

Hamish Hay

Beyond Gender

Intersectionality as a lens for understanding water security
amongst refugees in Northern Uganda

Trondheim, 28th June 2021

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Executive Summary

This thesis critiques the received wisdom that gender is the overriding social difference when planning for water access and water security. Whilst water is undoubtedly a heavily gendered experience, research has revealed that intersectionality, the study of multiple interlocking social differences, could build a richer understanding of systems of inclusion and exclusion. The concept, which is widely explored in academic discourse, has seldom been used to understand water security or plan for water access.

Uganda has experienced unprecedented levels of migration since the outbreak of civil war in South Sudan in 2013. Concurrently, it has implemented an unusually liberal refugee regime which gives registered refugees the freedom to work, move, and access most public services. Until recently, the humanitarian sector has primarily been responsible for needs-based water provision in refugee settlements. However a transition, with the support of humanitarian actors, is currently being undertaken towards a utility-led water supply model.

This thesis explores intersectionality within the case of South Sudanese refugees in Northern Uganda. The researcher set out to understand: how households access water; knowledge of intersectionality amongst key stakeholders; and whether intersectionality could be a useful lens for water access planning and monitoring.

Through an extensive literature review around the theoretical domains of poverty reduction, humanitarian relief and development aid, and intersectionality, the researcher developed a theoretical model. It combined knowledge around how South Sudanese refugees in Northern Uganda could experience water security and insecurity, with a focus on the interlocking socio-spatial differences of gender, class and ethnicity. The researcher then interviewed 10 key expert informants from the humanitarian sector to explore knowledge, attitudes, and practices around intersectionality within their field of responsibility. Two quantitative survey datasets, conducted nationally amongst refugees and host communities, were analysed to examine potential relationships between social differences and indicators of water security.

The researcher concluded that, despite some awareness of intersectional experiences, there is little application of knowledge around intersectionality within the case. Nevertheless, the concept has the potential to greatly contribute to a more useful theoretical lens beyond gendered analysis and provision. This could be advanced through additional academic research and practical applications by humanitarian and development agencies.

Foreword & Acknowledgments

Water is life. It's not just a key physiological need for humanity, but a foundation for higher levels of well-being including health, education and work. In low-income countries, restricted access to safe water has deeply disempowering effects that typically reinforce existing socio-spatial differences in gender, citizenship, class or cast, race and many other factors. The millions of people around the world forcibly displaced from their homes similarly rely on water for their lives and livelihoods. As a water engineer with a long standing interest in ideas of international development, the importance of water has been close to my heart for many years.

Urban Ecological Planning (UEP) has challenged the way I think about the world around us and provided me with an invaluable new perspective on how people interact with both the natural world and the built environment. The course is special in its ability to broaden our understanding of how the world works. It's been an exciting journey integrating my experience as a water engineer with the new perspectives and challenges that UEP has thrown me as part of this Thesis.

I would like to thank my supervisor, Rolee Aranya, and my co-supervisor, Mrudhula Koshy, for their hours of dedication, pertinent insight, and boundless enthusiasm which supported the production of this thesis, particularly when the pandemic severely limited the possibilities for primary research. I would also like to thank Hilde Refstie, from the Department of Geography, for her support in developing the case boundaries and for her connections with vitally useful contacts. Finally, I thank all of my wonderful key informants in Uganda, for building the backbone of this thesis, and my sister and aunt, for diligently proofreading this document!

Statement of Originality

I certify and that this is my own work and that the materials have not been published before, or presented at any other module, or programme. Where the knowledge, ideas and words of others have been drawn upon, whether published or unpublished, due acknowledgements have been given.

Hamish Hay

Monday 28th June 2021

Trondheim



Figure 1 : South Sudanese citizens, and recent refugees, carry jerry cans for water



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1. Introduction

Within academic discourse, and the development and aid sectors, it is widely recognised that water is an inherently gendered experience. In general, women around the world are more affected by water insecurity than men, and in many cases patriarchal power structures take decisions in ignorance of the lives and needs of women. To this end, policies and strategies for water security frequently aim to integrate the needs and voices of women in decision-making processes. However, some argue that a focus on gender ignores the complexity of lived experiences which may require a more nuanced lens of analysis. Does gendered water as a maxim matter anymore or is a new approach required? Could intersectionality offer a practical and useful contribution to the suite of tools available for practitioners?

Gendered experiences of water impact the lives of women and girls and have far-reaching consequences for human well-being, economic growth and society (Crow and Sultana, 2002, p. 709). It has been well-researched how the constant “struggling for water” (Sultana, 2020, p. 10) has disproportionate physical, social and emotional impacts on the life-worlds of women under many circumstances, and in many parts of the world. Sustainable access to safe water not only directly contributes to physical health, but can enable women to access education, work, and ultimately enable personal freedom or, to use Amartya Sen’s words, the “capability to choose a life one has reason to value” (McMichael, 2016, p. 282).

In some academic fields, gender identification is seen as too simplistic to understand and tackle complex systems of oppression, the outcome of which can be the inclusion or exclusion of certain people or groups. With roots in feminism and racial studies, the theory of intersectionality stipulates that multiple social differences, and systems of oppression and exclusion, should be examined at the same time to better understand people’s lived experiences (Walker, Frediani and Trani, 2013; Castán Broto and Neves Alves, 2018).

Within its original domain, intersectionality has been used as a ‘critical’ social theory, or a way of criticising inequalities and advocating for change

(Collins, 2019). However, there have been few applications of intersectionality in water, and no evidence of it being operationalised at scale. Academics such as Farhana Sultana (2020) and Ben Crow (Crow and Sultana, 2002) have sought to both apply and progress intersectionality as a critical social theory for cases of water security, with a focus on places of exclusion and difference, such as informal settlements in the Global South. Others, such as Harris et al. (2016) and Dewachter, Holvoet and Van Aelst (2018) have sought to identify intersectional experiences of water access through quantitative data collection both in urban and rural areas. They found that social class (or income) and gender are two significant social differences that both interact and affect access to water. However, the existence of a generalised, multi-factor, contextual, applicable, and useful working model for intersectionality as a tool for understanding and promoting water security appears to be some way off.

79.5 million people worldwide are forcibly displaced due to persecution, violence, or conflict, including 26 million international refugees. There has been a particularly sharp rise over the past 10 years, driven by conflicts in Syria, South Sudan, Ukraine and other parts of the world. Only a small proportion of those displaced over this time period found a robust solution such as resettlement, naturalisation

or return to country of origin (UNHCR, 2020), and the average duration of refugee displacement is between 10 and 17 years (Bassi et al., 2018).

The movements of South Sudanese refugees into Uganda over the past decade took place within a uniquely liberal policy context. Unlike other countries, recognised refugees in Uganda have the right to work and access many of the same services as Ugandan nationals. Land is allocated to refugees to promote self-sufficiency and livelihood opportunities, whilst integrated approaches are beginning to be used to plan for service delivery for both host and refugee populations. Whilst most refugees live within designated refugee ‘settlements’, many have moved to urban areas, including Arua and Kampala. Within the city of Arua, around a quarter of the population are refugees (IMPACT Initiatives, 2018).

Water supply services for South Sudanese refugees in Northern Uganda have, since 2013, mostly been provided through a humanitarian needs-based model coordinated by the Office of the Prime Minister (OPM) and the United Nations High Commissioner for Refugees (UNHCR). However, at the time of writing, a substantial shift is taking place, with services in Uganda transitioning to the new ‘Northern Umbrella of Water and Sanitation’ utility. This is likely to have implications for how water is provided to refugees.

Using South Sudanese refugees as a case, this thesis seeks to examine whether intersectionality could form part of a useful theoretical model for understanding and improving water security.

1.1. The case

The case focuses on refugees of South Sudanese origin residing in Northern Uganda, in both settlements and urban areas such as Arua. The primary social differences are gender, ethnicity (in particular tribal ethnicity) and class.

Sex was used as a proxy indicator for gender, with just two categories: male and female. Despite simplification for the purposes of analysis, the

researcher recognised that such terms are contested and socially constructed, with the idea of gender as an inanimate label under scrutiny (Walker, Frediani and Trani, 2013).

Britannica Academic (2021c) defines class, or social class, as a group of people in society with a similar socio-economic status, and can be related to property ownership, income, and profession. For the purposes of analysis this thesis made explicit use of proxy indicators for class, including housing type and income.

Ethnicity is defined loosely as a group bound by “common ties of race, language, nationality, or culture” (Britannica Academic, 2021a). The idea of ethnicity was subjectively interpreted by key informants as part of the data collection process, primarily as tribal ethnicity.

Research questions

The research questions explored in this Thesis are:

RQ1: How do South Sudanese refugees in Northern Uganda access water?

RQ2: To what extent do South Sudanese refugees in Northern Uganda experience water security or insecurity based on gender, ethnicity and class, with a focus on Uganda?

RQ3: How is intersectionality explicitly or implicitly understood and operationalised at present amongst selected stakeholders in Northern Uganda? Could it be a valid frame of reference for planning, implementing and monitoring water supply services amongst refugees?

1.2. Descriptive table of contents

The **Background** chapter contextualises the case in terms of forced migration within and to Uganda. It goes on to describe changing international and local approaches to refugee management through conventions and frameworks, with an increased focus on self-sufficiency and the developmental challenges of displacement. It then describes the specific case of the displacement of South Sudanese refugees into Uganda since 2013.

The **Theory** chapter takes a deep dive into concepts relevant to the case and the associated research questions. These are organised into three theoretical domains: poverty (including livelihoods and vulnerability); development aid and humanitarian relief; and intersectionality. In addition to exploring the origins of these concepts, it explores their applicability and potential usefulness for explaining water security and insecurity. The chapter is followed by a proposed **Theoretical Model** for better understanding how the discussed concepts could contribute to understanding water security for refugees.

Next, in the **Research Design** chapter, the research methods are presented. The chapter also presents the philosophical approach adopted by the researcher, the challenges presented by the Covid-19 pandemic, and finally the desk-based qualitative and quantitative methods including interviews, a focus group and archival data analysis.

The **Case Analysis** chapter presents and analyses the results of the data collection methods. It includes thematically-grouped analysis of the quantitative and qualitative data.

Finally, the **Discussion** chapter explores the results in the context of the case, and the **Conclusions and Implications** chapter examines how the knowledge gained from the thesis addresses the research questions and could contribute to a better understanding of water security amongst refugees.



Figure 3 : South Sudanese children being processed at Busia collection point, before heading to Impvepi Camp



2. Research Design

This chapter explores the knowledge that was necessary to answer the research questions introduced in the previous chapter, the methods used to gather this knowledge, how the methods ensured sufficient reliability and validity of the results for subsequent discussions, and ethical considerations. Furthermore, the limitations arising from the 2019-2021 Covid-19 pandemic are also discussed, and how the methods were adapted under these circumstances.

Figure 4 overleaf provides an overview of the origins of the field of study and the three-stage research process. **Stage 1** consisted of a review of background information around phenomena of forced migration into Uganda, including policies, history and discourses over time. It also includes an investigation into contemporary destinations for refugees in Uganda, and experiences of water security there. **Stage 2** harnesses the identified theories and discourses to generate a conceptual framework, orientated around intersectionality and other modes of theoretical domains. **Stage 3** makes use of the secondary research methods, interviews, and archival data analysis to understand the roles of key stakeholders in the case. Based on insights gained through these interviews, the conceptual framework was then revised based on insights from the analysis of data.

2.1. Defining research questions

2.1.1. Water security

Maintaining and securing access to water in emergency situations, such as in the case of forced displacement, can be challenging (Bassi et al., 2018). The Global Water Partnership defines water security as where every person has access to affordable, safe water to live a healthy and productive life whilst protecting the natural resources upon which water supply depends (Varady et al., 2016). UN Water, on the other hand, defines water security both as a process and an outcome. As a process, they consider governance, finance, political stability and international cooperation as all playing a role in providing water for drinking, food production and ecosystems (UN Water, 2013). As an outcome, they define water security as:

“The capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability.”

(UN Water, 2013)

For the purposes of analysis, this thesis focuses on water security in terms of the ability of refugee households to sustainably access safe water sources, and the role that governmental and non-governmental stakeholders can play in this process.

2.1.2. Problem statement

An early review of literature revealed that there is an emerging recognition of intersectional experiences, beyond gender, around the provision and consumption of water services. Such experiences can contribute to water security or insecurity. Building on this early review of literature, this thesis adopted the premise that gender may be insufficient for understanding systems of inclusion and exclusion in relation to safe water security. It sought to test whether the case, and by extension similar cases, could benefit from the integration and application of principles of intersectionality as part of a theoretical model.

The proposed problem statement for this thesis is:

“Existing ways of working amongst stakeholders working with refugees in Northern Uganda fail to consider intersectionality, and multiple socio-spatial differences, in the analysis of, understanding of, and planning for water security”

2.1.3. Research questions

RQ1: How do South Sudanese refugees in Northern Uganda access water?

The first research question was supported by both the background literature review and the qualitative data collection methods. It sought to develop a rich description of the everyday practices of refugees and how they access water.

RQ2: To what extent do South Sudanese refugees in Northern Uganda experience water security or insecurity based on socio-spatial differences, in particular gender, ethnicity, and class, and their intersections?

The second research question sought to use both qualitative and quantitative data to draw relationships, both hypothetical and demonstrable, between socio-spatial differences and experiences of water security.

RQ3: How is intersectionality explicitly or implicitly understood and operationalised at present? Could it be a valid frame of reference for planning, implementing, and monitoring water supply services amongst refugees?

The third and final research questions sought to examine knowledge, attitudes, and practices around intersectionality within the case – whether explicitly or implicitly. It also aimed to hypothesise whether the concept could be operationalised within a broader framework and make a useful contribution towards maintaining water security for refugees in Uganda and beyond.

2.2. Strategy and approach

The researcher explored the relevance of intersectional theory for understanding security and insecurity of water access through a single case, using qualitative methods and quantitative archival data analysis. The chosen case is the experiences of South Sudanese refugees in Uganda, primarily within refugee settlements in Northern Uganda (the Western Nile region) and urban areas. Data was gathered through expert interviews, a focus group, archival analysis of survey datasets, and reports produced by third parties.

The researcher had originally planned to conduct primary data collection, through interviews, questionnaires and focus groups, but was prevented from doing so by the on-going Covid-19 pandemic.

