective action ensures the support of the livestock development officer and to organise artificial insemination. The group indicated not to be able yet to grasp support for the construction of bio gas plants.

In 2000 the Rift Valley savings and credit cooperative society in Oldeani has been established and registered in 2001 from the perspective to facilitate the trading of maize and beans through the construction of godown and office and to enable members to have access to loans up to Tsh. 600,000. The savings and credit cooperative society operates partly through village government involvement from the point of view that in case members do not repay their loan they are reported to the village government after which they are fined. At times of interview 9% of the members that got a loan had not repaid the loan timely and were fined (2% of outstanding amount per month), which was concluded as an average situation. The District Cooperative Officer is invited by the Board to conduct the external audit annually. The Board indicates to depend on its own educational level to push others, to know their rights (and duties) and to cope with the District Cooperative Officer and the Karatu District Council.

Once a year a seminar is organised together with Mang'ola savings and credit cooperative society with experts from Karatu District Cooperative Office.

Most estate labourers have been organised in the Tanzania Plantation and Agricultural Workers Union (IPAWU). Through this savings and credit cooperative society one is able to get access to loans as well. In total 3 savings and credit cooperative societies operate in Oldeani.

In 2001 people started petty business. In 2008 the Rift Valley Children Funds gave loans for small business (*mgahawa*, school fees) in consultation with savings and credit cooperative societies, while in 2009 the village community banks were introduced. Since 2009 Oldeani accommodates a number of small business groups that operate in various trades to assist each other and/or giving loans to each other. Groups of mainly 5 to 10 women are involved in e.g. selling crops, making pictures, making video or show, raising chicken, running of restaurants or *hoteli*, keeping dairy cows or *ngombe ya kinyeji*, or just working as labourers. Although organised in small groups they operate together under the heading

of 'Ward' which has not yet registered, to organise a plot in Karatu to expose their businesses. The group members assist each other with small loans if necessary.

Since 2010 village community banks have been established in Oldeani as well. The collective action in reference to the village community bank (4) / savings and internal lending communities (3) loans is to have a clear monitoring of the repayment of the loans through 'social control'. Their way of operation is discussed under 'financial capital' above. Besides on production people spend their money on school fees, construction of accommodation or any consumption. So far there is no indication that village community banks communicate or cooperate amongst themselves.

Food shortages occur regularly, the last one being in 2006. One does not have space to cultivate oneself; and in 2006 the price of maize was very high up to Tsh. 11,000 per *debbe* and one actually did not have sufficient money to buy food.

Local institutional embedding

The mission of Oldeani village government is to educate people and to have them being involved in business and getting loans to buy biogas, water harvesting implements or solar energy. It encourages the construction of teacher's houses at secondary school through **nguvu kazi*, sand, aggregate, etc., or having households paying Tsh. 7,000 in case one does not work. It encourages agricultural extension to improve the harvest by having improved seeds purchased and distributed under the *mbegu mbora* project. For bio gas construction individuals seek support from Karatu Development Association.

Oldeani has a village executive officer, while the ward executive officer (WEO) is based in Oldeani as well. It has an agricultural/livestock extension officer, a water technician, 16 health staff in the RHC, 36 teachers and 4 volunteers paid by the village, 3 police officers and a postmaster. In average 54 pupils per teacher indicates that there are insufficient teachers in Oldeani as the standard is 40 pupils per teacher.

The village is split up in *vitongoji* and e.g. the chairpersons of Ngamba and Kati indicated that their vision is to have improved houses with solar energy, water for all households, electricity to the houses, milk for everybody and good roads for cars to pass well the whole year round. They

feel responsible to ensure quality education for all children and to organise people for road construction through joint planning

There is no space for building another secondary school. Estate owners pay less money to central government and the village government may get *peanuts*, but the latter one is not able to force the *absentee landlords* to pay anything. In 2008 Oldeani village government requested central government to issue land back to the village/villagers that is not in direct use by the estates, but it did not receive feedback up to date. The village government sees redistribution of unused estate land as an option to enhance local economic development.

Primary societies stopped functioning but savings and credit cooperative societies were established. As many people work on one of the estates, they have united in the Trade Union to discuss labour matters with the estate owners. Public services like education and water are managed collectively in loose cooperation with the village government. Village government and its committees operate as indicated in the LG Act without the informal cultural links with informal traditional Mwiraqw advices. People indicated to appreciate the recent political change in the village government through which a different agency enabled development. Village community banks and savings and internal lending communities were established as 'stand alone' micro-finance groups, while additional cooperation to have access to larger loans has not been institutionalised (yet).

