Handbook of Research on Library Response to the COVID-19 Pandemic

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Preface

Sars-COV-2 was first reported in Wuhan China on December 31,2019. Twenty-one days later the United States identified its first case, a man who had traveled from Wuhan to the state of Washington. It has been suggested that the virus had likely spread for months in Wuhan prior to their lockdown.

On December 31, 2019, the delegates of the Chinese Center For Disease Control and Prevention (CDC) went to Wuhan for a field investigation. The sample of the virus was isolated and identified as a pathogen of an unexplained pneumonia on January 6, 2020.

The genome sequence of the virus was decoded in a few days.

January 23, 2020 Wuhan began their lockdown, halting travel. By March 26, 2020 well over a billion people was under some form of lockdown and by April 2020 half of the world's population were in lockdown and over 3 billion people were ordered to stay home.

Schools businesses, universities, and libraries were closed affecting 61.6 percent of the world's population.

With little time to plan, academic libraries began shutting their doors in early March 2020 to protect the safety of users and their employees and moved their services online with remote work.

The years of curating digital content, providing opportunities for research, interaction and developing search interfaces and web presence have served well during their online transition.

Lab closures and travel restrictions presented barriers to faculty research libraries. Librarians can assist faculty members by building virtual environments to collaborate from a distance.

Research and information from multidisciplinary sources is vital especially during a pandemic. Researchers rely and access libraries for pertinent information.

When the libraries in the United States imposed lockdowns in March 2020, this could have caused a serious strain on their users; However, librarians and library staff played an important role during a challenging time. The good news was libraries were able to offer their services online. Online services include live book readings, Storytime, educational programs video games, and a host of other programs.

When the buildings of the Lubuto Model Library in Lusaka, Zambia, closed because of the virus, the library continued to use its large outdoor spaces to teach children to be safe, following public health guidance on social distancing, in fun and joyful ways inspired by the children themselves.

The Ghana Library Authority (GhLA), which manages 10 regional and 52 public libraries across the country, has adapted existing services to meet the needs of locked down communities. For example, the GhLA is continuing with its literacy classes to improve young people's reading and writing skills, but now they are offered live on Facebook.

Lithuania, public libraries that have 3D printers that they normally use in digital skills and creative workshops for children and youth, began using them in the fight against the coronavirus. Lithuanian

grantees have joined a national initiative of public libraries to print the medical face shields that protect doctors and nurses treating infected people.

Libraries in the United Kingdom have seen a huge increase in volume in the number of audiobooks and ebooks that are being loaned out. It is estimated that all branches lent an additional 3.5 million ebooks from 13th March to 14th August. E-books were up 78% and 3,000 new members have signed up for cards during lockdown.

In addition, libraries in London also set up virtual IT training sessions to assist people at home with zoom.

During the COVID 19 pandemic, the "Handbook of Research on Library Response to the COVID-19 Pandemic was created." This book was created beginning with 40 proposals and ending with 23 full chapters from contributors. Modern technology has enabled the completion of this handbook from beginning to end.

The purpose of this book is to provide an in-depth historical account of how various libraries, academians, scholars and practitions and staff, professors and practitionersrose to the challenge during the COVID-19 pandemic.

This handbook contains 23 chapters of actual documentation, research and information with an array of multidisciplinary topics ranging from library and information science, computer science, research, surveys, actuary science, computational mathematics, and revolutionary technology ahead of its time during the COVID 19 pandemic.

The contributors consist of professors, librarians, scholars, and researchers, who rose to the challenge during a period when their universities and libraries were in full lockdown or providing minimal service and working remotely.

Chapter 1: Leading Through a Crisis – The Application of Servant Leadership During the COVID-19

This chapter discusses servant leadership in the context of the management and leadership issues and outcomes associated with managing a health sciences library staff and services remotely through the first six months of the COVID-19 pandemic (March 2020 - September 2020).

Chapter 2: Features and Limitations of Ontologies for Coronavirus Data Management in Libraries

This chapter **o**utlines the features and limitations of the ontologies that have been built to improve quality of decisions and to support better policy in COVID-19 data management. Practical use cases are described, as well as results of defining and implementing ontology-based data as an emerging technology in libraries.

Chapter 3: The Leadership Role of Scholarly Communications in the COVID-19 Crisis – A Case Study

This chapter presents the case of how the Systems and Scholarly Communications Unit at Duquesne University's Gumberg Library provided leadership and support for library management during the COVID-19 crisis of 2020. After a brief introduction of the working situation of the department, the chapter describes the leadership disposition of the unit going into the crisis, and follows with how that disposition guided the work of the unit throughout the opening months of COVID-19. The chapter will be useful for

those who need to consider the crisis opportunities available to Systems and Scholarly Communications units at mid-tier academic libraries.

Chapter 4: Applying the Dynamic Capability Framework in University Libraries During COVID-19 Era

This chapter aims to apply the Dynamic Capability Framework in academic libraries in Ghana during the global health crisis (COVID-19 pandemic). Also, providing the audience (library and archive professionals, academia, researchers, and others interested in the impact of COVID-19 and libraries) with an in-depth account of how various academic libraries, librarians, and information professionals are re-positioning and restructuring during the COVID-19 pandemic. It is hoped that the chapter improves the understanding of the impact of the COVID-19 pandemic on libraries in Ghana and even beyond.

Chapter 5: Tackling COVID-19 Using Blockchain Technology

This chapter discusses the novel coronavirus disease, COVID-19, the timeline and the impact of COVID-19 on healthcare society. It sheds light on the various emerging technologies that could help healthcare society to curb the spread and impact of this novel disease. It recommends blockchain the pioneering technology as the perfect solution to the issues and challenges caused by this disease to the healthcare world. The chapter elaborates blockchain, its types, versions and its outstanding potential to skim over this pandemic situation. It enlightens how this promising technology could help healthcare to face the issues caused by this pandemic virus.

Chapter 6: COVID- 19 Pandemic and Virtual Information Services – Experiences of Frontline Librarians and Users in Makerere University Library, Kampala, Uganda

The chapter outlines the history of the library, resources available and emergency plans for both the university and the library. The paper further aims at exploring the experiences of staff at the frontline and users in the period of the pandemic. The study serves two purposes; to find out the experiences from the perspective of service provision and users and to appraise electronic information services. Even with ease of restrictions, online learning will remain a viable option in the context of distance and resource constraints.

Chapter 7: Libraries in the Midst of the COVID-19 Pandemic – Rising to the Challenge

The purposes of this chapter are twofold: First, the chapter examines the coronavirus, Second the chapter provides an in-depth view of libraries academic centers during the COVID 19 pandemic and what they accomplished rising to the challenge.

Chapter 8: Measures and Initiatives Adopted by Indian University Libraries During COVID-19 Pandemic

The purpose of this chapter is to assess the efficiency of university libraries by examining the efforts of librarians in the ongoing 2020 COVID-19 pandemic and how a sample of university libraries further respond to this evolving crisis

Chapter 9: Using Diffusion of Innovations Theory to Modify Library OER Interventions During CO-
   VID-19 Pandemic

The purpose of this chapter is to describe an OER Librarian's use of Diffusion of Innovations Theory to make meaning of and anticipate challenges the Library faced in spring 2020 associated with the CO-VID-19 pandemic. The challenges described relate to continued efforts in support of the OSU Library's OER initiatives.

Chapter 10: Libraries on the Global Health Crisis Pandemic COVID-19

This chapter provides in depth account of various libraries, librarians and emerging technologies which supports the services of libraries around world during the pandemic and post pandemic of COVID-19.

Chapter 11: A Study on Supervised Machine Learning Technique to Detect Anomaly in Network

A discussion on Intrusion Detection System (IDS) as a tool which is used for identification of the illegal access a network and counterparts the static checking capabilities of a firewall. The author reveals various steps to implement the IDS system such as using the data mining technique which will provide the well-organized procedures for training of data for the IDS.

Chapter 12: Using Canvas Commons to Transform Information Literacy Instruction

This chapter describes the university's pilot year implementing Canvas Commons information literacy modules on campus with necessary alterations due to COVID-19, to report on lessons learned, and to outline future plans for the project.

Chapter 13: Challenges to Libraries During Health Crisis and a Way Forward to Deal With These
   Challenges

The chapter provides a solution for libraries to deal with the pandemic. A variety of policies, studies, and strategies are formulated. The use of technology is considered the best strategy for dealing with the pandemic. Dimensions of the work are being changed.

Chapter 14: The Role of Information Professionals in South Africa in the Provision of Information
   During COVID-19

This chapter sought to assess the role of information professionals in South Africa on the provision of information during COVID -19 through analyzing their level of skills and competencies, and col-laboration with various stakeholders.

Chapter 15: A Pandemic at the Library – Lessons From COVID-19 About Technology Needs for Re-
   mote Working During a Crisis

The authors here believe that one can learn from what happened during the COVID-19 crisis to prepare better for the next crisis. Herein, the authors will discuss the lessons learned from helping 28 library staff and faculty work set up with technology for remote working, to be better prepared for the next emergency or disaster.

Chapter 16: The IHS Library and Its Response to the COVID-19 Pandemic

This chapter some contextual information about the history of IHS and the main clients of the library and a description on how the library of the Institute for Housing and Urban Development Studies (IHS) responded to the COVID-19 crisis. Two topics are covered here: 1. How the services offered to the library users has had to change and evolve. 2. Developing content for a wider audience through the IHS COVID-19.

Chapter 17: Automated Detection of SQL Injection Attack on Blockchain-Based Database

This chapter provided a description on Blockchain technology and its components.

Chapter 18: Opportunities and Challenges Offered by the Effects of COVID-19 Pandemic on Academic Libraries

Through research and a case study this chapter aims to meet the following objectives:

1. To identify the opportunities that were brought about by COVID-19 in academic libraries.
2. To examine the challenges that was conveyed by COVID-19 in academic libraries.
3. To offer solutions to some of the challenges faced by academic libraries during the lockdown period.
4. To establish information services that different academic libraries were offering during the pandemic.
    Chapter 19: Impact of Information and Communication Technology in Indian Education System During COVID-19

The authors present a theoretical and practical representation to solve the problems of ICT in two different ways (i) to find the role of ICT in the education sector, (ii) increase the growth of interactive learning in India.

Chapter 20: A Study on Evolutionary Technique to Predict the Sales During COVID-19

Authors study traditional and evolutionary techniques to predict the upcoming marketing sales during the COVID 19 pandemic using mathematical models, machine learning, and evolutionary techniques.

Chapter 21: COVID-19 – Home vs Other Places Quarantine: A Study in Kashmir

Authors provides a detailed account of actual quarantined experiences in a hospital setting and uses computational mathematical formulas according to actuary science.