Bryman (2016), in their book on social research methods, was the primary philosophical inspiration for this thesis, including their approach to the generation of theory, concepts and knowledge through acknowledgment of subjectivity. Yin (2018) and Johansson (2003) have informed the practical design of this case study-based project, including the selection and bounding of the case, and how the case could be harnessed to inform wider theory. Furthermore, “The good research guide : for small-scale social research projects produced” by Denscombe (2010) provided practical advice for the ensuring validity and reliability from interviews and the focus group. Finally Flyvbjerg (2006)

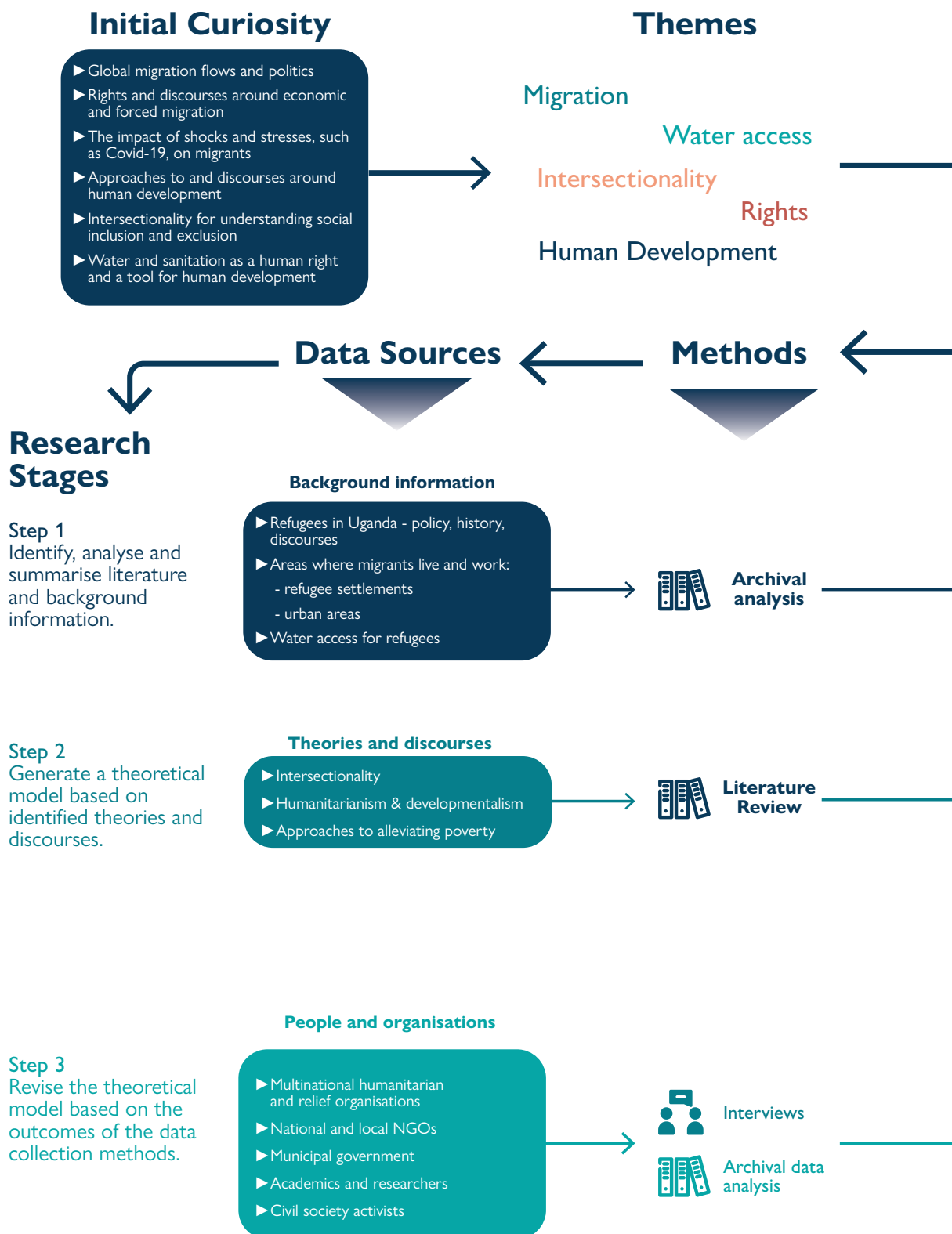


Figure 4 : Research design diagram

Assumptions

- ▶ Global migration flows, driven by multiple factors and through individual livelihood choices, will continue to grow in scale and scope.
- ▶ Protracted displacement will remain the norm for many
- ▶ Access to safe water and sanitation will remain a key barrier to human development.
- ▶ Development, humanitarian aid, and global and local politics will become increasingly intertwined

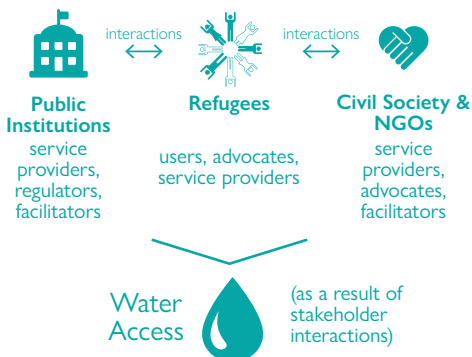
Research Questions

RQ1: How do South Sudanese refugees in Northern Uganda access water?

Generation of a theoretical model

Revision of model

Understanding stakeholders & roles:



- Primary mode of analysis:
Intersectionality
Gender
Ethnicity
Class
- Other modes of analysis
Humanitarian relief & development aid
Poverty reduction

RQ2: To what extent do South Sudanese refugees in Northern Uganda experience water security or insecurity based on socio-spatial differences, in particular gender, ethnicity, and class, and their intersections?

RQ3: How is intersectionality explicitly or implicitly understood and operationalised at present amongst selected stakeholders in Northern Uganda? Could it be a valid frame of reference for planning, implementing and monitoring water supply services amongst refugees?

provided justification for the use of case studies in social research for generating hypotheses around real world phenomena.

2.2.1. The original research strategy

The original research design envisaged an action research approach to data collection and the immersion of the researcher in the case through mixed field-based methods. Methods were to include on-the-ground data collection amongst refugees in both refugee settlements and urban areas, expert interviews within the governmental and non-governmental sector, and an experiment with a trusted local partner to stress-test alternative methods of participation to better understand and respond to intersectional experiences in water.

Action research is differentiated from traditional ideas of research, in that the research has a specific intention to address a societal issue and achieve change in society (Maruyama and Van Boekel, 2014) with the intention to “alter things” as an explicit aim of the project itself (Denscombe, 2010, p. 126). The experiences of the researcher in the process of knowledge gathering were to be captured through processes of autoethnography, including extensive reflection. Surveys, soft mapping, and participant observation were to be employed as additional supporting methods. The methods would have triangulated between a wide variety of sources, with a focus on the life-worlds and experiences of refugees themselves and their relationships to water.

Due to the Covid-19 pandemic, the methods were adapted to focus entirely on desk-based research, with a heavier reliance on expert informants, literature, and data archives. This presented a challenge to validity and reliability in the research, due to the physical distances involved and the challenges in performing action research. The researcher therefore sought to interview a broad range of experts, including those working ‘on the ground’ in Uganda, those operating more at a policy level, and those working for government agencies. Furthermore, the conclusions drawn were triangulated against background information and

the analysis of quantitative archival data in order to ensure validity.

2.2.2. Revised research strategy

The revised research design was based around a single case, water security amongst refugees from South Sudan, with the methods being exclusively desk-based. The methods rested partly on the use of archival analysis to understand whether intersectionality could make a practical and useful contribution to understanding water security amongst South Sudanese refugees, with applicability to other cases of forced displacement around the world. However, the primary method rested on expert interviews for understanding knowledge, application, and practices around intersectionality for stakeholders operating within this specific case. The overall aim of this thesis, and its relationship to the research questions and research methods ultimately used, is shown as a logical framework in Figure 6 overleaf.

2.2.3. The principles of Urban Ecological Planning

The research design was driven by the principles of Urban Ecological Planning (UEP), an approach to urban practice that examines interactions between social and environmental ecologies and human habitats (Sliwa, Aranya and Refstie, 2018). UEP is based around nine core principles that differentiate it from traditional forms of urban planning and provide practical pointers for how urban ecological planners can approach their practice. Two principles that have most significantly informed the design of this research exercise are given below.

2.2.3.1. Value-based and developmental planning

The UEP principles reject the instrumental assumption of planning as an unbiased exercise and argue that planners should express their values in their practice. This particularly applies where such stances are made on behalf of politically or environmentally disadvantaged groups. This thesis

required the researcher to make “value stances” (Sliwa, Aranya and Refstie, 2018, p. 6) on behalf of refugees in Northern Uganda, which have been stated in the section “Values and reflexivity” on page 23. Thus, the methods seek to explicitly explore the value of an intersectional lens to benefit water security amongst refugees, as opposed to considering the wider developmental prospects of Northern Uganda as a whole.

2.2.3.2. Contextual planning

The UEP approaches rejects “standardised and generalised solutions” (Sliwa, Aranya and Refstie, 2018, p. 10) and argues that the replication of ideas in multiple circumstances, without consideration for local demographics, economics, politics and social structures, can have negative consequences. Therefore, this thesis embraces the contextual nature of intersectionality as understood by academics including Davis (2008) and Sultana (2020), in particular the context of power in co-constituting social-spatial differences. This also highlights the importance of the rich background literature review for illustrating the international, national and local context of the case.

2.2.3.3. Preliminary work and motivation

The motivation of the researcher was to understand how refugees experience inclusion and exclusion, with a specific focus on water security. This was based on the researcher’s previous experience of livelihood frameworks and their relationship to systems of governance (Hay, Martul and Lyngstadaas, 2019) and how frameworks can help to understand the build-up of individual and community vulnerability (Hay, 2020).

International and internal migrants, both labour migrants and the forcibly displaced, can face barriers when attempting to improve their livelihoods or engage in livelihood strategies, when compared to more settled populations. Such barriers were stark in the early stages of the Covid-19 pandemic in 2020. The researcher was particularly struck by the condition of labour migrants in India, where inter-



Figure 5 : A clean water borehole, Uganda

Aim



To understand whether intersectionality could point towards improved models for understanding and planning for water access for refugees.

Problems

Objectives

Water service delivery is complex and involves multiple stakeholders, operating both in the humanitarian and developmental domains.



To understand the methods of water service delivery used amongst refugees in the rapidly changing situation in Northern Uganda.

Interlocking social differences interact with access to materialities, including water, but there is a dearth of applied knowledge around practical implications for refugees' access to water.



To investigate whether South Sudanese refugees in Uganda experience oppression based on social differences and their intersections.

Intersectionality is a recognised theoretical lens within racial and feminist studies, but less so in the water sector. It is unclear if explicit or implicit knowledge around intersectionality is held within the sector, and whether it offers useful insights for refugees or service providers for understanding water security and insecurity.



To understand knowledge, attitudes, and practices around the core concepts of intersectionality for stakeholders involved in water provision for refugees in Uganda, and to appraise whether intersectionality could be a useful frame of reference for water supply amongst refugees.

Figure 6 : Logical Framework

Research Questions

RQ1: How do South Sudanese refugees in Northern Uganda access water?

RQ2: To what extent do South Sudanese refugees in Northern Uganda experience water security or insecurity based on socio-spatial differences, in particular gender, ethnicity, and class, and their intersections?

RQ3: How is intersectionality explicitly or implicitly understood and operationalised at present amongst selected stakeholders in Northern Uganda? Could it be a valid frame of reference for planning, implementing and monitoring water supply services amongst refugees?

Research Methods



Archival analysis around access to water amongst refugees in Northern Uganda



Expert interviews with stakeholders working with water access for refugees



Archival analysis of survey data collected by stakeholders operating in Uganda



Expert interviews with stakeholders working with water access for refugees



Expert interviews and focus groups with a focus on knowledge, attitudes, and practices around the principles of intersectionality

state migrants living ‘hand to mouth’ were left with few livelihood opportunities following a national lockdown. Aajeevika Bureau (2019), an NGO, has highlighted how, during the Covid-19 pandemic, longstanding chains of vulnerabilities amongst labour migrants were aggravated, including poor access to safe water and sanitation.

To explore these impacts the researcher considered potential multiple cases of migrants, in particular the experiences of internal migrant labour in India, international asylum seekers in Europe, and refugees in Northern Uganda. Initial engagement with potential research partners included the Centre for Urban and Regional Excellence (CURE) in India, the Urban Action Lab in Uganda, and the JAGA Mission in India. All of these organisations expressed an interest in intersectionality as a frame of reference for understanding livelihoods, but frequently lacked data on migrant status within a sufficiently relevant case. A focus on a thick qualitative narrative was therefore deemed to be essential and, given the close connections between NTNU and the Urban Action Lab in Uganda, the researcher chose a single case focusing on the experiences of South Sudanese refugees.

2.2.3.4. Influences on social research

Bryman (2016) describes factors which can have implications for the design of social research projects, including epistemology, ontology, values and practical considerations. The case of the treatment of refugees is arguably a value-laden exercise, with competing worldviews and viewpoints leading to different subjective constructions of reality. This section considers the most important of these and whether they have implications for the research design. A summary of these influences, including uncertainty in the context of the case, is given in Figure 7.

2.2.3.5. Epistemological positioning

In the early stages of the project, the researcher adopted the axiom that a technocratic approach to water and sanitation provision fails to adequately consider the diverse intersectional experiences of the forcibly displaced. Therefore, it was necessary to reject a *positivist* approach to knowledge generation, which Bryman (2016) describes as a “value-free” approach to research that exclusively uses empirical data to generate knowledge (p. 24). The researcher instead adopted a *subjectivist* and *interpretivist* position. Bryman (2016) explains how subjectivist and interpretivist approaches acknowledge that social meaning is subjective, and that people, including the researcher make sense of the world in different ways. Therefore, the researcher sought to acknowledge their own values and biases in the research, and the different viewpoints of stakeholders towards the case. Social meaning can be significantly reinforced by labels and discourses surrounding them, which can be especially pertinent when considering migration. The idea of the ‘migrant’ is a highly loaded term with real world consequences for how people and groups treat each other. As summarised by Erdal and Oeppen (2017), “labels have discursive power... [which] impacts their migratory experiences” (p. 982).

The researcher developed two hypothetical scenarios below, to demonstrate the potential value of a subjectivist-interpretivist approach for understanding the case:

Hypothetical scenario 1: water access in an informal settlement

Within an informal settlement, a quantitative survey could demonstrate very low levels of daily volumetric drinking water provision compared to a wealthy ‘formal’ neighboring settlement. Using a positivist empirical lens, this could be viewed as an unacceptable disparity which requires an appropriate solution. However, through a interpretivist-subjective lens, research could reveal that other informal sources, such as rivers, meet many of the livelihood needs of this community that are not captured through controlled sources.

Such a lens challenges the assumption that the ‘problem’ to be solved is volumetric water provision.