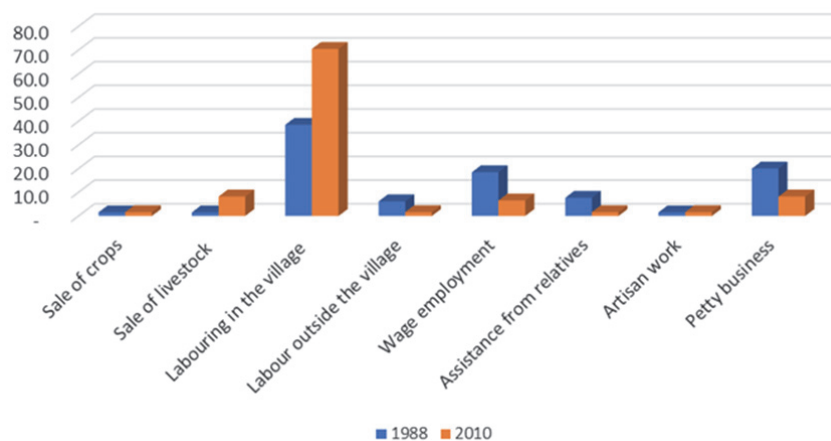
Estate land has been issued under 99 years lease contract, but not all land is productive. Village government is unable to redistribute such land to others to enhance production. Small groups of people produce together and cooperate without having the collective action registered and institutionalised. A number of small groups works together having joint outlets in Karatu, but without being institutionalised either.

B.8.10 Livelihood strategies

Most Oldeani heads of household were not born there. In 1988 only 14% of them were born in Oldeani and in 2010 only 39%. Most people live and work in Oldeani on temporary basis, as the actual work on the estates takes about four months a year. The other part of the year one looks for work elsewhere or one cultivates one's own shamba elsewhere. However, the family resides in Oldeani as accommodation is made available for the estate labourers. 'Labouring in the village' has become a ma-

major source of income as nowadays over 70% of the households indicate to see that as their major source of income, while in 1988 that was only seen so by less than 40% of the households. See Figure B.8.4.

Figure B.8.4
Main sources of income of Oldeani Households in 1988 and 2010



Source: Author

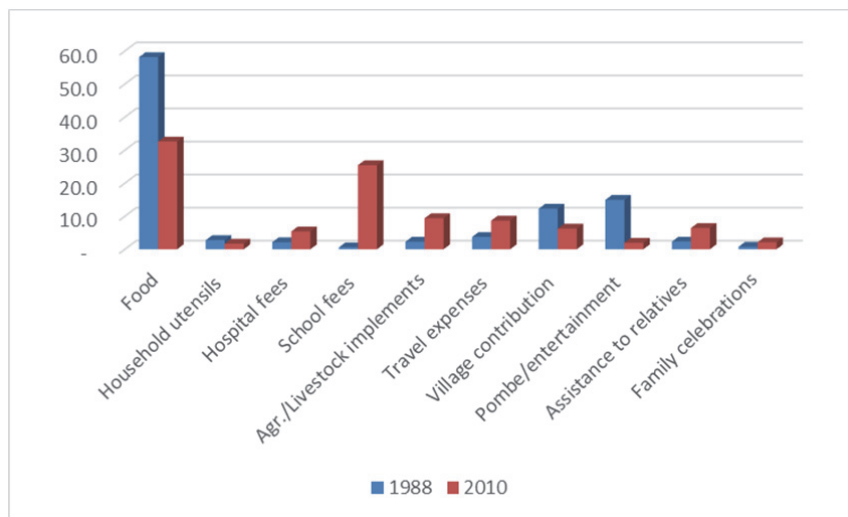
In 1988 one indicated 'to be around' even after the working season. That time only 2% of the heads of household indicated to travel, while that percentage rose to 87% in 2010. Outside of the working season on the estates nowadays people try to get involved in petty business in small – non-registered – group undertaking with an outlet in Karatu. One requested for education in group formation.

In 1988 household expenditure was spent for 60% on food items with the remaining part mainly spent on village contributions and beer/entertainment, as indicated in Figure B.8.5.

In 2010 only 30% of the average household expenditure was spent on food, while as a major increase 25% of the household expenditure was spent on school fees, with some little 10% on agricultural and livestock implements and travelling. Increased expenditure to have access to education – I conclude – is partly caused by people's awareness and interest to invest more in someone's education, and partly by government's ina-

bility and unwillingness to pay for primary education for 100%. In addition, people nowadays spend relatively less on 'drinking' than what happened in the past.