Chapter 22: Responding to COVID-19 for Information Delivery – A Case Study of Learning Resource
Centre, Vignana Jyothi Institute of Management

The purpose of this chapter is to share the experience of a B-School Learning Resource Centre in response to the COVID-19 and New Normal conditions. The paper describes the services provided by the learning resource center at this time of crisis and illustrates the unexplored challenges faced by the Libraries during COVID-19 pandemic: and the actions taken for the new normal conditions using innovative technologies, and how the new digital services and activities was carried out by librarians remotely to keep their libraries alive. The chapter provides an account of the library's professional role in improvising library services during the COVID 19 pandemic.

Chapter 23: From Bake-Alongs to Tech Talks – How One Public Library System Pivoted to Virtual
Programming

This chapter describes how one public library system moved rapidly from business as usual to completely virtual programs and services by examination of the library's approach to staff training, program development and evaluation, and digital services. The chapter concludes with examples of virtual programs implemented for different age populations.

Chapter 16
The IHS Library and Its Response to the COVID–19 Pandemic

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ABSTRACT

There are two points of departure for this chapter. At one level, the chapter explores how the Institute for Housing and Urban Development (IHS) library responded by adjusting the services it provides to its immediate constituency, together the with Erasmus University Rotterdam (EUR) University Library, with a rapid shift to e-books. At another level, the IHS library has also responded to the COVID-19 situation, by providing information to a much wider audience, targeting particularly Africa, Asia, and Latin America by collating information on the social, economic, and environmental impact of COVID-19 in the urban areas of emerging economies. The majority of the institute's participants come from such countries, where a lack of resources increases these countries' vulnerability to the onslaught of the pandemic. The IHS library's contribution the institute's COVID-19 Resource Hub (see https://www.ihs. nl/en/resources/covid-19-resource-hub) is briefly described in the second part of the chapter.

INTRODUCTION

The COVID-19 pandemic has fundamentally changed the today's world, and everyone has had to learn new skills and approaches in addressing the problems that the virus poses for us all in both our personal and professional lives. This chapter describes how the library of the Institute for Housing and Urban Development Studies (IHS) has responded to the crisis. There are two levels covered here: 1. How the services offered to the library users has had to change and evolve. 2. Developing content for a wider audience through the IHS COVID-19 Resource Hub (https://www.ihs.nl/en/resources/covid-19-resource-hub) (IHS, 2020a). This chapter also gives some contextual information about the history of IHS and the main clients of the library.

BACKGROUND

In 1948 the Bouwcentrum Rotterdam opened in a brand-new round building, to contribute to the post-war reconstruction of the Netherlands. At that time the Round Building was an iconic building and ahead of its time. The photo in Figure 1, available online at the Dutch National Archive, was taken in 1958.

Figure 1. The 'Bouwcentrum' Round Building, Rotterdam Dutch National Archive, n.d.

IHS' origins date back to the same year as that photo, 1958, when the first International Course on Building took place in the Bouwcentrum, attended by nine participants. (Ettinger Jr, 2008) The international activities subsequently were formalized in 1971 with the establishment of the Bouwcentrum International Education (BIE). The institute's objective was then: by means of international exchange of information, knowledge and experience to make a substantial contribution to and participate in development cooperation in the field of housing, building and planning as well as integrated quality control.

In 1982 the BIE became the Institute for Housing Studies (IHS), and in the early 1990s the name was expanded to: Institute for Housing and Urban Development Studies (IHS). Around that time IHS started to collaborate more intensively with Erasmus University Rotterdam (EUR), and in 2000 IHS moved from the Round Building to the J-building on the EUR campus at Woudenstein. Formal integration into the university followed in 2004, where the institute now specializes in providing education, research and advisory services to urban professionals, particularly from emerging economies, on the social, economic and environmental aspects of running cities and towns, and responding to the challenges posed by urbanization. IHS currently has a dedicated, multidisciplinary international academic staff from more than 15 different countries who teach, research and advise on topics such as housing, land, spatial planning, urban infrastructure, climate change and regional development. At the heart of all teaching, research and advice, is a people-centred approach, which means that the institute's approach particularly promotes techniques and skills that address the social aspects of urban development and urbanization. In 2007, IHS received the **UN-Habitat Scroll of Honour award,** for leading the way as a global centre of excellence and knowledge through its high-quality teaching programmes in housing, urban management and urban environmental management and planning. (IHS, 2018)

The origins if the IHS library date from 1971, when it was felt that the organization no longer could continue to rely on the Bouwcentruum's library to access the institute's growing needs for printed documents relevant to the work of the BIE. (Ettinger Jr, 2008) The picture below in Figure 2 shows the IHS library in the basement of the Round Building in 1997

Figure 2. The IHS library in the round building 1997

At that time the collection consisted of a mixture of grey literature (reports on housing and urban development projects from various countries including relevant internal reports from Housing Ministries, documents from consulting firms, print books and journal articles). Given the history of the organization the collection very much reflects the organization's tradition of grounding much of its work from insights gained from practice in the field.

In 2000, as was mentioned above IHS moved from the Round Building, to the Woudstein campus of the Erasmus University Rotterdam. Initially IHS occupied two and half floors of the J building, and in 2008, IHS moved to its current location occupying one floor on the 14th floor of the T-Building (now known as the Mandeville Building). The library is located at the heart of the organization in a multifunctional area between the offices housing the academic staff and the classrooms and study areas for course participants. Figure 3 below shows the IHS library in the T-Building from around 2011.

Figure 3. The IHS library in the t-building 2011

The IHS library is a small specialized library, now employing just two information managers who together are responsible for running the library. Up to 2003 the library used to have its own print subscriptions to nearly seventy academic journals covering issues relevant to the mandate of IHS. When

it became part of the Erasmus University Rotterdam in 2004, IHS was able to access the information resources provided through the EUR's main University Library. As at that time most of these journals were increasing becoming available full text and online, the need for IHS to retain its print journal collection disappeared, as most of the journals to which the institute subscribed were also available through the mother university. IHS as part of the university pays a fixed percentage of its turnover per year to be able to access central university services, such as access to academic journals provided by the University Library. This digital access to academic journal content has clearly been crucial in the development of the institute's main educational output, the Master's in Urban Management and Development (UMD), as it gave both IHS academic staff and our Master participants greater access to a much wider on-line academic literature. To encourage the use of these digital resources the library maintains a separate articles database covering the same key journals to which the institute used to subscribe, but now linking to the Digital Object Identifier (DOI) of each article. There were at the time of writing 71,465 articles in this database.

From July 2017 the IHS library initiated a major refurbishment in which the whole library collection was weeded out, and partially digitalized with a drive to scan much of the older grey literature. At the time the main library database had **24405** records covering **27817** volumes and including **6731** digital documents. By mid-August 2018 the main library collection was reduced to **17453** records covering **18925** volumes including **9042** digital documents. Choices have had to be made about disposing of old materials and on which documents to digitalize, based on their condition, relevance for the collection and their (digital) availability elsewhere. The aim being to create a more hybrid (digital) collection focussing on the institute's main areas of interest. It was also decided to showcase our unique academic book collection on cities, towns and urban development. Below, Figure 4 shows the refurbished IHS library, in July 2019.

Figure 4. The refurbished IHS library in the Mandeville building, July 2019
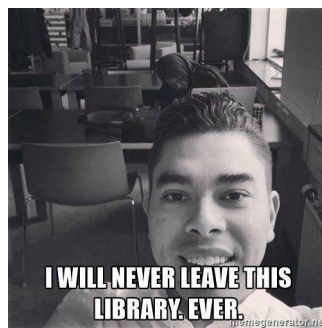

The IHS library's main users are more than thirty academic staff, IHS associates and the participants of the institution's educational activities. External researchers are welcome to use the library by appointment and the candidates of the institute's PhD. programme are also avid users of the library's collection.

Since 2004 the Institute has been offering a Master's in Urban Management and Development (UMD) which up to the UMD15 that ended in September 2019, has seen 1,276 participants complete their final thesis. It is a very international Master programme, and including the current UMD Masters, UMD16, it has attracted participants from ninety countries. (see Appendices 1 to 3). On average the UMD from UMD1 (2004) to UMD15 (2019) attracted an average of 85 participants coming from an average of 27 different countries. The UMD16 the current Master programme has participants from 42 different countries. Without a doubt IHS offers a very international Master programme.

The IHS library functions as a physical and knowledge interface where participants of the institute's educational activities are offered a safe and trusted environment in which to follow and complete their academic studies. Figure 5 below is a photo of one our participants, shown by UMD13 participants during a graduation ceremony, clearly expresses how the UMD cohort come to love the safe study environment that the IHS library offers to them.

Figure 5. UMD13 Participant in the IHS Library

Apart from a specialized print book collection and partially digitalized grey literature collection, the participants can access the book and digital content of the main EUR University Library. It was the best of both worlds. And then COVID-19 hit.

DISCUSSION

On 15th March 2020 the 'intelligent lockdown' of the Netherlands began, and on the next day, 16 March 2020, the Dutch Prime Minister Marc Rutte, asked the whole population of the Netherlands to stay at home, and employees were strongly encouraged to work from home. The EUR adhered closely to the advice of the National Institute for Public Health and the Environment (RIVM) and effectively shut down the university campus, including the Mandeville Building in which the IHS library is located. Below is an exert from a communication from the management of IHS in the lead up to these events:

General Measures

EUR and IHS are using the following policies and guidelines:

As of 17 March, all buildings- with the exception of residential buildings - will be closed for students, until further notice.

All study places and catering on the Woudestein campus, the EUC campus, the Hoboken campus and the ISS campus will be closed from Monday March 16th. In addition, the sports building on the Woudestein campus is also closed, other buildings remain open for activities of the teaching staff.

Students are discouraged to come to campus and are strongly advised to study at home.

In the letter to parliament, the Cabinet writes that education should only be given at a distance. For the EUR, this means that we will make maximum use of online education and, if necessary, make additional investments and efforts. All on-campus education, including on-campus exams, will therefore be cancelled from March 13 until at least April 6th." (IHS, 2020b)

This situation has continued with IHS staff, including library staff, having only limited access to the Mandeville Building. During the summer of 2020, with a policy of only 20% occupancy of university office space, meaning physical access to the IHS library has remained limited, with no access for course participants.

The timing of lockdown meant that the current UMD16 participants (94 Master candidates) were the ones who potentially were most negatively impacted by the abrupt imposition of lockdown. They were denied access to the library and the area in which they had normally studied, with immediate effect. They were at the time just about to begin research workshops to prepare them for their fieldwork. Fortunately, they were able to follow these online with the IHS academic staff. The same applied to various colloquia in preparation for their thesis and planned fieldwork. As many were unable to travel back to their respective countries because of the COVID-19 pandemic, some were obliged to either change the topic of their final thesis and/or their method(s) of data collection and information gathering. Some participants of UMD16 chose to return to their respective countries to complete their studies, while about two thirds ultimately chose to remain in Rotterdam on campus in their student accommodation to complete their studies in Rotterdam.