Hypothetical scenario 2: the legitimacy of claims to WASH

Settled populations can view claims to water access from a transient or migratory population as illegitimate, especially in the case of urban slums. They may consider a lack of citizenship, local registration, or land deeds as a lens which supports this view of illegitimacy. However, the transitory population may consider claims to water access through a different lens – that of water as a universal human right, for example. This reveals the subjective nature of uneven power relations and how these affect claims to water access. Again, a interpretivist-subjective lens is likely to be best placed for unpacking and gathering knowledge around these viewpoints and associated power relations.

2.2.3.6. Values and reflexivity

Bryman (2016) explains how it is increasingly common to embrace research as valid despite biases and existing value systems in the researcher, as long as they are stated (p. 34). The researcher had value positions on several philosophical and practical

matters around water security for refugees, which are:

- 1. There are few justifications for excluding the rights imbued in citizenship to migrant communities;
- 2. Water and sanitation (WASH) is a human right and should be available for all; and
- 3. The state should ultimately be responsible for (but not necessarily the provider of) water services.

The researcher was in a privileged position and explored a context far removed from their day to day reality. They had an academic ‘baggage’ of theories and concepts which may not have always been appropriate for the case in question. Recognising these and other biases, the researcher maintained an attitude of reflexivity around biases that could affect the research task. These included letting the data collected ‘speak for itself’ through the first stage of analysis and coding, feeding “back into the stock of theory and research findings” (Bryman, 2016, p. 21), and triangulating the findings from multiple research methods.

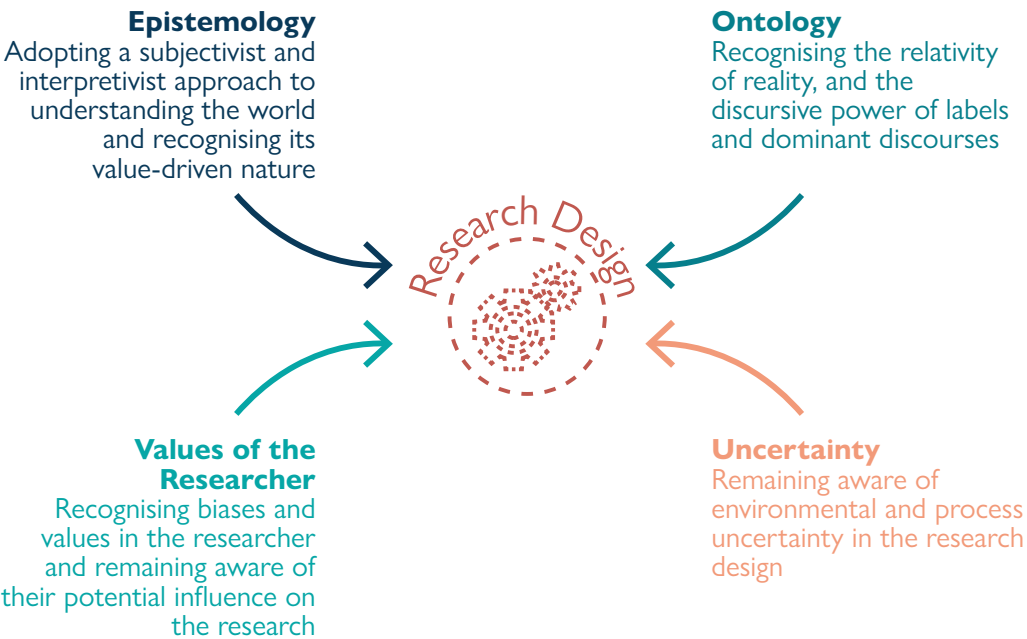


Figure 7 : Influences on social research

2.2.3.7. Uncertainty in research

The proposed research design was subject to significant levels of uncertainty, both ‘environmental’ and ‘process’ uncertainty, as defined by Abbott (2005).

Environmental uncertainty, related to the uncertain context within which research takes place, was primarily evident through the difficulties encountered by the researcher in planning for primary data collection. This uncertainty was managed by defining a sufficiently diverse range of both primary and secondary research methods that, in the event of some methods being unavailable, could still permit the triangulation of research conclusions.

Process uncertainty, uncertainty around whether the relevant outcomes could be obtained through the research design, was controlled by managing the expectations of the study. The researcher recognised the risk that the data could be insufficient for forming firm conclusions around intersectionality for water access, but could nevertheless help shape the direction of future research tasks.

2.3. Methods

2.3.1. The case study approach

The research design rests around the case study approach, which Yin (2018) argues allows the researcher to investigate phenomenon in a real-world context, even when the boundaries between the context and phenomenon are unclear. A ‘case’, according to Johansson (2003), is the examination of some sort of phenomenon “specific to time and space” (p. 5) and can be an object or process and be empirical or theoretical. Johansson further argues that the “empirical world is full of complexity” and that a deep examination of a single or small number of cases is the “explicative” exploration of many variables. This contrasts with the “reductive” method, commonly used where multiple cases are available, and which seeks to correlate between a few variables across cases (p. 4).

2.3.1.1. Selecting the single case

A single case was selected primarily due to the large number of data points, the volume of qualitative knowledge available, and close connections with potential informants. The opportunity was open to tell a rich and explicative story, in a context, with the support of some archival data.

Flyvbjerg (2006), in a critique of misunderstandings around case-study research, argues that analytical rationality is inherently limited, but that context-dependent epistemic knowledge, even from a single case study, can be of great value to learning. Within the case of refugees in Uganda, to quote Yin (2018) again, there are “many more variables of interest than data points” (p.14) – gender, race, sexuality, education level, skills set, family history, physiology, personality type, and many others. The practical impossibility of controlling for variables in a systematic and empirical manner was clear. Therefore, the researcher placed greater value on a thick qualitative analysis of narrative within the context.

Both Yin (2018, p. 48) and Johansson (2003, p. 8) offer insights into how single cases can be selected such that they offer the most useful contributions to theory and knowledge: critical cases, extreme cases, common cases and revelatory cases.

A *critical case* has a set of circumstances that are very closely related to the theoretical propositions and can be used to determine whether such propositions are correct. In this way, a single case can contribute to theory-building. An *extreme case* has clear deviations from established theory or everyday norms, and the unusual nature of these cases can therefore provide insights into such ‘normal’ processes. Thirdly, a *common case* is representative of widely experienced circumstances across multiple cases. Therefore, insights and lessons learnt have implications beyond a single cases, and this can contribute to theory-building. Finally, a revelatory case is considered to be one where a phenomenon can be examined that might normally be inaccessible to the researcher.



1) Temporal Boundary

From the outbreak of conflict in South Sudan in 2013 until present year, 2021, with an appreciation of the wider historical context



2) Geographical Boundary

Refugee settlements in Northern Uganda, City of Arua, City of Kampala



3) Policy Boundary

National policies, regulations and protocols, and international protocols



4) Unit of Analysis

South Sudanese refugee households

Figure 8 : Boundaries of the case

Attributions: uganda by Andrejs Kirma, uganda by Salvia Santos, Earth by Batibull, and Home by Nunnicha Supagrit from the Noun Project

The selected case in Northern Uganda is arguably revelatory, as such large-scale movements within a short time frame, in the context of a 'liberal' refugee policy regime, have not previously been witnessed in the same way. The high number of displaced individuals from South Sudan can be seen as a 'test' for a more liberal approach towards refugee rights and refugee self-sufficiency, within the framework of the UNHCR Global Compact on Refugees (as discussed in the *Background* chapter) and could offer revelatory insights for theory-building.

2.3.1.2. The unit of analysis and associated boundaries

The selected unit of analysis is the relationship between refugee households and water access points. The geographical focus is on South Sudanese refugees residing in settlements in Northern Uganda, but with the inclusion of refugees' experiences in urban areas, especially Arua and Kampala, where this adds richness to the narrative. The temporal boundaries of the case stretch from the outbreak of the recent conflict in Sudan in 2013 to the present day, with a focus on the present experiences of refugees but with an appreciation of the broader historical context. The policy boundaries of the case primarily concerned national government regulations, policies and protocols for refugee management at the present time, as well as international protocols. A graphical representation of the boundaries of the case is given in Figure 8 on page 25.

2.3.1.3. Approach to model generation

The researcher's approach to model generation is illustrated in Figure 9 on page 28. Johansson (2003) makes the distinction between deductive, inductive and abductive reasoning (p. 9) and for this study, these methods have been combined in the process of testing, generating and revising theory – also known as the "adaptive theory approach" (p. 11).

The Theoretical Model was initially generated through the deduction and synthesis of concepts

and through generalisation from case studies identified in the literature view.

Following the analysis and coding of data collected as part of the data collection exercise, additional concepts were generated, which were then tested against the Theoretical Model and used to generate a revised model.

The approach to testing theory described here has a close conceptual relationship to what Johansson (2003) describes as abduction, or "naturalistic generalisation" (p. 10). They describe this as the process of gathering facts from known cases identified in literature, generalising from them, and applying them to a partial case. Due the limited possibilities for primary data collection, the selected case was, to an extent, reconstructed from facts, data and 'clues' where possible.

2.3.2. Data Collection

2.3.2.1. Choice of methods

The methods used reflect the approach to generating, testing and revising the theoretical base as previously described. The researcher sought practical advice for the design of these desk-based research methods from Denscombe (2010), in their research guide for small-scale social research projects, in addition to the book by Yin (2018) on case study research. The research methods were primarily qualitative, and thus, as argued by Denscombe (2010) the data must be seen within a sufficiently detailed context (p. 238).

2.3.2.2. Archival analysis and desk-based research

The literature review was a vital early-stage part of the research proposal, and informed the researcher about the case, relevant theories and concepts, and how they have been applied to other cases in the past.

The theoretical foundations of intersectionality are feminism and racial emancipation, with applications to cases of water access and refugees. The researcher

discussed the case with academics within their university to identify relevant literature, in addition to tracking references within the body of literature itself. The researcher also identified additional themes including rights-based approaches, needs-based approaches, humanitarianism, developmentalism and livelihoods that provided additional contextual and theoretical richness to the case and the proposed theoretical model.

The researcher gathered a wide variety of background data concerning the specific case. Sources included government documents, publications from official agencies (such as UNHRC, the World Bank and smaller non-governmental organisations, NGOs) as well as statistical survey data. Both the Ugandan government and large non-governmental organisations have commissioned large surveys of the refugee population in Uganda over the past 5-10 years.

2.3.2.3. Interviews

2.3.2.3.1. Interview design

Expert interviews gave the opportunity for the researcher to gain deeper insights into experiences of water access amongst refugees through discussions with key informants (KIs). The researcher designed an interview guide around the 'KAP' framework, consisting of knowledge, attitudes and practices. The World Health Organization (2014) describes KAP as a technique which deepens an understanding of how information and attitudes influence actual behaviours (p. 6). Through this approach, the researcher aimed to better understand *knowledge* (what is known), *attitudes* (what is thought) and *practices* (what is done) in relation to intersectional experiences in water access.

Intersectionality is not a widely understood technique. Therefore, the survey focused on the constitute elements of social difference, and the interactions between them, in a language which the key informants were most likely to be familiar with. The interview format was designed to be

'semi-structured', and therefore despite the fact that the questions were organised around the KAP framework, there was significant scope to "let the interviewee develop ideas and speak more widely" (Denscombe, 2010, p. 175). Through discretion in allowing the interview to divulge on subjects, such a technique offered a 'thicker' description and gave greater insight into views, attitudes and meanings (Yin, 2018). The interview guide is given in Appendix 1.

The researcher took rapid notes during the interview process, outlining key points made and key concepts expressed by the key informants. All key informants were asked if they were willing to be recorded during their interview, and all but one consented.

A focus group, a facilitated interaction between individuals with a focus around a certain topic (Denscombe, 2010, p. 352), was used to interview five members of a large non-governmental organisation. The role of the researcher, as the moderator, was to create a relaxed atmosphere for discussion, steer the direction of the topic, and if necessary stimulate attendees into responding (p. 353). Focus groups have the advantage of bringing multiple sources of knowledge together, and through discussion and interaction, can reveal underlying motives and logic used by the participants.

2.3.2.3.2. Key informants

Key informants were interviewed from large multi-lateral agencies, international and national non-governmental organisations, and a Ugandan university. An overview of the informants, and associated informant codes, is presented in Table 1 on page 29.