Figure B.8.5
Household expenditure in 4 weeks before the survey in percentages⁴⁵



Source: Author

Besides the fact that the population get better educated, the TPAWU members have been active ensuring that child labour does not exist on the coffee estates (*Nchabaga, 2002.*)

The *mobility* of the population has increased. In 1988 only 2% of anyone in the household travelled outside the village in the year before, which in that time was far below the sample's average over the district. Nowadays it is 87% of the heads of households that travelled outside the village in the year before, which is far above the average. In that sense the mobility of the people in Oldeani has improved tremendously

B.8.11 Livelihood outcomes

Oldeani's household incomes has increased and remained above the average of the research area and consequently grew faster than the national

inflation figures. However, it remained below the average household income in Karatu district. Population's well-being grew, but less quickly than the average in the district. Socio-economic service delivery in the past had more effect than in current situation in terms of e.g. accessibility and health services. Education facilities grew but the educational level of population and heads of household lagged behind the average. Average household's land size was already comparatively small in 1988 and decreased further. Oldeani's average livestock herd decreased, its employment situation on the estates deteriorated, and as a consequence people changed towards contour farming, zero-grazing and non-registered collective action for petty business. Household members that are employed as casual labourer have to find additional employment in petty business or outside the area, through which they are less able to maintain or secure socio-economic services. As they do not have access to sufficient land, food security is guaranteed only in case one gets adequate income through e.g. own farming or additional casual employment elsewhere.

B.8.12 Summary

The initial conditions in Oldeani are described in reference to the estates that have been operational since colonial times up to the late eighties and were 'owned' by European settlers. Socio-economic services operated rather well that time but deteriorated after the estates were sold to *absentee landlords* from Arusha. Over time people from other parts of the district seek seasonal work as unskilled labourer on the estates. In 1988 less than 20% of the heads of household was born in the area, while in 2010 still less than 40% of the heads of household was born in the area. Although families may stay in accommodation supplied by the estate owners, heads of household may work seasonal only in Oldeani, while they or their relatives are involved in business and/or cultivate their *shamba* elsewhere. A variety of private entrepreneurs (maize mills, shops, tailors, butchers, etc.) operate in Oldeani.

Although the number of lower local government related committees (19) is above the average level and the number of civil society organisations (24) is above the average level, while the number of collective actions in the productive sector (13) looks below the average, but a number of small entrepreneurial groups of mainly women that are not registered operate in all kind of commercial enterprises off-season. Co-

ordination structures are there and their leaders are able to stimulate people to pay for construction and maintenance of socio-economic infrastructure in terms of education and water supply. Both in the field of education and in the field of water supply coordination and exchange take place among neighbouring villages.

Notes

- ¹ Original questionnaire is in Kiswahili.
- ² Original questionnaire is in Kiswahili, while translated in Ki-iraqw (local language).
- ³ IRA (1989: 1) notes that the socio-economic baseline survey was conducted in eight areas, selected by the Mbulu District Council as being a good representation of the various homogeneous groups, forms of land tenureship and agro-ecological zones:

- Mbulumbulu: a catchment area with substantial agricultural surplus, but subject to soil erosion.
- Oldeani: an area located in the lower edge of Ngorongoro crater highlands. It is dominated by estate farms leased for 99 years, hence with a predominance of estate labourers as well/
- Mang'ola area: located along the shore of Lake Eyasi. This is an area with irrigation potential especially for onions and paddy production. However, there is no substantial agricultural surplus. It is inaccessible by road due to poor state of the road.
- Buger: an area with moderate agricultural surplus, but inaccessible throughout the year due to the poor state of the road.
- Kwermusl: close to Mbulu town, located on the highlands near Nou forest reserve, hence difficult to reach; the road is in poor state. The area has no significant agricultural surplus
- Tlawi: this area is close to Mbulu town as well, but in the Southwest. The district road to Haydom passes by the village. It has irrigation and fishing potential because of Lake Tlawi. There is a moderate surplus in this area.
- Harar: remote area, located in the Southwest tip of the district, near Mbulu – Singida – Hanang borders. There is moderate agricultural surplus.
- Mongo wa Moono: remotely situated along the Rift Valley (Yaeda Valley). No agricultural surplus. Mainly an area of pastoralists, hunters and gatherers.