Although denied physical access to the IHS library, library staff did what they could, to remotely meet any of the information requests of all IHS course participants, the academic staff and other interested parties, such as IHS associate staff. There was also the first Master, in Urban Governance (https://www.ihs.nl/en/master/urban-governance) which had just started during this academic year, that IHS contributed towards together with EUR's Department of Public Administration, and the around twenty participants of this new course, also lost access to what had become their trusted study space at the IHS library. (IHS, 2020c) Table 1 below summarizes the number and kind of to the responses undertaken by an IHS library staff member to try and address this new and unprecedented situation.

The Remote Library Service Logbook of an Urban Librarian (17 March 2020 – 13 August 2020), presents an overview of the information services undertaken for various patrons of the IHS library. It specifies the individual actions undertaken to respond to different requests and/or to service the ongoing information needs of the users of the IHS library. These activities took place on top of the usual routine library tasks such as populating various databases and maintaining the physical library collection, most of which was possible to do remotely.

Table 1. Summary of remote library services to IHS users provided by the author during lockdown till 13 august 2020

17 March 2020 -13 August 2020	Print library book	Online content	Searches	SDI	Other
UMD16 Master candidate	17	13	2	-	1
Urban Governance Master candidate	1	-	1	2	-
IHS PhD. candidate	7	12	3	4	
IHS staff member	11	18	12	36	12
IHS Associate Staff		3	2		
IHS Alumni		3			1
External to IHS		1	1		1

In terms of services: *Print library books* refers to the purchase of new library books, *Online content* refers to the creation, sharing or acquisition of digital content, *Searches* mostly refers to detailed topic based collation of (on-line) resources for specific training purposes; *SDI* refers to sharing links to on-line resources (mainly journal article DOIs) with subject specialists and *Other* refers to various activities ranging from discussing access issues to advising on combatting a case of plagiarism. The most striking change in the period covered above is the upsurge in access to e-books.

Clearly one of the most important trends during the pandemic has been the increase in the use and access to e-books. Rather than going it alone the IHS library has developed a much closer relationship with the EUR's University Library and during lockdown there has been a clear shift in direction with the ordering of more e-books for the IHS library collection, instead of just opting for print editions. This trend for the IHS library was initiated on the 25 May 2020 when an IHS lecturer requested an e-book for a forthcoming webinar that he was planning about the impact of COVID-19. Through the EUR University Library the book was available online by 5 June 2020, see: https://eur.on.worldcat.org/oclc/1129220851. (Loh and Hsu, 2020) Since then there has been a close consultation with the EUR University Library about e-book acquisition which has resulted in a closer alignment of the collection policy between the two libraries. E-books are usually available within a week as opposed to about three weeks for print copies ordered from publishers. In the current circumstances where access remains limited to the current physical IHS library collection, most efforts will continue to focus on enhancing e-book access.

The best models from the perspective of library patrons are the ones that grant perpetual access to the pdfs of the books without any Digital Rights Management (DRM) hassles. For example, in 2014 the IHS library purchased 130 copies the book by Sandra van Thiel at a discount for use by UMD Master participants in their Research Methods module. Nowadays that same book published by Routledge can be downloaded as a pdf by staff and students from the EUR's University Library (see: https://eur.on.worldcat.org/oclc/874100997) for anyone working or studying at the EUR. This is on the Taylor and Francis e-book platform, see Figure 6 below. (Thiel, 2014)
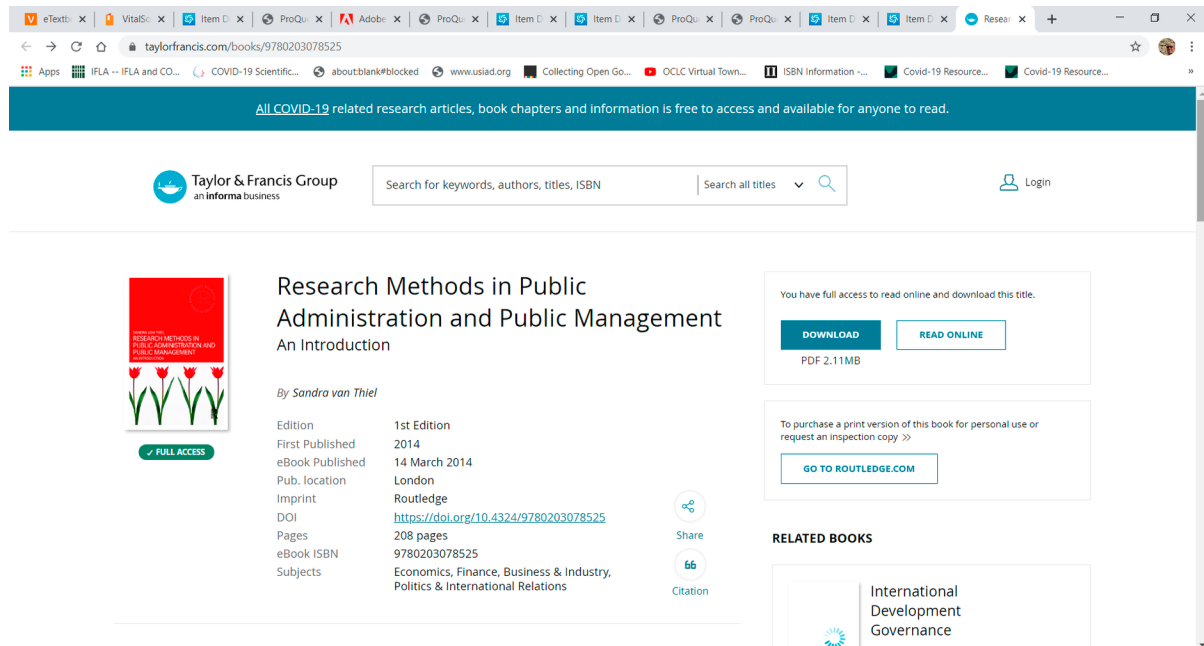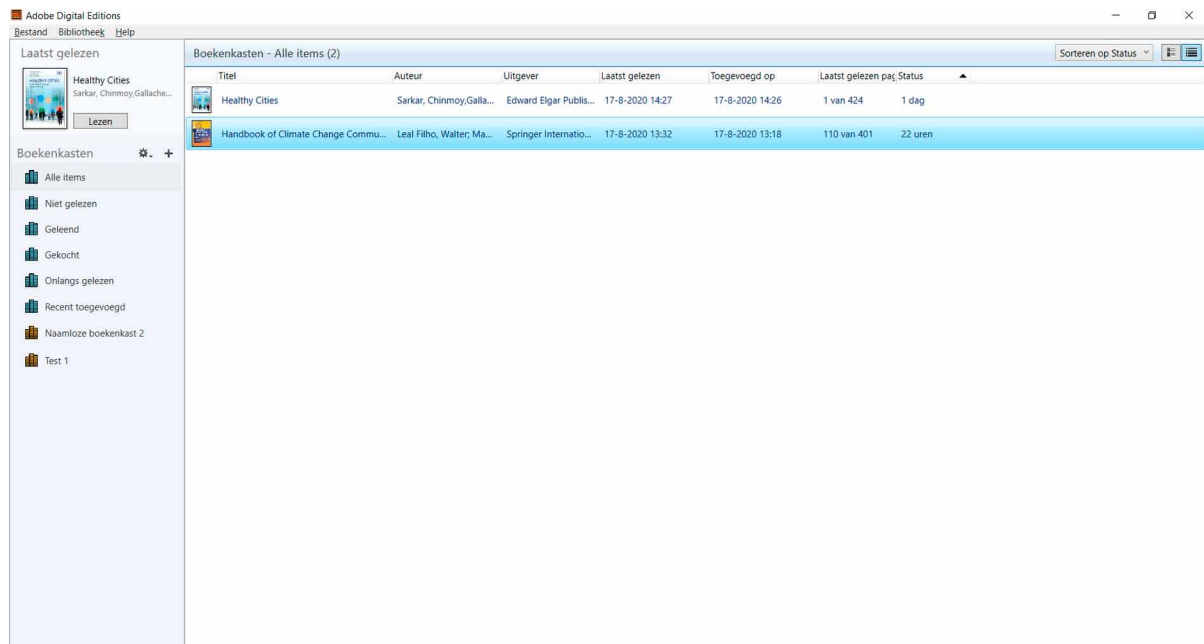
Figure 6. An example of the Taylor and Francis E-Book Platform

Figure 7. E-books with DRM using adobe digital editions

Routledge also offer e-books through another platform called VitalSource (https://www.vitalsource.com/) (VitalSource, 2020) but that seems more geared towards creating an online e-book bookshelf at the level of the individual student, and this business model is less attractive for institutions, such as libraries. Other providers such as EBSCO and PROQUEST use programmes such as Adobe Digital Editions which offer e-books for limited loans whereby patrons are expected to create accounts and to access the material which is often subject to DRM limitations. What the user gets is his or her own digital bookshelf on their devices, similar VitalSource. But do users really want different digital bookshelves on their devices? The answer is obvious. There is much room for improvement to enhance the user experience for these types of services. The best products offer perpetual access to the pdf without any constraints. Figure 7 below shows an example of an online bookshelf using Adobe digital Editions.

We are currently in the middle of a pandemic and no one really knows what is going to happen. The pandemic, although restricting face to face interaction and access to study areas, has clearly accelerated the interest of higher education institutions in accessing and using e-books. The expectation is that until the pandemic is over, the reliance on e-books will increase. It means as an interim measure the IHS library will need to follow this trend. It also has implications for IHS' forthcoming Master programme UMD17 (2020-2021).

It is likely that the new UMD17 Master participants whose course is due to start in October 2020, may well have to have part of their course in a blended format, meaning the initial modules of the UMD17 Master programme will have to be offered both online, and face to face in small socially distanced groups in situ, for those who are able to come to the Netherlands. Normal service can only be fully resumed once there is a vaccine and the pandemic has abated. In the interim, working much more closely with the EUR University Library, the IHS library will be obliged to focus on continuing the expand its e-book content in the short-term, and limit it's print book acquisitions to those titles that the EUR is unwilling to acquire.