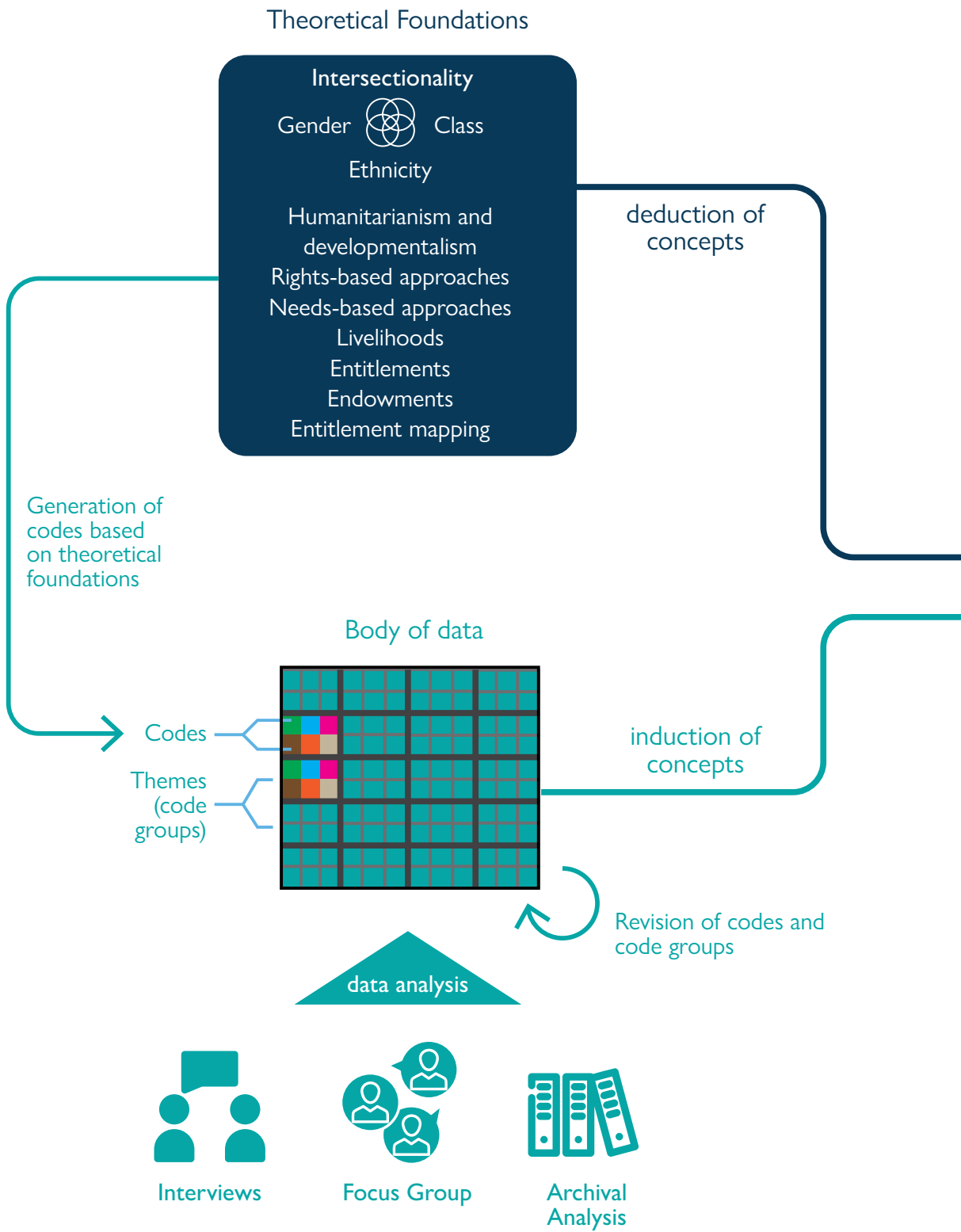
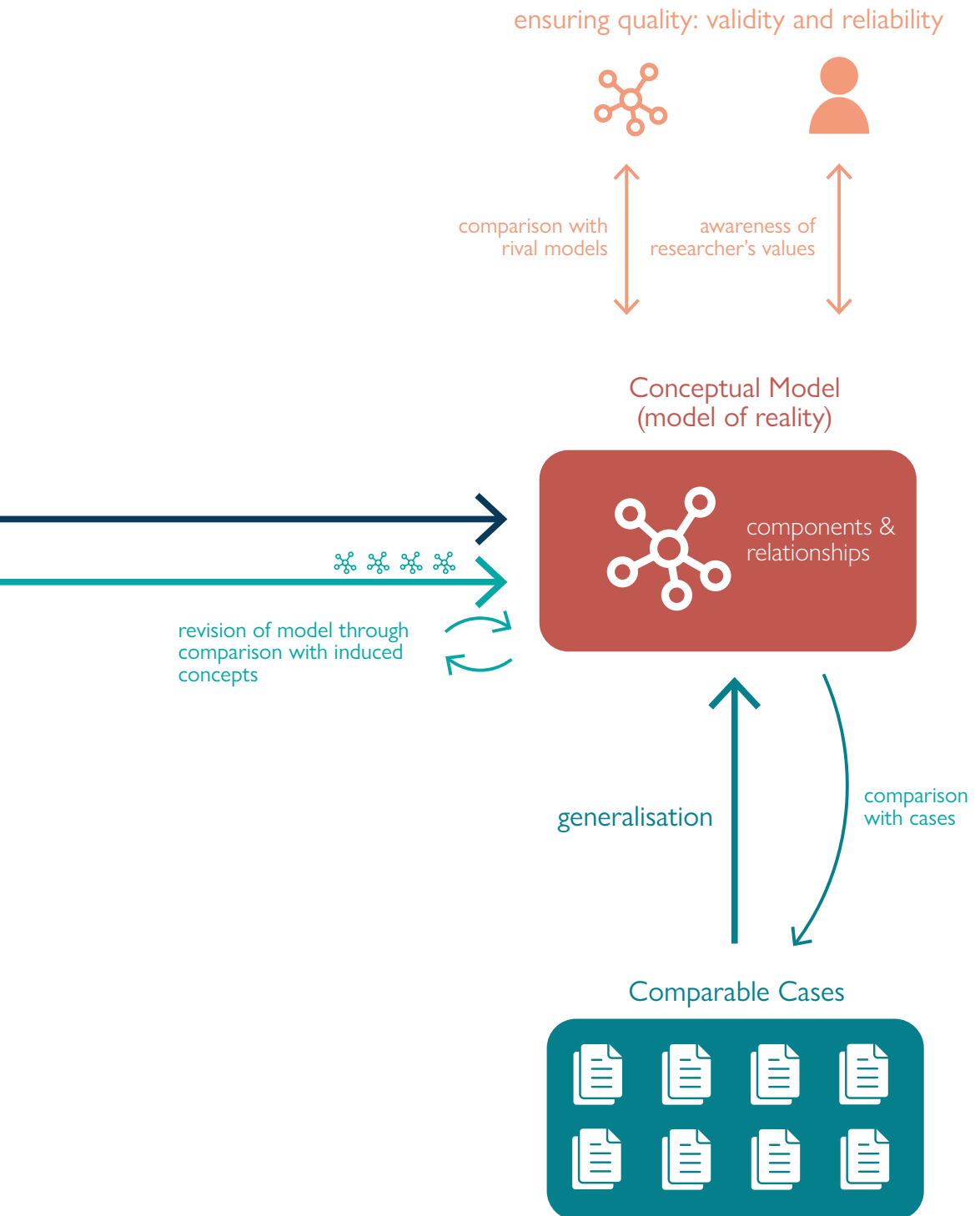


Figure 9 : Approach to model generation



2.3.3. Data analysis

Analysis of the data and knowledge gathered through the methods consisted of three steps, as explained by Denscombe (2010). The data were first described, then explained, and then interpreted to point towards wider meaning (p. 235).

The description focused on what, when, to whom and how often the phenomena occurred, and is outlined in the *Results* chapter. The explanation examined potential cause and effect relationships in the data – how things are connected, why things happen, and when things could potentially happen again in the future. Finally, the interpretation of the data examined patterns and regularities that contributed to the model of reality. These last two points are examined in the *Discussion* chapter. Denscombe (2010) notes that this last stage is the most value-laden phase of the exercise and can reflect the context of the research and “personal values and experiences of the researcher” (p. 236).

2.3.3.1. Analysis of qualitative interview data

The data were processed primarily according to the principles of thematic analysis, a “method for identifying, analysing and reporting patterns (themes) within data” (Braun and Clarke, 2006, p. 79) and was inspired by the deductive-inductive research model outlined by Tjora (2019). The goal was to develop themes largely driven by the data actually collected, without being excessively influenced by the existing theoretical model (p. 83). This was carried out to avoid potential bias or presupposition.

2.3.3.1.1. The generation of codes

Coding, a subjective process, groups words, sentences or paragraphs based on events, actions, opinions or meanings. Miles and Huberman (1994) argue for the use of codes to extract meaning from words (p.56) and for different levels of analysis: for description, analysis, and pattern-building.

Where necessary, codes were merged or eliminated throughout the process of coding, leaving just those that are most likely to be important for analysis. The remaining codes were retained as ‘higher level codes’. These were used for the generation of concepts.

A summary of the process of coding for model generation is given below, based on the models of both Braun and Clarke (2006, p. 87) and Tjora (2019, p. 4):

1. Transcribing interview and focus group data where necessary, where there was a lack of clarity around detail or meaning from the notes taken during the interviews;
2. Generating codes across the entire dataset for description, analysis and pattern-building, as described by Miles and Huberman (1994);
3. Grouping codes into higher-level themes;
4. Reviewing whether themes worked in relation to the entire dataset, and producing induced concepts;
5. Matching the concepts with the existing conceptual model; and
6. Proceeding with the theoretical development of the conceptual model through a process of iterative revision.

Thematic analysis of the interview data was carried out using NVIVO qualitative data analysis software.

2.3.3.2. Analysis of quantitative archival data

Limited sets of anonymous archival data around refugees settled in Northern Uganda were obtained from the World Bank, UNHCR and REACH through professional networks developed over the course of the research. In many cases, raw data were unavailable, or were too small to perform meaningful analysis around intersectional experiences. Nevertheless, two datasets, one from the World Bank and the other from REACH, provided some limited insights to support the analysis.

Key Informant ID	Gender	Organisation	Interview type	Primary insights
K1	Male	International NGO	Semi-structured interview	Provided a global outlook of approaches to water access amongst refugees
K2	Male	Ugandan University	Semi-structured interview	Contextual insights into water supply challenges in Uganda amongst nationals and refugees
K3	Male	Local NGO	Semi-structured interview	Challenges for refugees in Kampala
K4	Female	Multi-lateral agency	Semi-structured interview	Approaches to water access for refugees in settlements in Northern Uganda
K5	Female	Local representative	Semi-structured interview	Challenges for refugees in Arua
K6	Female	International NGO	Focus group	Contextual knowledge of refugee settlements and the transition to the utility model
K7	Male	International NGO	Focus group	
K8	Male	International NGO	Focus group	
K9	Female	International NGO	Focus group	
K10	Male	International NGO	Focus group	

Table 1 : Key informants

The objective of quantitative analysis was not to estimate the statistical significance of the quantitative data in relation to quantitative data, such as through regression analysis or chi-squared tests. Instead, the objective was to provide visual representations of the datasets to provide insights into the themes raised during the interviews, and to test (or triangulate) the concepts generated by the qualitative data analysis.

The datasets used for analysis are can be requested through links in Appendix 3

2.3.3.3. The World Bank Uganda Refugee and Host Communities Household Survey

In 2018, the World Bank carried out the Uganda Refugee and Host Communities Household Survey (World Bank Group, 2019). It interviewed 2,209 households and was weighted to be representative of both refugee and host communities in Kampala,

the South West and the Western Nile (Northern Uganda) regions. The topics covered included primary sources of water and sanitation, time taken to access sources and time spent waiting at sources. In addition, an estimation was made of the total household assets available.

Whilst the dataset included a full roster of all household members, data on water access was only recorded at a household level. Therefore, analysis took place based on the gender of the head of the household, as the lowest possible unit of analysis.

2.3.3.3.1. Process

After first separating out refugees who are recorded as being displaced by the 2013-2018 South Sudanese conflict, random sample of both male and female headed-households were selected, comprising 242 males and 242 females. Random sampling was performed in Microsoft Excel, using the RAN() variable to perform random ranking of the male and

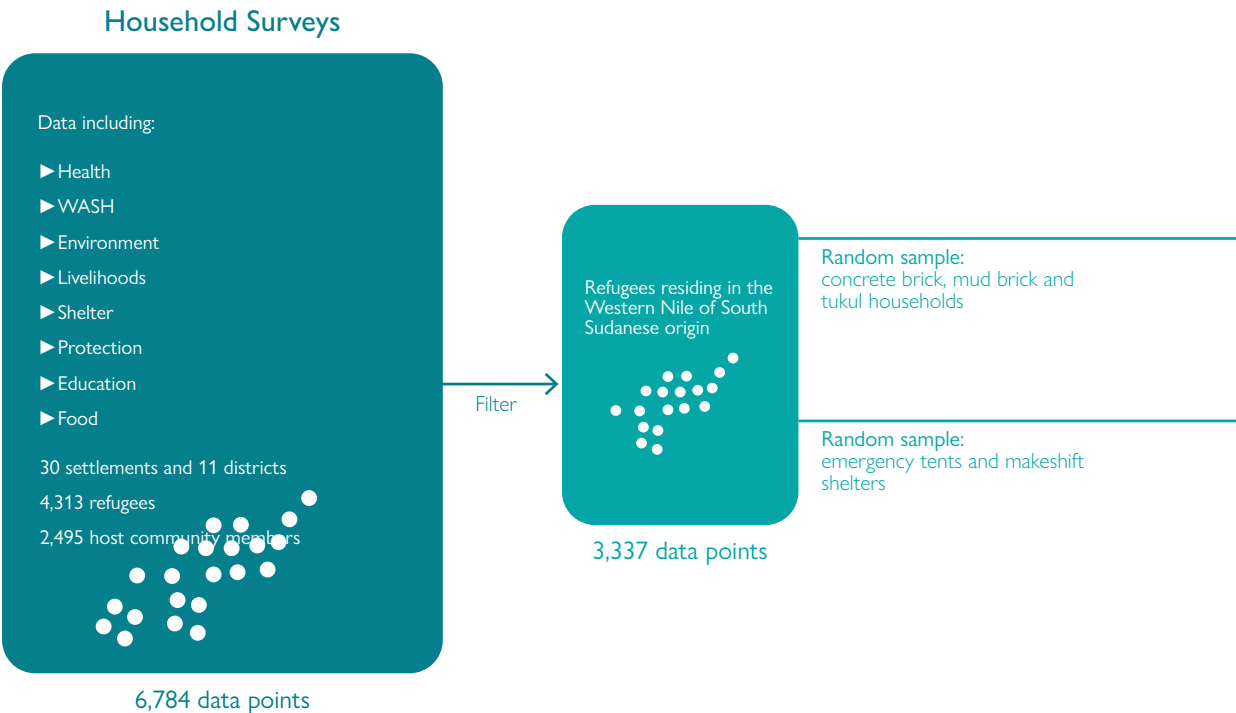


Figure 10 : Quantitative analysis of the JMSNA

female respondents in turn, followed by a random selection of the ranked respondents.

Datasets related to household composition, access to water and household assets (as a proxy for class) were then imported into Power BI, a graphically driven data analysis and insight software package. Using unique household identifier numbers, these datasets were joined.

Frequency analysis was then performed to visualise correlations between the gender of the head-of-household, indicators of water security, and level of household assets.

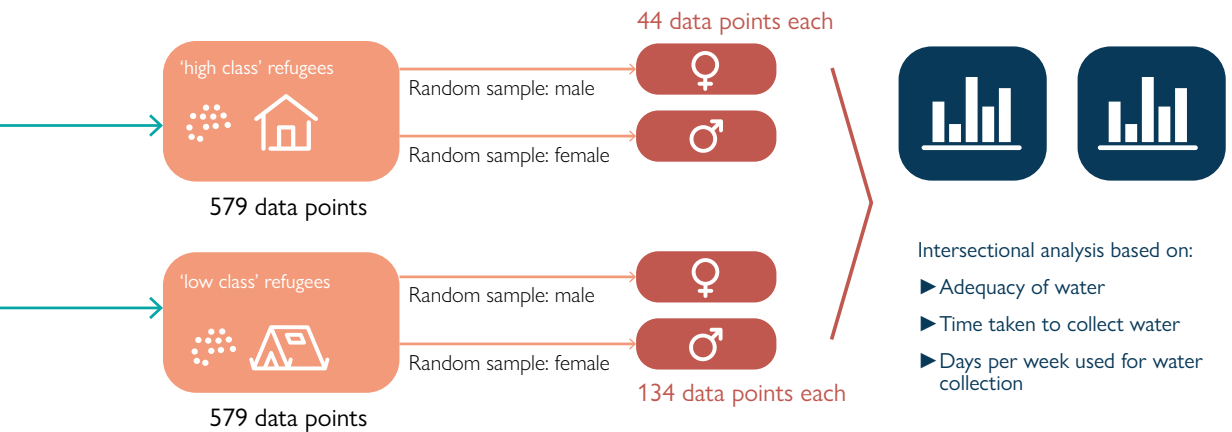
2.3.3.3.2. Proxy Indicators

Indicators of water security included time taken to and from the primary water source of drinking water, the time typically spent waiting at the primary source of drinking water and the type of main drinking water source. The estimated total

value of assets was used as a relative measure of the wealth of assets. No useful indicator was identified for ethnicity. Details of the indicator codes are given in Appendix 3

2.3.3.4. Joint Multi-Sector Needs Assessment (JMSNA)

The JMSNA was initiated at the 2016 Humanitarian Summit, where multiple donors agreed that there was a need for standardised and coordinated needs assessment in Uganda for better targeting humanitarian support. Data from 6,809 households were collected in 30 refugee settlements, 11 districts and Kampala and included both refugees, and host communities (REACH, 2018). Data were collected around health, water & sanitation, livelihoods, shelter, education and more. It was a comprehensive survey and provided an opportunity to integrate multiple indicators through an intersectional lens.