From within these eight study areas, eight villages were selected for sampling: Kambi ya Simba, Oldeani, Mang'ola Barazani, Buger, Kwermusl, Tlawi, Harar and Yaeda Chini.

⁴ The timeline was developed by the author during a focus group discussion with a selection of village leaders on 28 July 2010 during which the indicated development issues were mentioned as important for the socio-economic development of Harar.

⁵ As indicated during an interview with the *kitongoji* chairpersons of Geyson and Masquirir, 6th of August 2012, in the village office of Harar.

⁶ Dijk, T. Van (1988): Some socio-economic aspects in Mbulu District (mimeo) MDRDP

⁷ As discussed on 6th of August 2012 with representatives of the PTA during an interview.

⁸ The two surveys were conducted in the period July-August.

⁹ The timeline was developed by the author during a focus group discussion with a selection of village leaders on 29th of July 2010 during which the indicated development issues were mentioned as important for the socio-economic development of Kwermusl.

¹⁰ Local Government Act (1982) and its revisions.

¹¹ 4th of April 2012.

¹² Focus group discussion Tiken leaders, 4th of April 20102.

¹³ The two surveys were conducted in the period July-August.

¹⁴ The timeline was developed by the author during a focus group discussion with a selection of village leaders on 26th of July 2010 during which the indicated development issues were mentioned as important for the socio-economic development of Tlawi.

¹⁵ Local Government Act (1982) and its revisions.

¹⁶ On 19th of April 2013 additional interviews took place to discuss collective action of the various groups. Anthon J. Genda, Ag. WEO Tlawi, Joachim Gabriel mwenyekiti Tlawi, Marco B. Sanka, VEO Tlawi, Andrea Alexander, mwenyekiti Jaranjar, Axweso Gobte, mwenyekiti Guneneda and Mwalimu Sebastian Anna, Primary School Tlawi took part in the discussion.

¹⁷ Currently there is little interest in maintaining the canal system. There is an ongoing conflict on water distribution between Tlawi and Silaloda.

¹⁸ The two surveys were conducted in the period July-August.

¹⁹ The timeline was developed by the author during a focus group discussion with a selection of village leaders on 27 July 2010 during which the indicated development issues were mentioned as important for the socio-economic development of Mongo wa Moono.

²⁰ Pastoral Women's Council, Ujamaa Community Resource Team (UCRT), Maliasili Initiatives (2012): Securing Community Land Rights: Experiences and

insights from working to secure hunter-gatherer and pastoralist land rights in Northern Tanzania.

²¹ As discussed with VEO Mongo wa Moono Pascali and other government leaders on 7th of August 2012.

²² The two surveys were conducted in the period July-August.

²³ The timeline was developed by the author during a focus group discussion with a selection of village leaders on 31st of July 2010. The indicated development issues were mentioned as important for the socio-economic development of Buger.

²⁴ Actual rainfall data in Buger were not measured.

²⁵ Local Government Act (1982) and its revisions.

²⁶ Focus group discussion was held on 28th of September 2012 in the Village Office of Buger.

²⁷ The two surveys were conducted in the period July-August.

²⁸ The timeline was developed by the author during a focus group discussion with a selection of village leaders on 5th of August 2010 during which the indicated development issues were mentioned as important for the socio-economic development of Kambi ya Simba.

²⁹ Local Government Act (1982) and its revisions.

³⁰ Fines are paid to the village government account, while 70% is returned to the *kitongoji* concerned and 30% goes to the village government.

³¹ As understood during an interview with five members of the Kambi ya Simba water committee, 27th of September 2012.

³² As indicated during the interview with the chairperson of the *kitongoji*, 27th of September 2012.

³³ As indicated during the interview with the four chairpersons of the ViCoBas.

³⁴ The two surveys were conducted in the period July-August.

³⁵ Village information was gathered mainly from interviews with village leaders, together with non-registered data at the Mbulu and Karatu Planning Departments.

³⁶ The timeline was developed by the author during a focus group discussion with a selection of village leaders, 2nd of August 2010, during which the indicated development issues were mentioned as important for the socio-economic development of Mang'ola.

³⁷ Focus group discussion village leaders Mang'ola, 2nd of August 2010.

³⁸ National Soil Survey Mbulu District (1989).

³⁹ See discussion with treasurer, 10th of May 2012.

⁴⁰ Focus group discussion Dommel school leaders, 25th September 2012.

⁴¹ As confirmed on 13th of April 2013 in an interview with Mang'ola councillor.

⁴² The two surveys were conducted in the period July-August.