Discussion on a Wider remit for the IHS library during the COVID-19 epidemic

IHS is an international institute with an ideal goal, and this is something that drives everyone who works for the organization. When the COVID 19 pandemic hit, the immediate concern of IHS staff was for those countries from where our participants come. Emerging economies often have an inadequate healthcare infrastructure, with many of their poorer inhabitants living in poverty in urban slums with inadequate housing, limited access to water and no sanitation facilities whatsoever. Perfect breeding grounds in the time of a pandemic. As a response to some of these concerns at the beginning of April 2020 a colleague shared these concerns in the IHS intranet.

As soon as this idea was launched it was realized the IHS library could have a pivotal role in fuelling the new online initiative with any relevant information that it was able collate surrounding the effect of COVID-19 on cities and towns in emerging economies. Almost immediately at the beginning of April 2020, the IHS library initiated wide-ranging searches of the Internet to gather as much relevant information as possible on COVID-19 and cities. There was no intention to collect material on the specialized medical issues around COVID-19, as it was clearly understood others in medical institutions are much better placed to address the medical aspects of the pandemic. The IHS library had already had some experience of curating knowledge online in the preceding year through its SDG 11 Knowledge Hub (see: https://www.ihs.nl/en/resources/library/sdg-11-knowledge-hub). (IHS, 2019)

Figure 8. The four sections of the IHS Covid-19 resource hub maintained by the IHS library
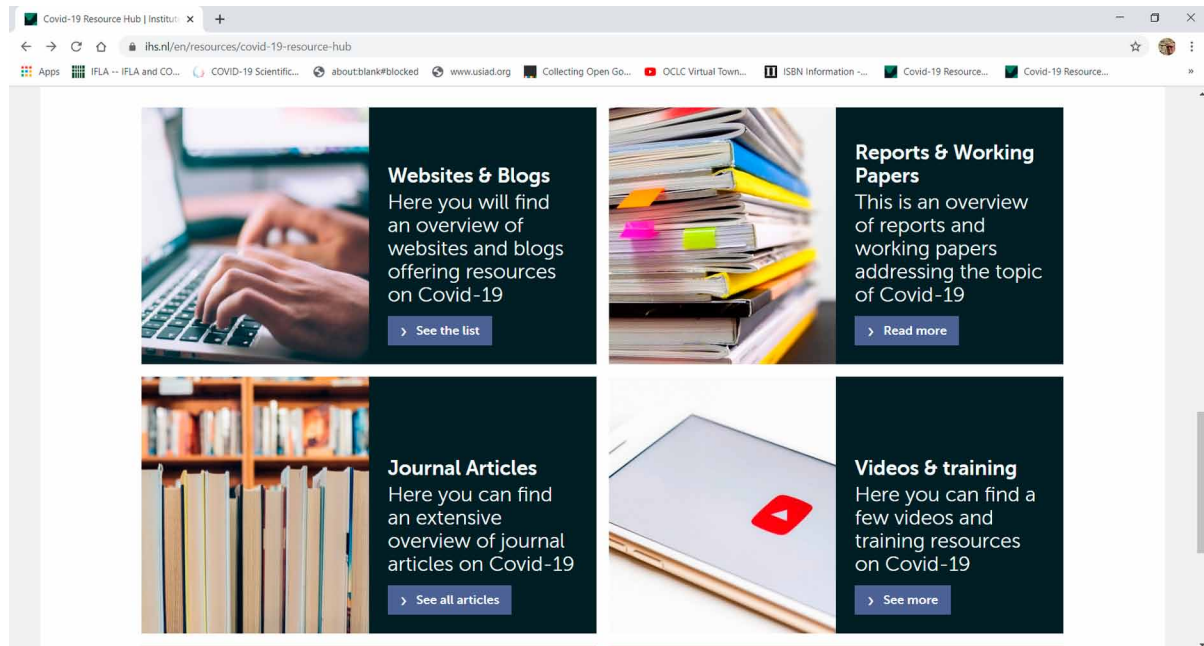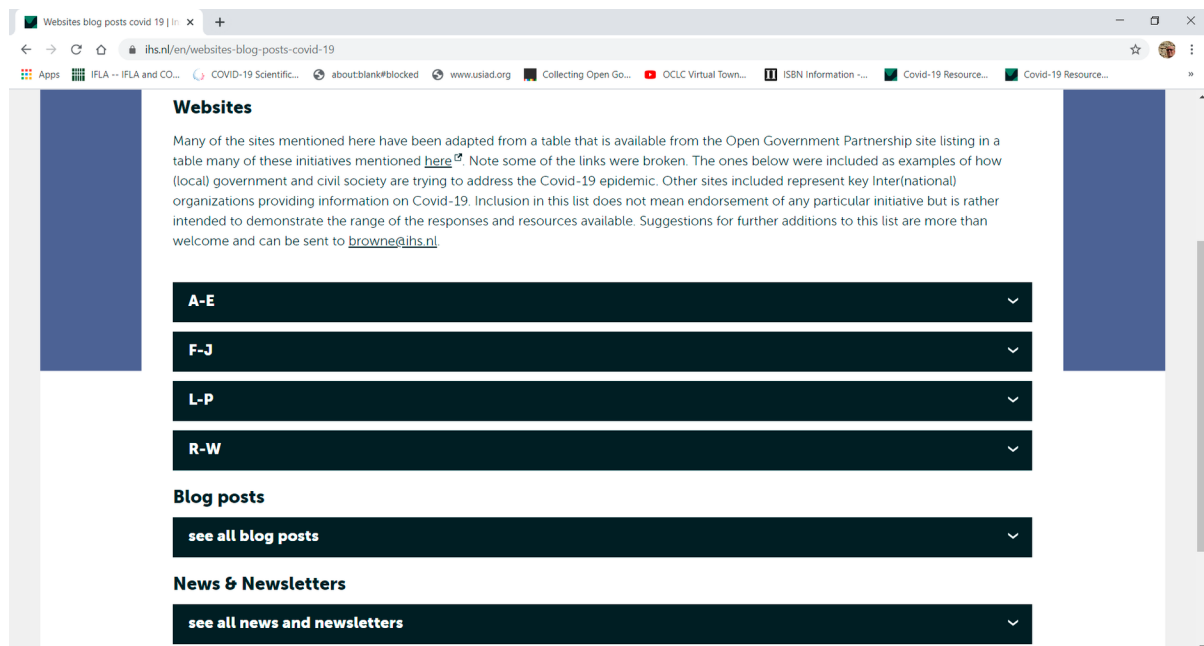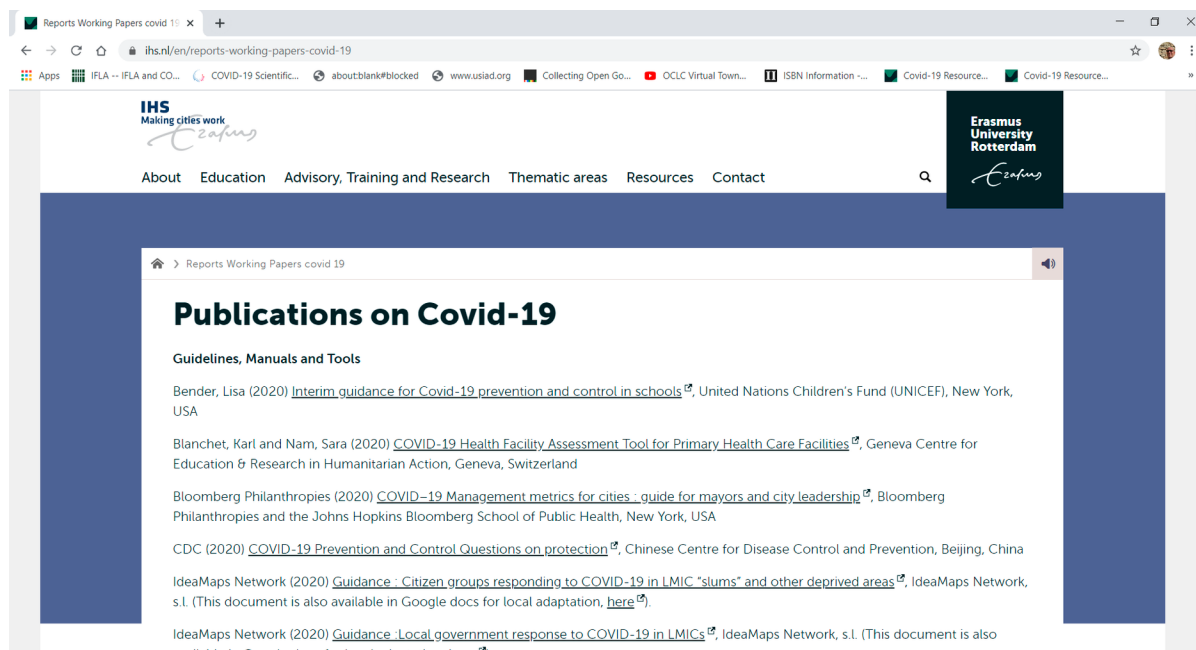

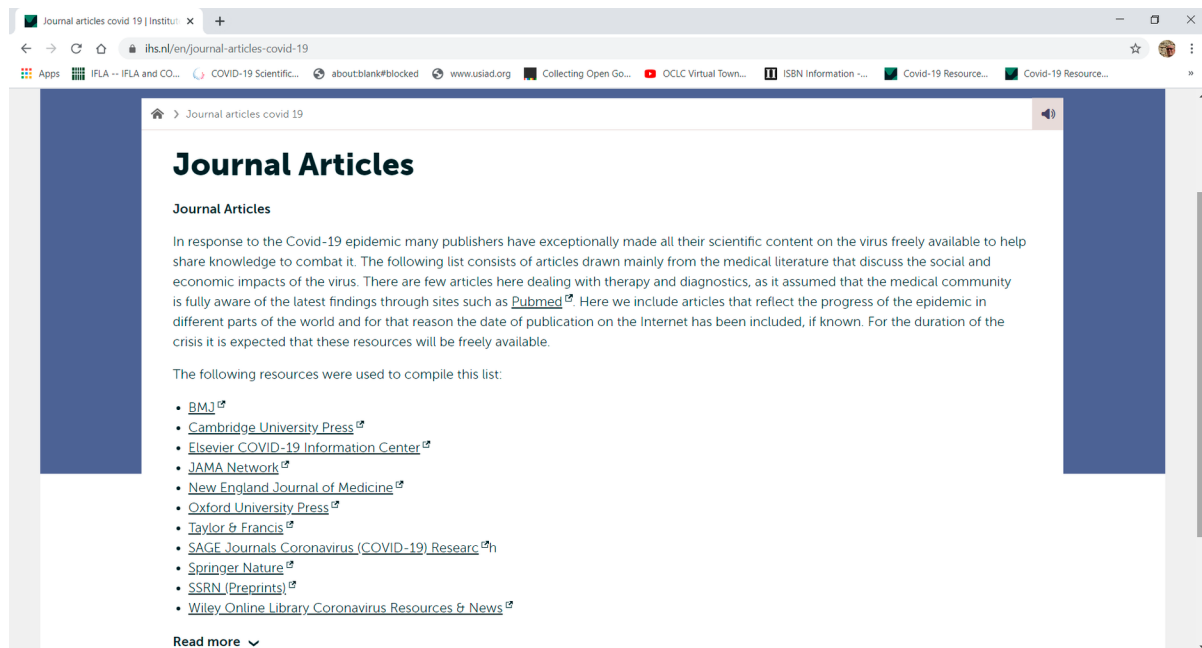*Figure 9. IHS Covid-19 resource hub websites & blogs and news*

Figure 10. IHS Covid-19 resource hub reports and working papers section

During April 2020 a start was made with collecting information concerning COVID-19 and cities. It all came together in four main categories, namely: 1. Websites & Blogs (including news); 2. Reports & Working Papers; 3. Journal Articles; and 4. Videos & training. See Figure 8 below. These were developed to support the COVID-19 Resource Hub which also incorporated an extensive questionnaire designed to find out how emerging economies were dealing with the effects of the pandemic, particularly at the local level. The site also incorporated some COVID-19 related content emanating from the EUR. The discussion here is limited to the four sections of the IHS COVID-19 Resource Hub mentioned above. The IHS COVID Resource Hub was officially launched on the 8th of May 2020.