Attributions: Scatter Plot by Blaise Sewell, House by hans draiman, camp by Snow, Male and Female by Milinda Courey, and Graph by ciciliakwo from the Noun Project

2.3.3.4.1. Process

Figure 11 gives an overview of the analysis process of the JMSNA.

First, data were filtered to include only refugees of South Sudanese origin. A random sample of 579 households with 'high class' and 579 households with 'low class', based on proxy indicators, were selected. In a similar way to the World Bank dataset, random samples were taken using randomised ranking within Microsoft Excel, using the RAN() function.

From within these two samples, sub-samples were taken of both male and female respondents. From those with 'high class', a random sample of 44 male and female respondents were selected, and from those with 'low class', a random sample of 134 male and 134 female. Again, random samples were chosen using randomised ranking.

An early problem noted by the researcher was the small size of the final datasets due to multi-stage process of sampling, filtering and sub-division.

2.3.3.4.2. Proxy Indicators

From within these four sub-samples, three indicators of water security were compared to give an intersectional insight into the relationship between gender and water security. The first was a subjective binary indicator - whether the respondent considered that they had 'adequate' access to water for meeting household needs over the past 30 days; the second was the typical amount of time spent collecting water from the main water point; and the third the number of days per week typically spent collecting water by a member of the household.

For this study, the type of shelter was used as a proxy indicator of class. After excluding blank value and non-answers, households with 'high class' were considered to be those households with 'concrete brick', 'mud brick' and 'tukul' construction, the latter being a traditional round hut of mud, grass and wood (Britannica Academic, 2021b). Households with 'low class' were considered those living in 'emergency tents' or 'makeshift shelters'.

Details of the indicator codes in the dataset are given in Appendix 3.

It was raised through the interviews how humanitarian actors often use proxy indicators for class in order to better target relief. Their use has been justified by academics such as McKenzie (2005), who has used asset proxy indicators to predict inequality in income or consumption.

2.3.4. Quality of the research

The quality of the research, especially through a qualitative study with limited sources of data, was a critical consideration for the research design. As described by Denscombe (2010), the ultimate aim of this thesis was to produce a viable account of how things work (p. 236). Yin (2018, p. 42) identifies the ideas of validity and reliability as contributors to research quality, which were discussed and applied to this thesis below.

2.3.4.1. Construct validity

Construct validity was necessary to ensure appropriate analytical measures for the concepts under study, and to avoid the development of overly subjective judgements. The use of a deductive-inductive analysis approach to the raw interview data was designed to generate concepts that avoided researcher bias, before being used to inform a revised version of the theoretical model. Furthermore, the use of a reasonably broad range of key informants helped to ensure the validity of these analytical measures.

2.3.4.2. Internal validity

Internal validity is related to the validity of causal relationships within the theoretical model. In addition to looking at patterns in the data, it was necessary to examine 'rival' explanations at this stage – and whether they could lead to alternative conclusions. This was performed through triangulation with other research methods, particularly between the qualitative and quantitative methods.

2.3.4.3. External Validity

External validity related to the validity of the research within the wider context of water security for refugees around the world. Within the single case under study, existing theory, based on other cases from around the world, was essential for the process of progressively generating a theoretical model that had wider applicability.

2.3.4.3.1. The validity of interview data

Denscombe (2010) offers specific advice for ensuring the validity of interview data. The researcher checked across sources (triangulated conclusions), and therefore compared the conclusions drawn from interviews with the extensive body of background literature and the analysis of quantitative data. The researcher also addressed the plausibility of the data. The researcher has discussed the validity of sources in the *Results* chapter.

Beyond this, the study protected personal and sensitive personal data through integration of guidelines from the Norwegian National Committee for Research Ethics in Science and Technology. This included the anonymisation of personal data and the destruction of personal field data before the end of the study. Special consideration was paid to sensitive personal data.

The consent form used for collecting data from the key informants (KIs) is given in Appendix 2.

2.4. Ethics

The ethical integrity of the research, and the protection of both individuals and society was ensured through three general principles:

1. **Quality of research:** the research was planned to be of sufficiently high quality through close working with university professors to ensure robust methods, along with the triangulation of multiple research methods.
2. **Protecting people:** the researcher considered the sensitive role played by many key informants and informants in Northern Uganda, and therefore anonymised all data and ensured full consent from the participants.
3. **Social responsibility and relevance:** The research project was designed to contribute to debates around water service delivery methods for refugees, with the explicit aim of supporting those experiencing protracted displacement. Continued large-scale forced population movements around the world means that the topic will continue to have wider relevance.

3. Background

Uganda has a long history hosting refugees and asylum seekers notably hosting 7,000 Polish refugees during the Second World War (Lwanga-Lunyiigo, 1993; UNDP, 2017). Insecurity, civil war and ethnic violence have been the primary drivers of forced migration to Uganda in recent history, and today it is the third-largest refugee hosting nation in the world (World Bank Group, 2019).

3.1. Uganda and forced migration

Following the outbreak of civil war in South Sudan in 2013, hundreds of thousands of individuals were forcibly displaced over the border and into Uganda. The government, UNHCR and other humanitarian agencies coordinated the rapid establishment of large-scale registration and assistance centres, along with nine new refugee settlements (Poole, 2019). Prolonged conflicts in Burundi and the Democratic Republic of Congo have, in addition, contributed to high flows of refugee over the past 10 years, with many of them having little prospect of return in the near future (UNDP, 2017). As of March 2021, the Office of the Prime Minister reports that 1.47 million refugees are now registered in the country, up from around 226,000 in 2012, a six-fold increase. The majority are hosted in Northern Uganda, and 60% are of Southern Sudanese origin (Hovil, 2018; UNDP, 2017; UNHCR, 2021). A peace agreement was signed in South Sudan in 2018, but there is an expectation that the displacement of South Sudanese refugees could remain protracted (Hovil, 2018).

In addition, Northern Uganda has experienced significant internal displacement in the past due to internal conflict combined with government policy towards internally displaced people (IDPs). Since 1986, 22 armed groups have staged armed conflicts with the government, most notably the Lord's Resistance Army (LRA). This led to significant internal displacement in a series of "protected villages", with similar characteristics to refugee camps, before the group signed a peace treaty with the government in 2006 (Dolan and Hovil, 2006).

3.2. Changing approaches to refugee and IDP management

Uganda's approach to the management of forcibly displaced people, both internally displaced and international refugees, has been subject to intense study by a range of academics including Hovil (2018); Idris (2020); Kreibaum (2016). Uganda's approach today is widely regarded as being unusually liberal and innovative, and integrates international best practice. One Ugandan scholar has described it as creating a paradise for refugees (Serunkuma, 2019) whilst the World Bank has boldly described it as the most "progressive in the world" (World Bank Group, 2019, p. 16).

3.2.1. Postcolonial policies and approaches

The Government of Uganda, following independence from Britain in 1962, favoured a policy of control and containment of refugees as opposed to protection. Hovil (2018) argues that this began with the Control of Refugees Act in 1960 (p. 4). Since then, forced displacement into Uganda, driven by conflict or political instability in neighbouring countries, has been a relatively common occurrence. Likewise, during the period of power held by Idi Amin from 1971, around 200,000 Ugandans fled north into southern Sudan, and remained there for a decade or more, to escape possible political persecution. From 1976 onwards, Uganda began to ratify international conventions and protocols and Hovil (2018) argues that from then onwards Uganda's treatment of refugees was



Figure 11 : Children and women gather at a water tap stand in Nyumanzi 1 camp, in Uganda

By Oxfam International, CC BY-NC-ND 2.0.

more informed by these international and regional standards.

Uganda has also witnessed very significant periods of internal conflict which resulted in multiple waves of internal displacement, especially throughout the 1980's and 1990's. Much of this displacement was arguably generated artificially through the government's policy of containing the rural population of Northern Uganda within "protected villages" (Hovil, 2018, p. 8).

Hovil (2018) and Poole (2019) have argued that these villages were, in effect, a form of government internment camp, with evidence of poor living conditions, debilitation and humiliation for those living there. There was limited access for NGOs to most of these camps, little scrutiny of the conditions experienced there, arguably nurturing and sustaining one of the "world's worst humanitarian crises" (Dolan and Hovil, 2006, p. 8).

3.2.2. Development of the liberal refugee regime

Since the year 1999 Uganda's policies have gradually shifted from one of containment, with the idea of refugees as a "burden" to the state, towards a recognition of refugees as potential "agents of development" (Hovil, 2018, p. 5). Hovil explains how in 1999 the country implemented the self-reliance strategy (SRS) which was inspired by UNHCR's refugee aid and development approach. It aimed to promote refugee self-reliance within four years of arrival through allocating small plots of land in refugee camps, which were renamed refugee settlements. However, self-reliance was difficult to achieve in the absence of freedom of movement and the freedom to work, and therefore "without freedom to move, any development potential was largely lost" (p. 7). Furthermore Hovil (2018) argues that the strategy gave an excuse to reduce need-based relief aid, leaving refugees in "conditions of terrible poverty" (p. 6) in some circumstances.

Notable developments, however, came to fruition through the Refugees Act of 2006 (enacted in 2008), the Refugee Regulations 2010, and the Kampala Convention (Hovil, 2018; Okello, 2019). These legal instruments created formal definitions of refugees and new procedures for determining their status, and they allowed for substantial freedoms for recognised refugees. Freedoms included the freedom to move within the country and the freedom to work, which was described as an “unusually liberal” approach (Poole, 2019, p. 3).

Uganda became, and remains, a pilot country for the UN’s Comprehensive Refugee Response Framework (CRRF) of 2016, which emphasised the need for comprehensive and integrated approaches to forced displacement, the coordination of aid, development and peacebuilding, and responsibility sharing across stakeholders with the ultimate aim of safe voluntary return (Nana Odoi, Rudolph and Volk, 2020; Idris, 2020). In response to CRRF, Uganda has implemented ReHoPE – the Refugee and Host Population Empowerment Strategy, the integration of humanitarian relief in government programmes, and the Settlement Transformation Agenda (STA). These propose situating humanitarian relief “within a development framework” and seeing the humanitarian mandate “through a development lens”, with the aim of providing better value for money and capacity building for sustainable government ownership. The strategy also states that humanitarian actions should be “catalysts” that are transitioned to development activities (Government of Uganda, 2017, p. 4). In addition, the Ugandan government seeks to use emergency funds to build long-lasting infrastructure that can be used by locals in years to come. (Bassi et al., 2018)

Ugandan refugees now enjoy many of the same rights as citizens and, to an extent, development planning amongst citizens and refugees is coordinated (Idris, 2020). Refugees in Uganda now have:

1. The right to access land and own property;
2. The right to access employment;

3. The right to access public services;
4. Freedom of movement; and
5. The right to access justice

(World Bank Group, 2019, p. 16)

The rights enjoyed by refugees in Uganda contrast significantly to those in other countries with high numbers of refugees. Campbell (2006) writes how in Kenya, urban refugees resort to bribes in order to gain livelihood opportunities outside camps. Brun (2016) highlights how 82% of Syrian refugees in Jordan live outside refugee camps and work illegally, leaving them at risk of lower wages and harsher condition. 86% of Syrian refugees in Jordan live in poverty.

3.2.3. Current efforts for refugee integration

The large movements of refugees into Uganda over the past 10 years have put significant pressure on some shared public services and natural resources, in particular water resources. The government has identified the need to co-ordinate better with the developmental needs of Ugandan citizens (Ministry of Water and Environment, 2019; Hovil, 2018). As a result, the Refugee and Host Population Empowerment Strategy (ReHoPE) and the Settlement Transformation Agenda (STA) have sought to better integrate the developmental needs of refugees with those of the host population. Proposals include a more coordinated approach to national development (Hovil, 2018, p. 12), including livelihoods, the delivery of services such as health and water, and activities to promote social cohesion between both groups (Idris, 2020, p. 9). Further building on these principles, the Water and Environment Sector Refugee Response Plan (WESRRP) from 2019 harnesses the principles of integrated service delivery, and focuses on the provision of sustainable water and sanitation to both refugees and host communities (Ministry of Water and Environment, 2019).

3.2.4. Critiques

Some academics have been critical of Uganda's approach to refugee management. Hovil (2018) has argued that adoption of international standards does not always benefit refugees 'on the ground', especially if humanitarian support is withdrawn from the poorest. Furthermore, they argue that refugee management can be used for political game-playing by giving Uganda access to additional external funds which have enabled it to increase political control over border regions. In addition academics Schiltz and Titeca (2017), writing in Al Jazeera, claim that the positive impression projected by Uganda to the outside world has deflected international attention from autocratic tendencies domestically, the behaviour the army, and the involvement of Uganda in the South Sudanese conflict.

Refugees who choose to reside in urban areas continue to be largely excluded from all forms of humanitarian support (IMPACT Initiatives, 2018). In addition, the policy of allocating land to refugees in settlements may not be tenable in the long term due to a scarcity of land. On agricultural land, refugees are not permitted to establish permanent structures, including perennial crops, that could establish their presence there, which limits long-term livelihood opportunities. Furthermore, there is no path to citizenship for refugees, including for children where one parent is a refugee (Kreibaum, 2016, p. 2).

3.3. Demographics and distribution of refugees today

3.3.1. The refugee integration journey

UNDP (2017) summarises the typical journey of a refugee into Uganda in terms of an entry, settlement and integration phase.

1. During the entry phase asylum seekers typically spend 1-3 days in a reception centre for registration, health screening, and the provision of some items.
2. Next, during the settlement phase, refugees are allocated residential and agricultural land in a refugee settlement.
3. Finally, during the integration phase, refugees are provided with access to a range of public services.

Integration is defined by Jacobsen in Campbell (2006) as when refugees are not in physical danger, are able to sustain livelihoods, and are socially networked in the host community (p. 409). The typical integration journey for refugees is summarised in Figure 12.