⁴³ The timeline was developed by the author during a focus group discussion with a selection of village leaders, 3rd of August 2010, during which the indicated development issues were mentioned as important for the socio-economic development of Oldeani.

⁴⁴ A number of additional interviews were conducted with leaders of various 'collective activities', 26th of September 2012.

⁴⁵ The two surveys were conducted in the period July-August.



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Teun van Dijk

Teun van Dijk, born on 16 June 1950 in Alphen aan den Rijn, the Netherlands, first visited Tanzania in 1972 on a hitchhiking holiday in East Africa. Other visits followed in 1974 and 1979, and from 1983 onwards he began working in Tanzania.

He earned his BSc in mathematics and a teacher's certificate in Leiden (1971) after which he taught in Voorburg for six years and at Zambezi secondary school in Zambia from 1978 to 1981. He obtained his MA in development studies (regional development planning) at the Institute of Social Studies in The Hague (1982).

From 1983 to 1987 he worked as socio-economist and regional planner within the Regional Planning Office of Dodoma in an ILO/SNV supported labour-intensive public works programme. From 1987 to 1991 he worked for the Dutch Ministry of Development Cooperation as coordinator of the Mbulu District Rural Development Programme with the then Mbulu District Council. During his sabbatical afterwards at the Institute of Social Studies in The Hague he began to further analyse baseline data from the household survey he had initiated in Mbulu. After that he worked as rural development advisor at the Africa Directorate of the Ministry.

From 1994 onwards he worked for the Management for Development Foundation (MDF) in many countries. In that capacity he was involved in many governance-related consultancy tasks incorporating Tanzania. His activities over the years have been wide ranging and included: the evaluation of district rural development programmes in Kondoa, Monduli and Songea (1997); a market survey/stakeholder analysis to prepare a five-year development plan for SNV-Tanzania (1998); training local government staff in policy development, planning, monitoring and evaluation in six districts in the Arusha and Shinyanga regions (1999-2000); institutional development of the secretariat of the East Africa Commission in Arusha (2001); preparation of a policy development handbook for local government for the Tanzania District Development Programme (2002); management facilitation for a primary education sector-wide approach course for the Department of Education and donor representatives (2003); preparation of the background paper 'Civil Society Participation within the Eastern Africa Community' (2003); mid-term review of a rural water supply and sanitation programme in seven districts in Shinyanga (2004); identification of district development programmes in three districts in Kigoma region in reference to capacity building interventions for councillors, lower level government and civil so-

ciety (2004); strategic orientation of the smallholder coffee sector in the Kilimanjaro region with the Kilimanjaro Native Co-operative Union (2005); enhancing the capacity of senior management of the Ministry of Higher Education (MHEST) in education, planning and management (2006); evaluation of SNV development programmes in, inter alia, Shinyanga, Kahama, Geita, Mwanza, Karatu (including Mbulu and Monduli) and Arusha with their stakeholders in local governance, civil society and the private sector (2007); evaluation of the functioning of civil society in underserved areas of Tanzania via AcT Tanzania (2010); project director of capacity building at the College of Business Education to develop and apply modular, competence-based curricula for business education (2010-2011); mid-term review of a project to create an enabling environment for income-generating activities for the poor, especially women and youths, involving local government, the private sector and non-governmental actors in six districts of the Coast and Kigoma regions (2011); mid-term review of the Local Government Development Grant in Tanzania (2011); action research training for staff of the Tanzania Public Service College (2012); exploration of development paths and baseline situation for a local government capacity building programme aimed at transparent and accountable public procurement within higher and lower local government (2012-2013); a needs assessment of local government leaders to establish a training programme for the Tanzania Public Service College in the context of a leadership competency framework (2013); assessment of MVIWATA's organisational and financial management capacity and its gender responsiveness (2013); strengthening the capacity of the Institute of Finance Management to support local government authorities' implementation of financial decentralisation and local financial governance (2010-2014); needs assessment and training of TNRF management (2014); enhancing the capacity of the Institute of Rural Development Planning (IRDP) to strengthen the public service in general and local government in particular in light of the decentralisation process in Tanzania (2005-2016); a study on how urban governance – both formal and informal, technical and political – impacts development outcomes (2016); and an evaluation of the ANSAF 2013-2017 strategic plan, which mainly focuses on the functioning of platforms for dialogue between smallholder farmers and other stakeholders (government, civil society, private sector) to ensure that agricultural policy benefits smallholders (2017). Van Dijk was also co-editor of IRDP's Tanzania Planners Handbook (2014-2017).