Websites and Blogs section (see Figure 9 below) was the first of the four sections of the IHS Resource Hub that the IHS library developed, collated, and has since continue to maintain. The list of websites was originally developed from an initial website of the Open Government Partnership's Collecting Open Government Approaches to COVID-19 (see: https://www.opengovpartnership.org/collecting-open-government-approaches-to-covid-19/#examples) (Open Government Partnership, 2020) and then further expanded by listing other relevant sites. This section of the Resource Hub also lists by date Blogposts and News about COVID-19 and cities in emerging economies. The aim being to get a sense of what was being written when. The main sources for the news section were the Thomson Reuters Foundation News (see: https://news.trust.org/coronavirus/) (Thomson Reuters Foundation News, 2020) COVID-19 news and the UN News on the Coronavirus (see: https://news.un.org/en/events/coronavirus-global-health-emergency-coverage-un-news) (UN News, 2020). As the crisis has gone on, the number of Blogposts and News items specifically relating to cities, seems to have diminished by late July/early August, even though the virus has not gone away.

Figure 11. IHS Covid-19 Resource Hub Journal Articles Section

The Reports and Working Papers section of the site (see Figure 10 below) lists public domain documents from a range of organizations with an emphasis of the policy implications for urban managers working in (local) government in the towns and cities of emerging economies. It is divided into two sections: i. Guidelines, manuals and tools; and ii. Policy Reports and Working Papers. The former is aimed at bringing together practical tools for urban managers confronted with dealing the pandemic. The later includes documents with more general policy implications for policymakers. Almost all include the links to the full text of the documents, usually in pdf format. These reports and working papers fit in very much in with the working tradition of IHS that for many years has been grounded in practice.
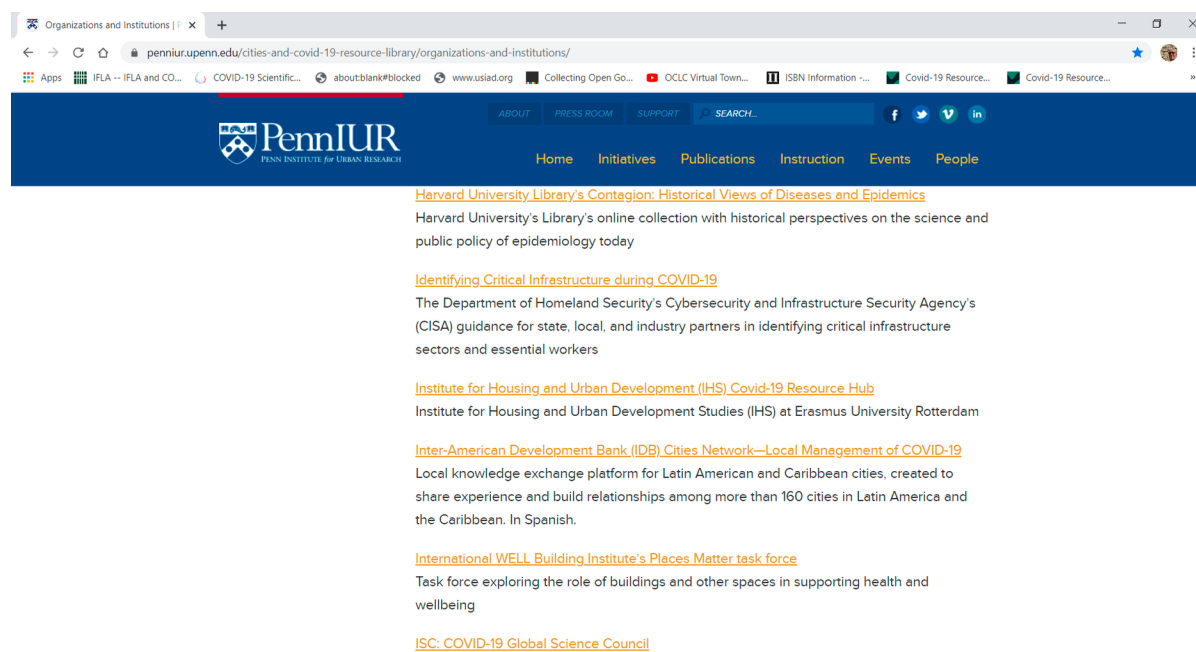
The Videos and Training section of the IHS COVID-19 resource Hub aims to include online film content or training materials possibly relevant to the impact of COVID-19 in cities of emerging economies. Although featuring a potentially dynamic medium, this part of the site is probably the part that still requires further development by focusing more on the many webinars that have sprung up in the socially distanced COVID-19 era. Many organizations have turned to providing webinars.

The last section of the IHS COVID-19 Resource Hub, Journal Articles, (see Figure 11 below) owes its existence to the fact that the whole publishing world has opened-up access to their on-line content about COVID-19. This has meant it has been potentially possible to share to a much wider audience much of this academic content. Initially it was the medical journals that were reporting on the pandemic, and the articles that were included in this section remained non-medical in the sense that they generally consisted of short reports from the field, often by local medical professionals in emerging economies, on the status of the pandemic in their respective countries. It is only later, from the early summer, that other economic and social science journals started to put online articles on COVID 19. The entries in this section for this reason specifies a separate date, which appears before the DOI, giving the date that the respective article first appeared online. Each article mentioned also includes a link to the pdf version of the article.

It is assumed that these will continue to be freely available to everyone as long the pandemic persists. In contrast to the other sections of the site, this is the section of the site that continues to grow most. The emphasis remains citing and linking to academic journal articles that address the social, economic and environmental issues of COVID-19 in the cities and towns of emerging economies.

Maintaining these four sections of the IHS COVID-19 Resource Hub has become incorporated into the weekly working routine of the library, with the updates usually being implemented on a weekly basis. As these four sections have developed since the beginning of May 2020, there has been a gradual change with a shift from most time being spent on the Websites & Blogs section to the Journal Articles section. With more and more academic journals contributing to the debate around the pandemic by July 2020 an average of 40 to 50 articles were being added to the Journal Articles section of the website. Material is still added to the Reports & Working Papers section of the site but on a more ad hoc basis. Although the IHS COVID-19 Resource Hub has been up and running for less than four months it is rewarding to see that it is beginning to be noticed, as evidenced by its inclusion in the website of Penn Institute for Urban Research with a listing of 'institutions and organizations with COVID-19 resources that may be useful to cities and urban researchers.' See Figure 12 below.

Figure12. Penniur's Listing Of Institutions And Organizations With Useful Covid-19 Resources

CONCLUSION

This chapter has tried to give a picture of the impact of current COVID-19 pandemic on a small special-ized institute library dealing with information on cities and urban development in emerging economies. The first section includes the history of IHS placing an emphasis on the very international nature of the organization's training and education remit, and the way in which the IHS library has been very much

incorporated into an educational experience providing a trusted environment for studying the complex issues surrounding the social, economic and environmental issue arising from urbanization and urban development in emerging economies. Key to that educational experience has been the face to face experience of exchanging ideas together with participants and lecturers from around the globe. It is against this background, with staff and participants no longer being allowed to access the trusted surroundings of the IHS building and its library, that IHS library staff have had to be flexible in addressing the information needs of its user base, often remotely. Many of the solutions to the requests that arose have been to seek a digital option, if available. This has led to a rapid change in collection policy, with a (temporary) ascendance of e-book acquisitions above print books. This has led to a closer working relationship with the EUR University Library staff, particularly the social science subject specialist. As long as the pandemic persists, and access to the physical collection remains impaired, the need to go digital in the sense of e-book acquisition will continue to be a priority, in order to be able to respond to the expected changes in the way in which forthcoming courses in the coming months may have to be offered to UMD participants. Blended learning.

At another level, given the potentially very dire situation facing the urban poor in the countries from where many of our participants come, often in large cities with considerable social, economic, and environmental problems, any effort by library staff to curate, share and disseminate information about COVID-19 is the least that could be done to help. That is what the material on the IHS COVID-19 Resource hub is about and why it was felt it was important to demonstrate that librarians with their specialist knowledge curation skills, are uniquely positioned to contribute towards combating the ramifications of this unprecedented pandemic.

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KEY TERMS AND DEFINITIONS

Cities: Large permanent human settlements whose inhabitants work on predominately non-agricultural tasks.

COVID-19 Resource Hub: An on-line resource accessible through the Internet that shares information about COVID-19.

DOI (Digital Object Identifier): A way to permanently identify articles and documents and link to them on the web using a string of numbers, letters, and symbols.

DRM (Digital Rights Management): Technical restrictions applied by publishers to limit the amount of copying, pasting, and printing of their e-books.

E-Book: A digital book, often in PDF format, that can be accessed through the internet.

Emerging Economies: Economies that cannot yet be considered as developed and the term has subsequently superseded that of developing country.

Library Services in Lockdown: Remote services offered to library users by libraries as normal access to libraries have been denied because of lockdown restrictions.

SDG11 Knowledge HUB: An on-line resource accessible through the Internet that shares information about the urban UN Sustainable Development Goal (SDG11).

SDI (Selective Dissemination of Information): A targeted service employed by libraries to keep their main users informed about new resources on specified topics.

Special Libraries: Libraries providing specialized information resources on a specific subject, catering for a specialized and limited clientele, and subsequently delivering specialized services to that clientele.