3.3.2. The situation today

The Uganda Refugee and Host Communities Household Survey (World Bank Group, 2019) interviewed 2,209 households in Kampala, the South West and the Western Nile (Northern

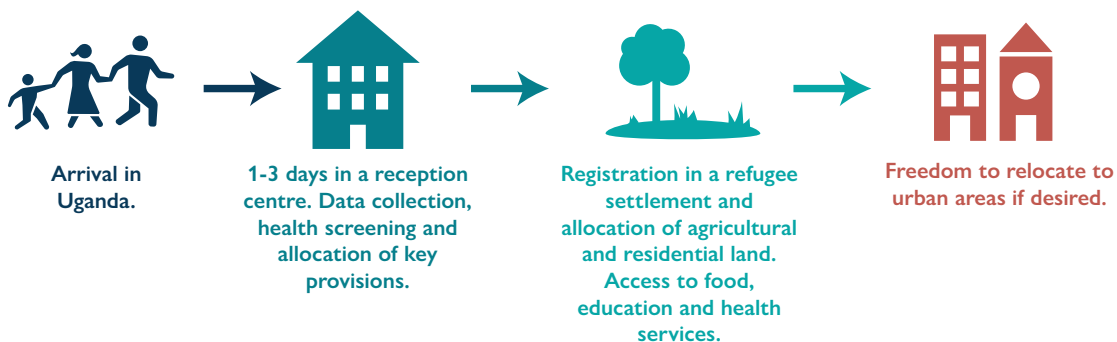


Figure 12 : The refugee integration journey

Attributions: Refugees by Gerald Wildmoser; House by Alice Design, plot by Christoffer Skogsmo, and Town by Solid Icon Co from the Noun Project



Attributions: By Fundacja PCPM, CC BY-NC-ND 2.0.



Attributions: OpenStreetMap contributors, Esri, USGS, HERE, Garmin, FAO, NOAA.

Uganda) regions. Despite the relatively small sample size, it provides the most useful and comprehensive overview of the distribution of refugees in the region identified by the researcher at the time of writing.

The vast majority of refugees reside in refugee settlement, and 65% reside in Northern Uganda close to the border areas of South Sudan. In some northern districts, refugees comprise over half the population. The settlement of BidiBidi alone (Figure 13) has a population of over 200,000 residents (Ministry of Water and Environment, 2019).

Whilst refugees in the north are almost exclusively of South Sudanese origin, Kampala is host to refugees from a range of countries – including The Democratic Republic of Congo, Burundi, Rwanda and Somalia, the largest group.

Refugees are, on average, younger than the host population, particularly in Northern Uganda – where 58% are under 15 years old. A slight majority overall are women, and 62% of households are female led. Refugee households tend to have much higher dependency ratios than local households. The ratio of dependants to non-dependants averages 1.7 for refugees, compared to 1.2 for host households.

Both locals and refugees may share similar characteristics, which can lead to competition for scarce resources and services (Kreibaum, 2016). Idris (2020) highlights that in rural areas where refugees typical reside, 75% of people engage in agriculture, and that refugees share many of the vulnerabilities of the host population. The World Bank also notes that both host and refugee households are vulnerable to agricultural shocks and rely on similar coping mechanisms, such as savings.

Across Uganda around 70% of refugees experience food insecurity, significantly higher than for local households. Furthermore, refugees remain highly dependent on food and other humanitarian assistance - 37% of refugees remain reliant on humanitarian assistance as their main form of income five years after arrival (Idris, 2020).

However, poverty levels appear to decrease the longer refugees have been established in the country

(World Bank Group, 2019). Furthermore, refugees with access to remittances appear to exhibit a far lower poverty rate than those who rely on aid or local income.

Refugees are typically economically active, with an average of 3.5 different livelihood activities or sources of income per household. However, the labour force participation rates is just 38%, compared to 78% for Ugandan nationals. Labour force participation is particularly low for refugee women (Idris, 2020).

UNDP (2017) notes that whilst there have been a number of studies documenting the monetary benefits of hosting refugees, the cost of the provision of services has not been well documented, making appropriate planning difficult. This can be especially complex as refugees often share services with the host population.

3.3.3. Approaches to refugee management

3.3.3.1. Refugee settlements

The vast majority of refugees live in a network of 30 formal refugee settlements across the country (AGORA, 2018) where economic activities are primarily based on agriculture and livestock (Idris, 2020).

Refugee settlements themselves can cover vast geographical areas, as shown in Figure 14 on page 40, in order to accommodate land allocations for each household. Figure 16 on page 44, an aerial photograph captured with a drone, shows the scale of BidiBidi refugee settlement, where residences are thinly spread around a central area. Settlements, in addition to facilitating land allocations and the distribution of humanitarian aid, can develop into peri-urban centres as shown in Figure 18 on page 47.

Within settlements, refugees can access services provided by the government and humanitarian agencies – including food, water, sanitation and education (UNHCR, 2019). The explicit goal of the Government of Uganda is for refugees to

become independent of aid and play an economic role in society (Kreibaum, 2016), although almost all refugees are in receipt of food aid, with many relying on aid organisations for income (UNDP, 2017). Policies for refugees which aim to expand freedoms and self-reliance have, in effect, given refugees the option of remaining in refugee settlements, with allocated plots of land in conjunction with humanitarian assistance, or moving to urban areas, but forgoing almost all assistance (World Bank Group, 2019). Along with land, refugees receive seeds, tools and materials for beginning small agricultural enterprises (Kreibaum, 2016). However, refugees are notably forbidden from setting-up permanent structures (Kreibaum, 2016) or from permanently acquiring land, and the land allocated to refugees is for temporary use and cannot be used as collateral for credit or rented out. This reflects wider difficulties that refugees face in accessing loans. Furthermore, many refugees lack agricultural skills, such as those from urban areas, and therefore may be less able to benefit from land allocations (Idris, 2020). Due to the high numbers of refugees entering the country, and the demand on available land, the average plot size has decreased substantially over time. Whilst the official allocation was formerly 50 x 50 metres, in 2016 the average plot size had fallen to just 30 x 30 metres, too small for significant cultivation. Furthermore, Idris (2020) claims that the land allocated to refugees tends to be less agriculturally productive than that used by host communities. Ruaudel & Morrison-Metois in Idris (2020) argue that, given these constraints, it is unrealistic to expect refugees to achieve agricultural self-sufficiency.

Poole (2019) notes that many settlements operate in very close proximity to local rural communities with underdeveloped infrastructure and underfunded government service provision. Some of these districts are amongst the poorest and least developed in the whole of Uganda and are “vulnerable due to underlying poverty, limited resilience to shocks, limited capacity of local institutions, and low levels of human capital.” (World Bank Group, 2019, p. 10).



Figure 15 : A water truck supplying refugees at Elegu, Northern Uganda.

Attributions: By EU Civil Protection and Humanitarian Aid, CC BY-NC-ND 2.0.



Figure 16 : An aerial photograph of BidiBidi Refugee Settlement, taken in 2016, shows the vast scale of the settlement which spreads across much of the countryside.





Figure 17 : A South Sudanese refugee constructing a shelter, Elegu, 2014

Attributions: By EU Civil Protection and Humanitarian Aid, CC BY-NC-ND 2.0.

3.3.3.2. Urban Areas

Refugees are not restricted from living in urban areas but are expected to be self-reliant if they choose to do so (World Bank Group, 2019).

There is scant data around refugees in urban areas, especially as refugees are generally unable to officially register their status in all cities except for Kampala (AGORA, 2018). Even within Kampala, registration rates are low. The World Bank Group (2019) notes that whilst 96% of refugees from South Sudan residing in Northern Uganda are registered with the government, within Kampala this drops to just 61%. Barriers to registration are noted as including long waiting times and long distances to the registration centres.

In Kampala the refugee population has grown substantially in recent years, doubling between 2012 and 2018, the majority of whom live in informal areas (UNHCR, 2018). However, the dominant city of choice for South Sudanese refugees in Arua, where they comprise 24% of the population (World Bank Group, 2019).

Overall, there are significant income gaps between refugees and hosts in Uganda. Refugees earn an average of USD 175 per month, whilst Ugandan citizens earn an average of USD 250. Furthermore, refugees face barriers to employment including language barriers, discrimination, and a lack of recognition of academic qualifications (Idris, 2020).

3.3.4. Water access amongst refugees

3.3.4.1. Settlements

Bassi et al. (2018) report that water quantity is a significant and important consideration for achieving sustainable living conditions in settlements in Northern Uganda. Water, sanitation and hygiene services in refugee settlements are operated by a range of organisations, from multiple NGOs to municipal agencies, but are typically coordinated by the Government of Uganda and UNHCR. There are currently 39 partners active on the National WASH Sector Platform operating across Uganda in multiple settlements (Maonga,

2017). Infrastructure planning for refugees can be complex, due to the multitude of agencies involved. These include the Office of the Prime Minister (OPM), UNHCR and District Local Governments along with implementing and operating partners.

Water supply systems include boreholes with handpumps, boreholes with motorised pumps water storage tanks, rehabilitated wells and in some cases surface water treatment plants (Ministry of Water and Environment, 2019; Bassi et al., 2018). Most water access is from communal standpipes, and long queues for water access are common (Ministry of Water and Environment, 2019, p. 56). The Government of Uganda estimates that water supply coverage amongst refugees in the whole of the country is 83.5% whilst those of the host communities in the same areas are estimated at 71% (Ministry of Water and Environment, 2019). Furthermore, The World Bank estimates that 94% of refugees have access to an improved drinking water supply¹, whilst the equivalent figure for host communities is 66%.

However, a significant proportion of this supply is not necessarily from sustainable sources. UNHCR

has estimated that around 27% of water supplied to refugees is through expensive trucking (as shown in Figure 15 on page 43) and in some areas the rate is over 80%. This has been attributed to rapid changes in the refugee population over short periods (Maonga, 2017). Water trucking is a common way of supplying safe water during an emergency but is very expensive and logistically complex, and is being gradually phased out where possible (Bassi et al., 2018). At present, average water consumption amongst all refugees in Uganda is 18 litres per person per day, lower than the government target of 20 litres per person per day (Ministry of Water and Environment, 2019, p. 53).

Apart from within water user fee pilot projects, water supply is free for refugees in settlements (p. 56). Given that there is nothing preventing host communities from also accessing these free services, this can lead to some local households abandoning household sources where these are chargeable.

All piped water systems in refugee settlements, according to Uganda's Ministry of Water and Environment (2019), operate without a water extraction permit due to the 'emergency' nature of refugee displacement. Therefore, the tapping of water resources is largely uncontrolled and degradation of these sources is becoming a

1 An improved source of drinking water is considered to include piped water, a tube well or borehole, a protected well or spring, or bottled water (World Bank Group, 2019, p. 57)



Figure 18 : A street scene in BidiBidi refugee settlement, Northern Uganda, 2019

Attributions: By Fundacja PCPM, CC BY-NC-ND 2.0.

significant issue in refugee-hosting districts. There appear to be few or no tools for ensuring that settlements do not exploit or damage the surrounding water resources as water infrastructure is developed. Other issues associated with infrastructure in settlements include underfunding, poor maintenance, and siloed working resulting in a lack of coordination (Ministry of Water and Environment, 2019, p. 61).

Uganda's Ministry of Water and Environment (2019) has an explicit goal to reduce what they describe as "dependence syndrome" and to drive refugees to pay user fees for water and sanitation services (p. xvi). This process, from a strategic level, is being supported by agencies including the World Bank and the United Nations, who both contributed to the development of Uganda's Refugee and Host Population Empowerment Strategy (ReHoPE). As part of this, there is a shift from a humanitarian-led water supply approach, which focuses on provision in settlements, towards a 'water utility model' of provision, amongst wider changes in how services are provided for both refugees and host communities. Under the utility model, the responsibility for water supply services in Northern Ugandan settlements is being progressively transferred to a new 'Northern Umbrella of Water and Sanitation' (NUWS) provider (GIZ, 2020, p. 2), which will provide chargeable water supply services to refugees in settlements. NUWS is described online as an 'umbrella authority', an association of water and sewerage boards and a government limited company. An 'umbrella authority' is defined as being a deconcentrated support structure under the Ministry of Water and Environment (Ministry of Water and Environment, 2019, p. 76). However, some key informants (as detailed in the *Results* chapter) suggested it operates more closely as a private company.

Tugume (2021) argues that the drive of the new utility is to maximise revenue collection and ensure full service capacity, as a lack of revenue collection is the greatest threat to system sustainability. The transition to NUWS is being supporting by international multilateral agencies, including GIZ

and UNHCR. However, there was a notable dearth of information in literature around the proposed transition to the utility-led model, highlighting the importance of additional data.

As part of this wider process of change, Uganda's Ministry of Water and Environment (2019) has called for donor financing to be aligned with their Water and Environment Sector Plan, in order to allow Ugandan ministries to maintain oversight of the sector (p. 81). In addition, they propose using humanitarian funding for both refugee and refugee-hosting communities (Government of Uganda, 2017).

3.3.4.2. Urban areas

Understanding the experience of water security amongst refugees in urban areas is difficult due to a lack of survey data, and due to the fact that humanitarian agencies are virtually non-operational in these spaces. UNHCR (2018) notes that whilst the humanitarian sector has developed water supply standards for use in settlements, there is nothing that comparably covers urban areas. The most useful survey of urban refugees, from the World Bank, estimates that 96% of refugees in Kampala have access to improved water supply services and 100% have access to improved sanitation (World Bank Group, 2019). This could suggest that either refugees successfully exploit livelihood opportunities in Kampala to improve access to services, or that those most endowed with assets are able to move from settlements to urban areas and sustain themselves there. No comparable data was identified for Arua, an important city for South Sudanese refugees.



Figure 19 : Kisenyi in Kampala, an area which is home to thousands of well-established Somali refugees

Attributions: By Slum Dwellers International, CC BY 2.0.

4. Theory

Intersectionality is a concept widely used by academics studying the complexities of oppression and inequality, building on racial and gendered perspectives (Walker, Frediani and Trani, 2013; Castán Broto and Neves Alves, 2018). However, despite the maturity of the theoretical discourse around intersectionality, there are few examples of it being framed in terms of water security, and scant evidence of practical applications for the purposes of planning or policy. This chapter examines potential applications of intersectionality to the case of water security for South Sudanese refugees in Uganda, with a focus on the interlocking socio-spatial differences of gender, class, and ethnicity. The theoretical framework, presented after this section, aims to support Research Question Three (RQ3), exploring intersectionality as a valid frame of reference.

The first section highlights different approaches towards **poverty reduction** and improving water security. Three important ways of working can be broadly categorised as **needs**, **rights** and **entitlement** approaches. Needs-based approaches focus on what is missing amongst beneficiaries, whilst entitlement analysis considers what beneficiaries already possess, and how this can be converted for their benefit (Nel, 2018; Devereux, 2001). In contrast to needs and entitlement analysis, **rights-based** approaches consider how discrimination can restrict access to resources and lead to social exclusion (Broberg and Sano, 2018). Encompassing these concepts, organisations have constructed frameworks for framing poverty through understanding **livelihood strategies**, or means of living, including what assets individuals or households already have and how they are converted (DFID, 2008). Social assets, and therefore social differences, are also considered here. The idea of **vulnerability** arguably also builds on this, by examining the extent to which shocks and stresses impact upon people's lives through their ability to use their assets to resist or recover (Moser, 1998). The livelihood strategies used by refugees, and their vulnerability, can differ from settled populations due to their precipitous living situation, different legal status to host communities, and reliance on humanitarian support.