APPENDIX

Table 2. IHS UMD1-UMD15 Master Programme in Urban Management and Development

Masters course in Urban Management and Development (UMD)	Year	Number of completed theses *	Countries of origin of the participants	Number of countries represented in each Masters
UMD1	2004-2005	68	Brazil, Bhutan, China, Colombia, Costa Rica; Ethiopia, Ghana, Indonesia, Kenya, Kosovo, Latvia, Nepal, Peru, The Philippines, Romania, Russian Federation, Serbia Montenegro, Slovakia, South Africa, Swaziland, Tanzania, Turkey, Uganda, Yemen, and Zambia.	25
UMD2	2005-2006	56	Albania, Bangladesh, Brazil, China, Colombia, Ecuador, Ethiopia, Georgia, Indonesia, Kenya, Nepal, The Philippines, Syria, Tanzania, Thailand, Turkey, Uganda, Vietnam and Zambia.	19
UMD3	2006-2007	56	Bangladesh, China, Colombia, Ethiopia, Ghana, Indonesia, Italy, Kenya, Mexico, Nepal, Pakistan, Tanzania, Thailand, Uganda, USA and Zambia.	16
UMD4	2007-2008	61	Bangladesh, China, Colombia, Ecuador, Egypt, Ethiopia, Georgia, Germany, Ghana, India, Indonesia, Kenya, Nepal, Nigeria, Taiwan, Tanzania, Uganda, USA, Zambia and Zimbabwe.	20
UMD5	2008-2009	74	Bolivia, China, Ethiopia, Ghana, India, Indonesia, Jamaica, Mozambique, Nepal, Nigeria, The Philippines, Romania, Rwanda, Serbia, Tanzania, Uganda, USA, Vietnam and Zambia.	19
UMD6	2009-2010	84	Bangladesh, Bhutan, China, Colombia, Eritrea, Ethiopia, France, Ghana, India, Indonesia, Iran, Italy, Kenya, Nepal, Nigeria, New Zealand, Papua New Guinea, Peru, The Philippines, Rwanda, Sri Lanka; South Africa, Tanzania, Turkey, Uganda, USA, Zambia and Zimbabwe.	29
UMD7	2010-2011	84	Bangladesh, Bhutan, Brazil, China, Egypt, Ethiopia, Ghana, India, Indonesia, Italy, Kenya, Malawi, Mexico, Nigeria, The Netherlands, Nepal, Pakistan, Peru, Rwanda, Serbia, South Korea. Sri Lanka, Tanzania, Thailand, Uganda, USA, Zambia and Zimbabwe.	28
UMD8	2011-2012	62	Albania, Brazil, China, Ethiopia, France, Georgia, Germany, Ghana, India, Indonesia, Kenya, Lebanon, Malawi, Mozambique, Russia, Spain; Tanzania, Vietnam and Zambia.	19
UMD9	2012-2013	78	Albania, Bangladesh, China, Colombia, Ecuador, Ethiopia, Finland, Ghana, Guatemala, India, Indonesia, Kenya, Mexico, Nicaragua, Nigeria, Nepal, The Netherlands, Pakistan, The Philippines, Switzerland, Tanzania, Turkey, Uganda and Zambia.	24
UMD10	2013-2014	97	Australia, Bangladesh, Bolivia, Bosnia and Herzegovina; China, Colombia, Ecuador, Ethiopia, Ghana, Greece, India, Indonesia, Italy, Kenya, Lebanon, Mexico, Nepal, Nigeria, The Philippines, South Africa, Spain, Sri Lanka, Tanzania, Thailand, Uganda, Ukraine and Zambia.	27
UMD11	2014-2015	106	Albania, Burkina Faso; Cambodia, Canada, China, Colombia, Ecuador, Egypt, Germany, Ghana, Guatemala, India, Indonesia, Italy, Japan, Kenya, Nepal, The Netherlands, Nigeria, Norway, Pakistan, The Philippines, Russia, Rwanda, South Africa, South Korea, Sri Lanka, Tanzania, Uganda, USA and Zambia.	31
UMD12	2015-2016	117	Afghanistan, Belarus, Brazil, Canada, China, Colombia, Egypt, Ethiopia, Georgia, Ghana, Guatemala, India, Indonesia, Italy, Japan, Jordan, Kenya, Mexico, Myanmar, Namibia, Nigeria, Pakistan, Rwanda, The Netherlands, The Philippines, Serbia, South Africa, Spain, Sri Lanka, Tanzania, Turkey, Uganda, Ukraine, USA, Vietnam and Zambia.	36
UMD13	2016-2017	132	Armenia, Albania, Bangladesh, Belgium, Bhutan, Brazil, Cambodia, Canada, China, Colombia, Egypt, Ethiopia, Ghana, India, Indonesia, Iran, Israel, Kenya, Lebanon, Mexico, Nepal, The Netherlands, Nigeria, Pakistan, Peru, The Philippines, Rwanda, South Africa, South Korea, Spain, Taiwan, Tanzania, Thailand, Uganda, UK, USA, Vietnam, Zambia	38
UMD14	2017-2018	109	Albania, Australia, Bangladesh, Brazil, Canada, China, Colombia, Egypt, Ecuador, Ethiopia, Germany, Ghana, Guyana, India, Indonesia, Iran, Italy, Japan, Jordan, Kenya, Lebanon, Luxembourg, Mexico, Nepal, The Netherlands, Nigeria, Pakistan, Paraguay, The Philippines, Russia, Taiwan, Tanzania, Turkey, Slovenia, Spain, Sweden, UK, USA	38
UMD15	2018-2019	92	Australia, Austria, Bangladesh, Bhutan, Brazil, Canada, China, Colombia, Egypt, Ethiopia, Ghana, India, Indonesia, Iran, Italy, Japan, Kenya, Lebanon, Malaysia, Nepal, Nicaragua, Nigeria, Pakistan, Peru, The Philippines, Rwanda, Russia, South Africa, South Korea, Sudan, Taiwan, Tanzania, Thailand, Turkey, Uganda, USA and Zambia.	37
Total		1276		

Table 3. The Remote Library Service Logbook of an Urban Librarian (17 March 2020 – 13 August 2020)

Date	Library Patron	Request	Response
17 March 2020	Urban Governance Master candidate	Information on Circular Economy in the Rotterdam port	Shared by e-mail the results of an on-line search
18 March 2020	IHS PhD. candidate	Obtain copy Development of institutional indicators for sustainable development: final report	Shared a copy
19 March 2020	IHS staff member	Request for two past UMD theses	Shared pdfs by e-mail plus a link the Erasmus University Rotterdam's institutional repository with more UMD theses online at https://thesis.eur.nl/org/6
20 March 2020	ISS Master candidate	Information on the integration of refugees in Europe	Shared a link to OECD reports on the topic
20 March 2020	IHS staff member	Migrants access to (affordable) housing, and then with a focus on Myanmar, Yangon	Undertook an on-line search on the topic and shared the results using https://www.wetransfer.com
23 March 2020	IHS staff member	Reserved a new book	Placed in his office to see after the end of lockdown
23 March 2020	UMD16 Master candidate	Information of Transit Oriented Development (TOD)	Shared by e-mail link to an article https://doi.org/10.1016/j.cities.2020.102607 .
23 March 2020	IHS PhD. candidate	An article about Airbnb in American cities	https://doi.org/10.1016/j.cities.2020.102618
23 March 2020	UMD16 Master candidate	Query about overdue library books	Informed the participant that all loans will be automatically renewed during the pandemic
24 March 2020	IHS staff member	Question as to whether IHS students have access to the online literature	Replied by email affirmative and that library staff will assist in getting access to other material on an individual basis as required
24 March 2020	UMD16 Master candidate	Request extension of the loan of 2 library books	Extended
24 March 2020	IHS staff member	Publication about drawing as a research method	Provided the link by email to https://link.springer.com/book/10.1007%2F978-94-6091-596-3 and ordered a book on the same topic
25 March 2020	IHS staff member	Online articles	Link to a Youtube film https://www.youtube.com/watch?v=ZqlTSCvP-Z0
25 March 2020	IHS staff member	Digital book acquisition	Link provided
26 March 2020	UMD16 Master candidate	Digital book chapter	Link provided
27 March 2020	IHS staff members	Digital book	Link provided
30 March 2020	Sustainable Urban Development 2020 SUD2020 short course participant	Access to a report on transport in Indonesia	Copy requested from another university and subsequently forwarded by e-mail
30 March 2020	UMD16 Master candidate	Specific document requested: Young-Jun Kweon, Kwang Sik Kim, 2009. National Traffic Safety Index. *Journal of the transportation research board*. Vol. 2137, Issue 1.	Drew a blank, and the time the national Inter Library Loan (ILL) service was suspended. Advice to the participant was to try and contact the author through ResearchGate to obtain a copy.
30 March 2020	IHS staff member	Online book request	Link provided by e-mail
30 March 2020	IHS staff member	Online book request	Link provided by e-mail
31 March 2020	IHS staff member	Search on city marketing /branding plus the link to a recent IHS PhD, thesis	Search results sent by e-mail plus the link to the PhD. thesis https://repub.eur.nl/pub/120109
31 March 2020	UMD16 Master candidate	Printed book request	Arranged delivery to the student accommodation on campus
31 March 2020	UMD16 Master candidate	Help in finding literature on "impact of renewable energy of European cities on economic and climate resilience"	Search results sent to the participant by email on 02 April 2020
01 April 2020	UMD16 Master candidate	Access to previous UMD Master theses	Provided link to the Erasmus University Rotterdam's institutional repository with IHS theses https://thesis.eur.nl/org/6
02 April 2020	External PhD. candidate	International perspectives on Housing and Urban Management	Replied by email suggesting searching the IHS main catalogue and articles catalogue on-line, and subsequently shared some links on 03 April 2020
06 April 2020	UMD16 Master candidate	Literature search on housing accessibility and affordability.	List sent by email
07 April 2020	UMD16 Master candidate	Access to previous UMD thesis	Shared link
11 April 2020	IHS PhD. candidate	Request to order 2 books on research methods	Ordered on 11 April 2020 and received on 24 April 2020. Later it was noted that the Erasmus University Rotterdam had digitals access to the same (see: https://eur.on.worldcat.org/oclc/1121133636 and https://eur.on.worldcat.org/oclc/1125275927. Subsequently the IHS PhD candidate was shared these links on 12 June 2020