The second section critically examines the divide between **humanitarian relief** and **development aid**; two broad approaches to poverty relief. Humanitarian relief aims purely to address needs wherever they arise. Poverty alleviation is typically achieved within a short time frame using apolitical means (Peruvemba, 2018). On the other hand, development aid places a greater emphasis on economic development for poverty alleviation through longer-term, often political, structural change (Lie, 2020). In practice, however, cases show that the scope of humanitarian relief work often expands beyond its traditional boundaries – known as **mission creep**. The space where humanitarian relief and development aid come together is also known as the **development nexus** (Lie, 2020). Such ideas have relevance for the service delivery of water to refugees, which is in the process of transforming from a humanitarian to a utility-led model.

The third and final section returns to the ideas of **social differences**. It recognises that it is common belief amongst practitioners that gender is a key social difference which helps to explain water security and insecurity (Seager, 2010), reflected in the emphasis placed on gender in project and programme planning for water provision. However, researchers have noted that, on a macro scale, gender may be less important - but does become manifest within the context of a case (Harris et

al., 2016; Dewachter, Holvoet and Van Aelst, 2018). Others have argued that social differences should be looked at together, at the same time, to examine differences in experience (Haughton and White, 2019). Such a concept is known as **intersectionality**. This section examines the history of intersectionality as a term, and practical applications for water security.

4.1. Poverty reduction

4.1.1. Introduction

A range of normative standpoints, moral positions, conceptual frameworks and models for addressing poverty have evolved through both academia and development practice over the past decades. It is beyond the scope of this thesis to explore all of these, but this chapter highlights some of the most important general concepts with relevance for humanitarianism and development aid. First, this chapter considers ideas of poverty and its close historical links to foreign aid. It then explores different macro-level approaches to addressing poverty – the needs, rights and entitlement approaches. Finally, it looks at how the concepts of livelihoods and vulnerability contribute to framing poverty.

4.1.2. Definitions

4.1.2.1. Poverty and aid

4.1.2.1.1. Defining poverty

Poverty as a concept has been remodelled and reformulated over time. Angelsen and Wunder (2006) explain how ways of understanding and measuring poverty in public, political and academic discourse have transitioned over the 20th century from ideas of a critical income threshold, to the ability to the poor to meet their basic needs, to human development indices, and finally the strength of household and individual assets and their role in achieving livelihood outcomes.

As in history, the term remains subjective and contested today. Wagle (2018) and Mahembe and Odhiambo (2019) broadly agree that there are three dimensions that continue to be recognised as different ways of understanding the root causes of poverty. These are: a) where basic needs remain unmet due to economic means (economic wellbeing); b) where human capabilities are insufficient to meet needs; and c) multidimensional and contextual factors such as social exclusion and discrimination. Mahembe and Odhiambo (2019) consider the first case, economic well-being, to be the income level required to acquire the goods necessary for a basic quality of life (or at least survival). The second, human capabilities, is based on the ideas of Amartya Sen and considers poverty as an absence of “basic human capabilities” to function at a certain level within society (Mahembe and Odhiambo, 2019, p. 3). Such capabilities could include education level and individual health. It also encompasses the capability to realise higher levels of freedom, and the ability to freely make livelihood choices beyond basic needs (Wagle, 2018, p. 187). Finally, for Wagle (2018) social exclusion refers to ways in which people are prevented from participating in society, through discrimination or exclusion from political processes or citizenship rights.

4.1.2.1.2. Foreign aid

Foreign aid, according to Mahembe and Odhiambo (2019), comprises the resources transferred from a donor to recipient countries in the form of grants or loans, for a variety of purposes. Foreign aid frequently aims to reduce poverty. The first Sustainable Development Goal is to “end poverty in all its forms everywhere” (United Nations, 2020, p. 6) with Qian-Qian, Man and Xiao-Lin (2015) arguing that “poverty reduction is the premise for sustainable development” (p. 67). Nevertheless, Angelsen and Wunder (2006) note that certain types of development can increase poverty, and Mahembe and Odhiambo (2019) note critics who claim that aid is ineffective at fighting poverty.

4.1.2.2. Addressing poverty: needs, rights and entitlement

There are numerous, often overlapping, approaches towards alleviating poverty and contributing to human development. However three terms are often used to differentiate approaches: needs, rights and entitlement-based approaches. These can in turn point towards normative, pragmatic, and ethical elements of humanitarianism and development aid.

4.1.2.2.1. Needs-based approaches

Needs-based approaches are based on the assumption that resources are missing where people experience acute deprivation, and there is an ethical imperative to meet them directly. Nel (2018) explains that such approaches are problem-orientated and focus on deficiencies in a community (what is lacking) and thus what can be provided from the outside to alleviate this deficiency. Pragmatically, resources for meeting needs are typically provided from outside the recipient community (p. 840). Needs could include food, shelter, health and education, to name but a few.

Needs-based approaches can be effective in situations of disaster and after exposure to strong shocks and stresses. Emergency needs assessments are used by the International Committee of the Red Cross, a humanitarian relief organisation, in the event of a disaster. The process is designed to identify whether external assistance should be used to meet pressing needs in the absence of local capacities (ICRC, 2008). Such approaches are in opposition to asset-based approaches, which focus on enhancing existing strengths and capacities within communities.

4.1.2.2.2. Rights-based approaches

Cornwall and Nyamu-Musembi (2004) summarise that whereas ‘needs-based approaches’ focus on harnessing additional resources for certain groups (for example, those in urgent need for food relief), rights-based approaches focus on sharing existing resources more fairly. Broberg and Sano (2018), in their analysis of the strengths and weaknesses of

rights-based approaches to development assistance, define the term as “donors supporting duty-bearers to fulfill their human rights obligations” towards rights-holders (p. 667). Practically, such approaches harness the role of law, in particular human rights law, to help achieve development. On the other hand, Devereux (2001) argues that rights can be considered as legal, moral or human rights (p. 246). Broberg and Sano (2018) and Uvin (2007) argue that such rights-based approaches assume that discrimination and violations of rights are among the most important causes of poverty or a lack of development.

Practically, ‘duty bearers’ typically refer to national institutions responsible for delivering services, whilst recipients of such services are often rights-holders. For such an approach to be effective, Uvin (2007) argues that recipients should be transformed into ‘active’ rights-bearers, able to actively advocate for their own rights, particularly those discriminated against. There should, therefore, be a mechanism of accountability between the rights-holder and duty bearer (p. 603).

Cornwall and Nyamu-Musembi (2004) argue that although rights-based approaches are relatively new in development discourse, such approaches have been harnessed as part of historical struggles for justice, particularly the framing of liberation and anti-colonial struggles in terms of the right to self-rule and the right of citizenship (p. 1420). They argue that the “act of struggling” for rights led to the articulation of these rights themselves (p. 1421). Since then, development actors in multi-lateral agencies have interpreted rights both as a means of development, and as a consequence of development. For the purposes of conceptual analysis in this essay, the researcher takes the former definition.

Cornwall and Nyamu-Musembi (2004) have also noted several factors that have contributed to the growth in popularity of rights-based approaches. A greater focus on partnership approaches to development, especially in recipient governments, has increased demands for accountability in spending. Increasing the capacity of civil society to

hold government to account through expression of their right to do so, they argue, is likely to lead to better or more effective spending for development. Furthermore, rights-based approaches can support fairer participation processes and hence lead to a better distribution of resources for those that need it the most. Hence, rights-based approaches can support marginalised people in accessing a greater share of national or international resources (p. 1417).

Large multi-lateral agencies have interpreted the normative and ethical principles of rights-based approaches in strategy-building. UNICEF's approach to rights is summarised by Cornwall and Nyamu-Musembi (2004) as three stages: a) an analysis of the complex social and political relationship between rights-holders and duty-bearers; b) understanding capacity gaps that prevent duty-bearers meeting their obligations to rights-holders; and c) equipping both of these parties through programme design (p. 1425). Moreover, DFID emphasise discrimination as a barrier to people realising their rights and engaging in decision-making processes which affect their lives (p. 1428). ActionAid goes further in attributing poverty to "unequal power relations", and promotes an advocacy-orientated position of "siding with the oppressed" (p. 1430).

Critiques of this approach are numerous, such as those raised by Broberg and Sano (2018). They argue that rights-based approaches can distract from actual service delivery and the capacity building of individuals and institutions necessary to achieve development. Furthermore, actions to enforce claims to rights are arguably political – especially if a political class feels threatened by such actions – which can restrict the ability of development actors to operate. Another critique is that ideas of rights amongst the donor and recipient community can be seen from different normative standpoints. There can be, for example, an implicit "moral superiority of the donor" (Cornwall and Nyamu-Musembi, 2004, p. 1420) in terms of their political understanding of rights.

4.1.2.2.3. Amartya Sen's entitlement approach and entitlement analysis

The concept of entitlement-based approaches to development originated with a paper by Amartya Sen in 1976 (Devereux, 2001). Sen considered 'entitlements' as a range of goods or services that can be harnessed using their 'endowments', the assets or capitals available to them (p. 246). Osmani in Devereux (2001) provides an interpretation of Sen's approach, and argues that it can be considered in three parts: 1) an 'endowment set', or the assets held by a person, 2) the 'entitlement set', goods and services that a person can obtain using endowments and 3) 'entitlement mapping', the relationships between the two previous sets and how they can be exchanged. Devereux (2001) argues that the process of mapping between the endowment set and entitlement set is the "central tool" of entitlement analysis.

Similarly, Nussbaum in Bjørnstøl draws parallels between the entitlement set and capabilities, or the "real opportunities and choices that are available to that person", with capabilities giving individuals the opportunity to achieve various desired lifestyles (Bjørnstøl, p. 6). There are clear conceptual similarities between entitlement analysis and assets, capabilities, and livelihood strategies.

4.1.2.3. Framing poverty: livelihoods and vulnerability

4.1.2.3.1. Livelihoods

Livelihoods refer to people's "capabilities, assets and activities required for a means of living" (DFID, 2008, p. 1) and are widely used amongst the working models of development agencies. Models for livelihoods can explain how individuals and communities transcend poverty, improve well-being, and overcome shocks and stresses. Amongst many of these frameworks, the idea of 'assets' or 'capitals' represent resources that individuals or communities can draw upon, and convert into what DFID (2008, p. 3) refers to as "positive livelihood outcomes". Radoki (2002), in presenting a livelihoods approach, suggests that such assets

can be broken down into five quantifiable and unquantifiable capitals: human, social & political, physical, financial and natural. The process of converting assets takes place as part of livelihood strategies, whereby people and communities make choices and undergo activities to meet certain goals.

DFID explains the different ways in which assets can be targeted or combined to escape poverty or achieve livelihood outcomes. ‘Sequencing’ refers to the idea of boosting the value of one capital (such as financial) which most effectively boosts other capitals over time through a chain of events. On the other hand, ‘substitution’ refers to the ability to compensate for the lack of one type of capital (such as land, or social networks, in the case of newly arrived refugees) with other capitals, such as finance.

4.1.2.3.2. Vulnerability

Vulnerability has been widely defined but Moser (1998) argues that all definitions assign two constituent components to vulnerability – the sensitivity (sometimes referred to as exposure) of people to shocks and stresses, and their resilience, in terms of how quickly they can recover. Kelman et al. (2016) similarly frames it as “the propensity... to be harmed” by a particular hazard, and the ability to tolerate this harm (p. S130). Adger (2006) offers a more nuanced definition, highlighting that vulnerability is not fixed, but manifests itself in the context of both place and time. Furthermore, Skillman (2018) argues that vulnerability should be seen as relational and not absolute, and linked to differences in power and wealth. Indicators of social vulnerability can help to identify people more “at risk” and those have relevance for humanitarian relief and development aid programmes (Muyambo, Jordaan and Bahta, 2017, p. 2).

Moser (1998), in their presentation of a proposed asset vulnerability framework, draws key conceptual links between poverty, vulnerability and livelihoods. In addition to overcoming poverty, Moser sees assets as “means of resistance” that can be “mobilised and managed in the face of hardship” such as shocks and stresses (p. 3). Shocks and stresses

are here considered to be short- or long-term negative pressures on the ability of people to fulfill livelihood strategies including disasters and forced displacement.

4.2. Humanitarian relief and development aid

4.2.1. Introduction

Humanitarian relief aid and development aid both aim to reduce poverty and improve livelihoods. Both differ significantly, however, in terms of how, and by whom, aid is delivered which can have significant implications for beneficiaries (Lie, 2020). Interpretations differ when examined from a top-down, philosophical perspective, when compared to a bottom-up ‘on the ground’ perspective. Ideas of humanitarianism and development aid could play a role in the changing context of water access for refugees in Northern Uganda.

4.2.2. Definitions

4.2.2.1. Humanitarian Relief

Humanitarian relief is focused on providing needs-based relief in the face of disaster to alleviate suffering and save lives (OECD, 2012). Sometimes referred to as disaster relief, it is distinct from development aid in its “emergency character” (Hardcastle and Chua, 1998). Such relief typically bypasses the operations of the institutions of state in the process (Lie, 2020, p. 12), is “apolitical” (Lie, 2020, p. 1) and focuses on providing relief rapidly. Donini in Brun defines humanitarian relief as a safety net designed to operate in times of disaster (2016, p. 395). Such disasters can include “natural” disasters, and human-induced disasters, such as conflict. It is worth noting that it is widely accepted by academics such as Kelman (2016) and Wisner (2012) that the use of the term ‘natural’ is misleading as all disasters are ultimately related to societal structures. On a practical level, Lie (2020) sees humanitarian relief as “exogenous” (p. 5), with

the funding and implementation of ideas typically originating from outside the affected country.

A resolution adopted by the United Nations in 1991, which acts as a blueprint for humanitarianism, lays down its philosophical principles as: humanity, neutrality and impartiality. A fourth principle, that of independence from other concerns, was added in 2004 as part of an additional UN resolution (Lie, 2020). Peruvemba (2018) argues that access for humanitarian relief is maintained due to trust between humanitarian actors and governments. Governments expect humanitarian actors to operate within a narrow, apolitical window, and therefore do not obstruct their activities. Peruvemba argues that a loss of this trust could inhibit the activities of humanitarian relief actors.