Table 3. Continued

Date	Library Patron	Request	Response
10 April 2020	UMD16 master candidate	Request for an IHS library book and a second book (to be ordered)	IHS book reached to the student on 20 April 2020 and the new book on 20 May 2020. Since ordering it, the new book has also become available digitally through the Erasmus University Rotterdam (See: https://doi.org/10.4337/9781786435309. Likewise, the other (IHS) book has also become available digitally through the university (see: https://eur.on.worldcat.org/oclc/1003856217. (Note: access to the IHS library building by library staff was at this time limited to an average of once a week so handing over of book could be protracted).
14 April 2020	IHS staff member	Access to a journal article for a UMD participant	Shared DOI by email with colleague https://doi.org/10.1016/j.landusepol.2019.104205
14 April 2020	UMD16 Master candidate	Request to pick up a print book from the desk of an IHS PhD. candidate and reissue it to a UMD16 Master candidate	Book sent by post on 16 April to the UMD16 Master candidate
14 April 2020	IHS staff member	IHS Training materials on Solid Waste Management	Send to the colleague by www.wetransfer.com the contents of previous IHS training manuals
15 April 2020	IHS PhD. candidate	Request for two books on city branding	Books ordered on 16 April 2020 and received 30 April 2020, and subsequently shared on 5 May 2020 links to digital versions that had become available through Erasmus University Rotterdam, see: https://eur.on.worldcat.org/oclc/876043214 and https://eur.on.worldcat.org/oclc/1004376530.
15 April 2020	IHS staff member	Request of digital version of two book chapters	Shared with the colleague
15 April 2020	IHS PhD. candidate	Request to obtain a book on the circular economy	Book ordered on 15 April 2020 and available from 20 May 2020 (to be picked up)
16 April 2020	IHS staff member	Request to order a print book	Ordered on 16 April 2020 and on his desk in the office by 12 May 2020
17 April 2020	UMD16 Master candidate	Request for two previous UMD theses	PDFs shared by e-mail
17 April 2020	UMD16 Master candidate	Request for an IHS library book	Found the book in the IHS library on 23 April 2020, and taken by a colleague the same day to the student accommodation on campus
17 April 2020	IHS intern	Requesting an ISBN for an IHS publication	Online registering of ISBN and passing the new number on by e-mail to the intern
17 April 2020	IHS PhD. candidate	Requesting books and an article on the circular economy	Shared link for an e-book and an article and ordered a print book on 18 April 2020 and it arrived on 23 April 2020 (print book to be picked up). The book has now been loaned to an Urban Governance Master candidate who is working on the circular economy too and it is reserved for the PhD. candidate when returned.
20 April 2020	UMD16 Master candidate	Requesting sources on land tenure and the SDGs in Arab countries	Shared some links to documents touching on the subject by e-mail on 20 April 2020 and a later e-mail on 21 April listing some manuals on land tenure
21 April 2020	IHS staff member	Requesting access to an article in the *International Journal of Urban Sustainable Development* to which the Erasmus University Rotterdam has no access	Requested access through the social science subject specialist of the Erasmus University Rotterdam University Library which became accessible on 26 May 2020, see https://eur.on.worldcat.org/oclc/298112514
20 April 2020	IHS staff member	Technical problem with accessing Web of Science from home	Provided by e-mail connection tips and links to troubleshooting manuals, and the problem was solved
22 April 2020	UMD16 Master candidate	Request for a previous UMD Master thesis	Shared by e-mail on 22 April 2020
22 April 2020	IHS staff member	Digital copies of research publication for a UMD16 Master candidate	Sent my e-mail on 22 April 2020
22 April 2020	IHS staff member	Print book order	Ordered on 23 April 2020, received 20 May 2020, and subsequently on her desk in the office. From 27 July 2020 digital access possible through the Erasmus University Rotterdam (see: https://eur.on.worldcat.org/oclc/953734826.
23 April 2020	UMD16 Master candidate	Requesting access to an article in the *International Journal of Urban Sustainable Development* to which the Erasmus University Rotterdam has no access	Sent an e-mail informing him that access had just been requested a few days earlier and that he will be informed once it is sorted, which was on the 26 May 2020, see: https://eur.on.worldcat.org/oclc/298112514

Table 3. Continued

Date	Library Patron	Request	Response
23 April 2020	UMD16 Master candidate	Print copy of the Research methods textbook from the IHS library	Delivered to her at the student accommodation on campus by a colleague
24 April 2020	IHS staff member	Request for a print book	Ordered on 24 April 2020 and received 30 April 2020 and subsequently posted to the colleague's home address, arriving on 02 May 2020.
26 April 2020	UMD16 Master candidate	Request for an online book on housing in East Asia	Decided to purchase a paperback version for the IHS library on 27 April 2020 and received on 12 May 2020. Student went back to her country for fieldwork but is to return mid-August. In the meantime the book is now available via the Erasmus University Rotterdam at https://onlinelibrary.wiley.com/doi/pdf/10.1002/9781119073635 and the participant was notified on 12 August 2020
28 April 2020	IHS staff member	Extensive search to collect material for an on-line training course relating to a Capacity Building Programme for City Leaders in Ethiopia	Results shared with the relevant colleagues in four folders in the corporate Dropbox account
02 May 2020	UMD16 Master candidate	Online version of a book chapter on research methods	Ordered a print version of the book on 02 May 2020 received on 12 May 2020 and delivered on the same day by a colleague to the participant at the student accommodation on campus
03 May 2020	UMD16 Master candidate	Request to loan IHS print library book	Picked up by a colleague and delivered to the student accommodation on the same day
04 May 2020	IHS staff member	Request for a book chapter for an ongoing research paper	Was not available, recommended contacting the authors through ResearchGate (Authors never responded)
04 May 2020	IHS associate staff member	Request for a literature search on noise pollution by motorized traffic at street level and the legislation and norms that are applied to this issue	Shared various links to relevant documents on the Internet over the ensuing couple of weeks
04 May 2020	IHS staff member for UMD16 Master candidate	Information on the Sustainable Development Goals (SDGs)	Shared a folder plus a link to the IHS SDG 11 Resource Hub maintained by the library https://www.ihs.nl/en/resources/library/sdg-11-knowledge-hub
04 May 2020	2 IHS staff members	Article about gentrification	Sent the DOI https://doi.org/10.1177/2399654419872507
04 May 2020	2 IHS staff member and an IHS associate staff member	Shared TOC of a journal with a special issue about Myanmar	https://link.springer.com/journal/41287/32/2
05 May 2020	IHS staff member	Print book order request	Ordered 5 May 2020, received 18 May 2020 and on her desk in the office on 20 May 2020
06 May 2020	UMD16 Master candidate	Participant requested a journal article from 1978 about the housing expert John F. C. Turner	Provided links to more recent articles and recommended a recent IHS library book discussing the history of housing programmes in developing countries
06 May 2020	UMD16 Master candidate	Requested a book chapter about Green cities	Acquired the e-book and shared the chapter with the participant
06 May 2020	IHS staff member	Difficulty in accessing online journal articles	Facilitated access
06 May 2020	IHS staff member	Query about access to a Routledge book	Link given to the EUR library record https://eur.on.worldcat.org/oclc/1004376375 which allowed downloads by chapter
07 May 2020	IHS staff member	Colleague inadvertently deleted some training materials in a shared folder	Restored the missing folder
07 May 2020	IHS staff members	Request to review a case study protocol for a planned research activity on COVID-19 and local initiatives	Made minor changes in the document
07 May 2020	UMD16 Master candidate	Request for a library book on Econometrics	Loaned to the participant on 08 May 2020
11 May 2020	UMD16 Master candidate	Request for a library book on Econometrics	Loaned to the participant on 12 May 2020
12 May 2020	IHS staff member	Overview of IHS staff academic publications since 2000	Answered in two parts, first with lists of IHS publication from 2000-2019 on 19 May and then on 29 June 2020 sent analysis in terms of journals, impact factors and H-index
13 May 2020	IHS staff member	Articles about evictions	Sent the DOIs https://doi.org/10.1016/j.cities.2020.102675 and https://doi.org/10.1016/j.cities.2020.102692
13 May 2020	IHS staff members and IHS PhD, candidate	Article about policymaking and urban resilience	Sent the DOI https://doi.org/10.1016/j.cities.2020.102691
13 May 2020	IHS staff members	Link to PhD. candidate's article	https://www.scienceopen.com/document_file/6894029c-698c-4c12-8948-acb22f8fc869/ScienceOpen/AMPS-17-1.pdf

Table 3. Continued

Date	Library Patron	Request	Response
14 May 2020	UMD16 Master candidate	Request for four titles mainly on transport planning	Supplied three of four publications sought, and agreed to order the last title when it became available
14 May 2020	UMD16 Master candidate	Request for three previous UMD theses	Shared with the participant on the same day
15 May 2020	UMD16 Master candidate	Request for a print journal article	Made a copy from a print copy on 18 May 2020 at the IHS library and shared it with the participant
15 May 2020	Urban Governance Master candidate	Request for a specific book about Ports	Obtained a digital copy to share with the participant on the same day
18 May 2020	IHS staff member	Extensive search to collect material for an on-line training on the following main themes: Solid Waste Management (SWM); Water; and Planning and Management	Results shared with the relevant colleagues in four folders in the corporate Dropbox account
22 May 2020	IHS PhD. candidate	Request for articles with overviews on social science methodologies	Sent some links to publications available through the Erasmus University Network
22 May 2020	UMD16 Master candidate	Request for a digital copy of a print research methods book	Explained the library only has a print version of the book in question
22 May 2020	IHS staff members	TOC of an important academic journal with a special issue on housing	https://journals.sagepub.com/toc/eaua/32/1
24 May 2020	IHS staff members	Article on local response to COVID-19 in informal settlements	Sent DOI https://doi.org/10.1177/0956247820922843
24 May 2020	IHS PhD. candidate	Article about 'story telling'	Provided a copy
26 May 2020	IHS staff member	Request for 2 print books	One book was ordered on 26 May 2020 and was received 01 July 2020 and will be placed in the colleague's office upon his return after the summer vacation, the for the other a digital version was ordered through the Erasmus University Rotterdam, which was available of 5 June 2020 . and shared with the colleague
27 May 2020	IHS staff member	Colleague temporary without internet access needed pdfs of two of his own articles	Sent on 27 May 2020
27 May 2020	IHS PhD. candidate	Part B of an earlier case study	Ordered online and shared
27 May 2020	IHS PhD. candidate	Journal article	Shared details
29 May 2020	IHS staff member	Sharing news item on land grabbing and COVID-19	https://news.trust.org/item/20200527202539-kbax2
02 June 2020	IHS staff member	Sharing a newsletter of a statistics programme	Forwarded e-mail
04 June 2020	IHS staff member	Overview of UMD theses on land leasing for a project proposal	List in Word provided
05 June 2020	IHS staff member	Link to article on Transit Oriented Development (TOD)	https://doi.org/10.1016/j.evalprogplan.2020.101811
05 June 2020	IHS staff members	Link to article of gentrification	https://doi.org/10.1177/0042098019829331
05 June 2020	IHS staff member	Request for journal article	https://doi.org/10.1038/s41586-019-0912-1
05 June 2020	IHS staff member	Copy of own chapter from a recent book	Shared with the colleague
08 June 2020	IHS staff members	Link to an article on gender	https://doi.org/10.1177/0042098019834160
08 June 2020	IHS staff member	Link to an article on water and cities	https://doi.org/10.1177/0042098019838481
08 June 2020	IHS staff member	Link to article on housing and the poor in South Africa	https://doi.org/10.3828/idpr.2019.26
08 June 2020	IHS PhD. candidate	Link to journal article	https://doi.org/10.3828/idpr.2020.3
08 June 2020	IHS staff member	Link to journal article	https://doi.org/10.1177/2399654419888910
09 June 2020	UMD16 Master candidate	Request for print copy of the Research methods textbook	Delivered to the student accommodation on campus on 10 June 2020
10 June 2020	IHS associate staff member	Request for an UN-Habitat country strategic plan	Not available at IHS library, sent links to relevant documents and referred her to a colleague who might be able to assist
10 June 2020	IHS PhD. graduate	Link to journal article	https://doi.org/10.1016/j.tranpol.2020.03.004
12 June 2020	IHS staff member	Request for a journal article	https://doi.org/10.1177/2399654419888910
13 June 2020	IHS PhD. graduate	Link to digital book	https://direct.mit.edu/books/book/3065/Rail-and-the-CityShrinking-Our-Carbon-Footprint
15 June 2020	IHS Staff member and IHS associate staff member	Requesting access to an online book and journal article	Arranged access to the book through the EUR and made an Inter Library Loan (ILL) request for the article. Book was accessible on 16 June through the Erasmus University Rotterdam and the copy of the article was shared on the same day
16 June 2020	IHS staff member	Query about an article not in the IHS 2019 list of staff publications	Explained said article appeared in a 2020 edition of the journal to which it was accepted
16 June 2020	UMD Master candidate from a previous year	Asking about access to information to try and completer her studies	Explained accessibility issues and offered assistance

Table 3. Continued

Date	Library Patron	Request	Response
16 June 2020	External student	Enquiry about access to IHS PhD. theses	Provided a list with links plus another e-mail on 30 June 2020
16 June 2020	IHS PhD. candidate	Looking for an old Dutch newspaper article about Rotterdam from 1947	Recommended contacting the Rotterdam archive to help
16 June 2020	IHS staff member	Requested a book for a forthcoming course	Asked Erasmus University Rotterdam to acquire a digital copy and a paperback copy for the IHS library for the lecturer was ordered. Access organized by 18 June https://eur.on.worldcat.org/oclc/874100997
17 June 2020	IHS staff member	Find pdf of a specific report online	Shared link on same day https://central.bac-lac.gc.ca/.item?id=BT22-131-2012-eng&op=pdf&app=Library
18 June 2020	IHS staff member	Shared link to an article	https://doi.org/10.1016/j.cities.2020.102791
18 June 2020	IHS staff member	Looking for digital version of Research Methods textbook	Sent link to the Erasmus University Rotterdam's digital version at https://eur.on.worldcat.org/oclc/874100997
19 June 2020	IHS staff member	Link to journal articles	https://doi.org/10.1016/j.worlddev.2020.105001 https://doi.org/10.1016/j.worlddev.2020.104984
22 June 2020	IHS staff member	Link to a journal and book	https://doi.org/10.1016/j.landusepol.2020.104573 https://link.springer.com/book/10.1007%2F978-981-15-3332-7
22 June 2020	UMD16 Master candidate	Request access to a book chapter	Shared copy of the chapter in question
23 June 2020	IHS PhD. candidate	Make an appointment to return IHS library books	Met 25 June 2020 outside the institute building to pick up the books.
23 June 2020	IHS PhD. candidate	Accessing online Spanish newspapers on Airbnb	Sent some suggestions on search strategies
23 June 2020	IHS staff member and IHS associate staff member	Links to journal articles	https://doi.org/10.1016/j.landusepol.2020.104624 https://doi.org/10.1016/j.landusepol.2020.104640
24 June 2020	IHS PhD. candidate	Link to journal article	https://doi.org/10.1016/j.landusepol.2020.104688
24 June 2020	IHS PhD. candidate	Distribute IHS library books	Put in her office on 25 June 2020
24 June 2020	IHS staff member	Link to journal article	https://doi.org/10.1016/j.landusepol.2020.104688
29 June 2020	IHS staff member	Link to journal article	https://doi.org/10.1057/s41287-020-00277-w
29 June 2020	IHS PhD. candidate	Link to TOC of a journal	https://www.tandfonline.com/toc/ceps20/28/7?nav=tocList
30 June 2020	IHS staff member	Link to journal article	https://doi.org/10.1093/cdj/bsy016
30 June 2020	IHS staff member	Links to two online publications	https://link.springer.com/referencework/10.1007/978-3-319-95717-3 https://link.springer.com/referenceworkentry/10.1007%2F978-3-319-95717-3_7
02 July 2020	IHS staff member	Request for a book	Organized access to e-book through the Erasmus University Rotterdam https://eur.on.worldcat.org/oclc/1007505295 available on 13 July 2020
03 July 2020	IHS PhD. candidate	Link to journal article	https://doi.org/10.1080/13683500.2020.1782855
06 July 2020	IHS PhD. candidate	Access to articles	Shared link one of the required articles plus another on the same topic on 07 July 2020
08 July 2020	IHS PhD. candidate	Link to e-book	https://link.springer.com/book/10.1007/978-1-4899-7665-9
09 July 2020	IHS staff member	Link to e-book available through the Erasmus University Rotterdam	https://link.springer.com/book/10.1007/978-1-4899-7665-9
09 July 2020	Urban Governance Master candidate	Link to journal article	https://doi.org/10.1080/02723638.2020.1788312
10 July 2020	Urban Governance Master candidate	Link to discussion paper	https://ecdpm.org/wp-content/uploads/Integration-Climate-Change-Circular-Economy-Foreign-Policies-Discussion-Paper-274-June-2020-ECDPM.pdf
10 July 2020	IHS staff member	Request for two print books	Ordered using a pro-forma invoice from the publisher receipt awaited
13 July 2020	IHS PhD. candidate	Book request	Downloadable with DRM limitations through the Erasmus University Rotterdam https://eur.on.worldcat.org/oclc/1141508533
13 July 2020	IHS staff member	Link to book chapter	https://doi.org/10.4337/9781782544418
13 July 2020	IHS staff members	Link to e-book through the Erasmus University Rotterdam	https://eur.on.worldcat.org/oclc/1154017255
13 July 2020	IHS staff member	Link to e-book through the Erasmus University Rotterdam	https://doi.org/10.4337/9781786433916

Table 3. Continued

Date	Library Patron	Request	Response
13 July 2020	IHS staff member	MOOCs on academic English writing	Sent a few links
15 July 2020	IHS staff members	Link to e-book through the Erasmus University Rotterdam	https://doi.org/10.1007/978-3-030-36494-6
15 July 2020	IHS staff member	Request for a book	Ordered an e-book and shared links of other books on a similar topic: https://eur.on.worldcat.org/oclc/1082522248; https://eur.on.worldcat.org/oclc/956705796; https://eur.on.worldcat.org/oclc/1132299442; https://eur.on.worldcat.org/oclc/861282931; https://eur.on.worldcat.org/oclc/1114970089; https://eur.on.worldcat.org/oclc/1016156718; https://eur.on.worldcat.org/oclc/7985015922;
16 July 2020	UMD alumnus	Request journal article	Sent by e-mail
16 July 2020	IHS staff member	List of recommended reading for online course	Prepared in RefWorks
21 July 2020	IHS PhD. candidate	Link to journal article	https://doi.org/10.1177/0042098019867073
23 July 2020	Urban Governance Master candidate	Requested IHS library book	Set aside at the IHS library (yet to be picked up)
23 July 2020	IHS staff member	Link to a recent World Bank document	https://doi.org/10.1596/978-1-4648-1405-1
23 July 2020	IHS staff member	Link to an article about a training event	https://icma.org/articles/article/launch-urban-development-learning-program-philippines?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+icma%2Fcoronavirus+%28Coronavirus%29
23 July 2020	IHS PhD. candidate	Request to help find a book	Link to Erasmus University Rotterdam UB book provided: https://eur.on.worldcat.org/oclc/782203706
23 July 2020	IHS staff member	Search on rental housing in Africa	List of relevant publications provided plus a recommendation for one book
24 July 2020	IHS staff member	Link to journal article	https://doi.org/10.1080/14672715.2020.1793210
26 July 2020	IHS associate staff member	Request for a book chapter	Requested the book by Inter Library Loan (ILL) and received it on
27 July 2020	IHS staff member	Check the references for two online training participant handboos	Done using track changes in Word and returned on 29 July 2020
29 July 2020	IHS staff member	Link to World Bank document	https://link.springer.com/book/10.1007%2F978-3-319-28112-4
29 July 2020	IHS staff member	Access to saved reading materials for an online course	Shared using https://www.wetransfer.com
29 July 2020	IHS staff member	Reference list for on-line training	Checked and sent by Word
30 July 2020	UMD16 Master candidate	Request for a library book	Handed over an IHS library copy outside the IHS building on 31 July 2020
31 July 2020	UMD16 Master candidate	Request for a library book	Handed over an IHS library copy outside the IHS building on 31 July 2020
04 August 2020	IHS staff member	Link to online book	https://doi.org/10.1007/978-3-030-32575-6
04 August 2020	IHS staff member	Link to World Bank document	http://hdl.handle.net/10986/33784
04 August 2020	IHS staff member	Link to World Bank document	http://hdl.handle.net/10986/33572
04 August 2020	IHS PhD. candidate	Access to two articles and a report	Links shared and one report requested through International Inter Library Loan (IILL)
04 August 2020	IHS staff member	Link to World Bank report	http://hdl.handle.net/10986/34271
05 August 2020	IHS staff member	List of publications on 'urban security'	List sent by e-mail
06 August 2020	IHS staff member	Access to journal articles	https://doi.org/10.1177/0042098019888441
11 August 2020	IHS PhD. candidate	Access to two book chapters	Requested online access through the Erasmus University Rotterdam to one of the books, see: https://eur.on.worldcat.org/oclc/1020031827 and suggested the other be requested through ResearchGate
12 August 2020	IHS UMD Alumnus	Requesting copy of an old IHS publication	Sent pdf on same day by e-mail
13 August 2020	IHS UMD Alumnus	Requesting help in resolving a case pf plagiarism by someone else who seems to have 'stolen' her UMD thesis	E-mail dialogue initiated on how to address/resolve the problem identified