4.2.2.2. Development Aid

The International Monetary Fund defines development aid as “aid expended in a manner that is *anticipated to promote development*, whether achieved through economic growth or other means” (Reddy and Minoiu, 2009, p. 7, emphasis added). Development aid (or development assistance) typically operates over a long time frame, is focused on structural change, and is therefore inherently political (Lie, 2020). In contrast to humanitarian relief, development aid works “with and through state authorities” (Lie, 2020, p. 12). Development aid is often enacted in partnership with governments (Stamnes, 2016), but can be, as argued by Buchanan-Smith and Maxwell (1994), politically conditional and hence dependent on



Figure 20 : A water bladder used to store water delivered by water truck in Nyumanzi 1

Attributions: By Oxfam International, CC BY-NC-ND 2.0

	Humanitarian relief	Development aid
Objectives	To save lives and alleviate suffering	To alleviate poverty and achieve long term development and good governance
Way of working	Short term, unconditional and immediate	Long term, structural and conditional
Principles	Humanitarian principles	Maximising the effectiveness of aid
Legal Basis	International humanitarian law	Agreements with partner countries and governments

Table 2 : Comparisons between humanitarian relief and development aid. Adapted from Kocks in Idris (2020)

political support. Donor policies or regulations may enforce a rigid separation between funding for developmental and humanitarian purposes to protect both streams from any accusations of politicisation.

4.2.3. Critiques and the ‘development nexus’

4.2.3.1. Comparing the two approaches

Kocks in Idris (2020) provides a summary of the key differences between humanitarian relief and development aid in terms of objectives, ways of working and context. These have been adapted and summarised in Table 2.

Stamnes (2016) differentiates humanitarian relief and development aid as operating on different time horizons, using different measures of success, and having different levels of emphasis on structural change. In addition, whilst humanitarian relief is explicitly apolitical, development aid is typically implemented through political agencies and systems.

Humanitarianism and developmentalism can be understood as both philosophical discourses, and as practical approaches for the international aid community, and can overlap and challenge one another (Lie, 2020). Hilhorst and Jansen (2010) make a distinction between the aspirational “idea” (p. 1135) of an unpoliticised space for humanitarian action, and the day-to-day “everyday practices

of aid” (p. 1136). They argue that humanitarian action is not separated from local political power, and draw on the example of the Asian tsunami of 2004 to show how the distribution of humanitarian aid was still shaped by existing local institutions, culture and power dynamics. They show cases where beneficiaries, rather than aid agencies, may determine the allocation of disaster relief based along the lines of existing local power structures. Furthermore, despite the essence of humanitarian relief as a temporary solution in response to ‘emergency’ situations, humanitarian organisations may work in the same area for 10, 20 or more years (Brun, 2016). They also argue that such approaches can “fix people in particular places and social positions” (2016, p. 394), and lead to a protracted state of reliance on systems of aid. On average, displacement lasts 17 years (Stamnes, 2016).

Lie (2020) describes the concept of ‘mission creep’ as the reorientation of humanitarianism beyond immediate needs and into a politicised space traditionally inhabited by development aid (p. 3). They argue that the separation of aid and relief may be artificial, and not reflect the actual reality of practice on the ground.

Lie and Brun both claim that, practically speaking, such missions often bleed into each other (Lie, 2020; Brun, 2016). They argue that such effects can be observed where action moves outside the scope of the “humanitarian present” (2020, p. 6), or the needs of people here and now, and into future needs. An example is given of the use of

humanitarian aid to discourage migration from a potential country of origin, as used by countries in the Global North in anticipation of future movements from the Global South. Such an intervention can be seen as explicitly political.

4.2.3.2. The humanitarian-development nexus

4.2.3.2.1. Integrating the nexus

The UN's World Humanitarian Summit of 2016 concluded that "humanitarian assistance alone is insufficient to adequately address the needs of the world's most vulnerable" (Lie, 2020, p. 2), and in particular promoted humanitarianism's engagement in the root causes of disasters such as conflicts. This reflects the view that humanitarian and development considerations may come together in complex humanitarian situations (Lie, 2020).

Over time, the concept of the 'development nexus' has emerged to refer to the "transition or overlap between the delivery of humanitarian assistance and the provision of long-term development assistance" (Lie, 2020, p. 1). It has been widely debated, yet poorly adopted amongst the international development community, and remains a contested term.

Stamnes (2016), as part of a call for a closer relationship between the humanitarian and development sectors, has proposed practical approaches for 'nexus' thinking. Two of the most salient suggestions are 'changing the aid model' and 'localisation'. The first involves joint action between humanitarian and development organisations, and flexible financing models that are not overly restricted to humanitarian causes. It also involves replacing humanitarian funding with multi-year financing, and integrating refugees in long-term budgetary planning. The second suggestion involves the localisation of responses, with a focus on local needs, local service delivery and community reliance. Part of this includes recognising local livelihoods, stabilising them in the short term, and supporting economic growth in the longer

term. Furthermore, Buchanan-Smith and Maxwell (1994) similarly argue that humanitarian relief should be better integrated into existing government structures. They suggest that the use of funds should not be overly restricted to humanitarian purposes, and that infrastructure constructed for the purposes of relief should be designed with consideration for long-term development potential beyond immediate short-term needs.

4.2.3.2.2. Nexus thinking amongst refugees

Idris (2020) highlights how the traditional humanitarian response to refugees has historically held them in a 'limbo' situation, unable to return to their country of origin or establish livelihoods in their new host communities, whilst potentially incurring large costs for the international humanitarian community and host country. This has led to a shift towards an approach emphasising both the self-reliance of refugees and integration of development approaches with the host population. In parallel, several international commitments have sought to support this transition globally. An example is the "New Way of Working" (OCHA, 2017). It calls on humanitarian and development actors to work towards collective outcomes and promotes financial mechanisms aimed at low-income countries for meeting the developmental needs of both refugee and host populations.

4.2.3.2.3. Critiques of nexus integration

Top-down attempts to expand "the humanitarian present into future crises" (Lie, 2020, p. 6) through 'nexus' approaches have at times been met with resistance amongst humanitarian organisations.

Aligning the planning cycles of humanitarian actors with those of development actors can be fraught with difficulty and can pull humanitarianism towards political goals. Peruvemba (2018), programme director of Malteser International, takes a strong stance against excessive integration of the humanitarian and development agendas through the 'nexus' approach. They argue that such a move can erode core humanitarian principles, particularly

the commitment to apolitical action. They argue that suspicion from national institutions where humanitarian agencies are diverging from their core goal of saving lives could restrict their ability to access those most in need. Furthermore, embedding humanitarianism in larger development agendas can reduce the ability of humanitarianism to rapidly address pressing short-term needs.

4.2.3.3. Forced migration and pressures on humanitarianism

Protracted conflicts can lead to a shift in emphasis from humanitarian relief to developed aid over time. Refugees may voluntarily remove themselves from the 'managed' humanitarian space (such as refugee camps) and settle in urban areas. Alternatively, humanitarian agencies may remove themselves from areas of protracted displacement due to a lack of funding.

Many refugees in urban areas exist on a continuum of formality-informality and legality-illegality, similarly to many other poorer urban residents (Darling, 2017), and for this reason Crisp, Morris and Refstie (2012) argue that the presence of refugees in urban areas can be far more accurately construed as a development issue, as opposed to a humanitarian one. They report that half of the world's refugees now live in urban areas, which can provide livelihood opportunities and security not found in camps. Cultural & organisational factors may discourage humanitarian actors to operate in this space, and the authors note that UNHCR has historically deterred refugees from taking up residence in urban areas (2012, p. S25). They note that agencies and NGOs face additional complexity when dealing with displacement in urban areas (Darling, 2017). Complexity in this case refers to a system, such as an urban system, of multiple interacting and connected components, that is difficult to understand and therefore complex in the general understanding of the term (Britannica Academic, 2021d).

UNHCR today recognises that their responsibility to refugees is not location-dependent, and that

they are committed to the "expansion of protection space for refugees to reside" (Crisp, Morris and Refstie, 2012, p. S34). However, this undoubtedly creates additional considerations for their operating model, with urban areas such as Arua and Kampala in Uganda becoming significant places for refugee settlement.

4.3. Intersectionality in water provision

4.3.1. Introduction

Intersectionality is a way of examining multiple categories of social difference (Sultana, 2020), interlocking systems of oppression and exclusion (Thompson, 2016; Castán Broto and Neves Alves, 2018), or "axes of oppression" (Carastathis, 2016, p. 1) in an integrated manner in order to better understand people's lived experiences. Haughton and White (2019) summarise the essence of intersectionality as examining multiple factors, identities or social strata at the same time in order to understand systems of oppression, which can create tensions or reinforce discrimination in society (2019, p. 87). Similar, Thompson (2016) argues that intersectionality can explain the formation of identity categories and subjects, or the way that people define themselves and others.

Intersectionality has roots in both feminism (Walker, Frediani and Trani, 2013) and through struggles for black female emancipation (Castán Broto and Neves Alves, 2018) and forerunners include phrases such as "triple jeopardy" or "interlocking oppressions" (Carastathis, 2016, p. 17). Thompson (2016) argues that intersectionality emerged from feminism in response to the simplified assumption that the oppression of women under systems of patriarchy is a result of their gender, without considering the much wider complexities of oppression. Within academia, ideas of intersectionality are now widely applied within different scenarios (Thompson, 2016; Carastathis, 2016). Intersectionality is, Carastathis (2016) argues, now dominant amongst feminist philosophy and gender studies.

Social differences can include gender, race, class, culture, ethnicity and a multitude of other categories (Thompson, 2016). Davis (2008) further argues for the importance of power and power relations in co-constituting such social difference, with Sultana (2020) elaborating in terms of discrete categories of historical, political, economic, social and legal power. Intersectionality is seen by some as triumphing over “essentialist and exclusionary” generalised theories of power and oppression that are seen as inadequate for achieving emancipation (Carastathis, 2016, p. 2).

Collins (2019) argues that intersectionality is progressing towards becoming a *critical* social theory. In other words, it is transitioning to a tool for “explaining and criticising” inequalities in the real world and maintaining an “eye towards creating possibilities for change” (p. 4). The analytical framework created as part of this thesis takes inspiration from critical social theory. It therefore points towards practical implications for stakeholders for improving water security amongst refugees in Uganda.

4.3.2. Applications to water security

Erdal and Oeppen (2017) consider the process of migration as including the act of leaving the country of origin, the journey itself, entrance and settlement in another country, and finally return and onward possible migration. Therefore for refugees, the context, expectations, and responsibilities around water access may be continuously changing over this journey.

The process of forced migration involves complex pathways and changing contexts. Many forcibly displaced individuals, especially in urban areas, may suffer from a loss of social capital and social support networks (Crisp, Morris and Refstie, 2012). Cultural histories, contexts and economic and political power are arguably particularly contingent and in a state of flux through the process of movement. Intersectionality in the context of water service provision could offer insights into how inclusion and exclusion can arise through

these complex processes of identity and subject-formation.

Gendered experiences of water are widely recognised amongst practitioners. Despite ongoing critiques (which are outside the scope of this thesis) it is now “common wisdom” that gender dynamics in water are closely related to poverty and sustainable development (Seager, 2010, p. 1). In common with intersectionality, frameworks for understanding gendered experiences typically reflect an understanding of gender as a “socially constructed set of relations” (Walker, Frediani and Trani, 2013, p. 112) in cultural and institutional settings, which can control access to a range of resources.

The theoretical origins of intersectionality rest on the axiom that examining the discrimination of women purely as a result of patriarchy or gender manifestly fails to consider the complexities of oppression (Thompson, 2016). As identified by Castán Broto and Neves Alves (2018), given that identities arise through social relations within circumstances, the very act of water provision can be a process of negotiation whereby such identities arise. To mitigate the risk of generating the monolithic category of the “third world woman”, Thompson (2016, p. 1290) highlights how cultural differences can interact with gender, in particular how different cultural groups may assign different water-collecting responsibilities to women in different contexts.

4.3.2.1. Cases of intersectionality in water access

Despite the depth of academic discourse around intersectionality, this study has identified relatively few examples of practical applications within the water sector, despite apparent theoretical applications. Nevertheless, through the analysis of quantitative data, some academics have begun to evidence the practical existence of intersectional experiences in water provision and in how individuals interact with water governance structures (Harris et al., 2016; Dewachter, Holvoet and Van Aelst, 2018). Water governance, in this

case, is considered to be all the systems in place that influence water's use and management¹. Other academics have applied intersectional theory to cases as a way of explaining water insecurity (Sultana, 2020; Crow and Sultana, 2002), and have even progressed intersectional theory through insights from practice (Thompson, 2016).

4.3.2.1.1. Case: Households in Accra and Cape Town

Harris et al. (2016) argue that female political ecologists have focused on gender-differentiated:

1. Access to and uses of water;
2. Knowledge of water and institutions;
3. Participation in governance; and
4. Lived experiences of water.

In their analysis of household surveys around water access in Accra, Ghana and Cape Town, South Africa, they argue that these gender-differentiated factors mostly arise when gender is considered *alongside* wider contextual factors. They highlight three specific considerations which mediate gendered experiences: work responsibilities, socio-cultural expectations and contextual factors². In particular, they noted how gendered effects become stronger where household water connections aren't available. Similarly, the employment status of both men and women affect what they consider to be an acceptable length of time taken to collect water, which can significantly affect the dataset. They advocate avoiding assumptions and truisms around gendered roles, but focusing on a closer examination of the context within which gendered experiences can arise.

4.3.2.1.2. Case: Water information networks in rural Uganda

Similarly, Dewachter, Holvoet and Van Aelst (2018) performed statistical and social network analysis in a rural Ugandan community to better understand intersectionality in water information networks. They argue that intersectional processes, and not gender alone, can help explain information exclusion around water in terms of top-down (from positions of authority) and bottom-up (user-originating) information streams. Gender and social class, both seen together, were powerful for understanding how information was shared. Their data showed that less educated women, for example, were unlikely to receive information from external information sources (such as local government officials), despite the fact that these less educated women were likely to share information with these external sources themselves. Higher educated women were likely to share information amongst themselves and high educated men, but were highly unlikely to share with low educated women. Low educated men were only likely to share information with other men, of any education level. They conclude that:

“the social category of gender cannot be addressed in isolation from other social and economic dimensions of social identity. Instead, categories such as gender, ethnicity, class and education level reinforce and influence each other in shaping people's access to resources such as information” (p. 555).

These experiences are therefore highly influenced by the intersection and education level. The findings from this study have been summarised in Figure 21.

4.3.2.1.3. Case: The water-citizenship nexus in Dhaka

Sultana (2020) explores intersectionality as part of a 'water-citizenship nexus' through a case analysis of a slum in Dhaka, Bangladesh. They define the nexus as how “inequities around water access reveal power relations and practices of citizenship in each context” (2020, p. 3). They examine the experiences

¹ <https://www.watergovernance.org/governance/what-is-water-governance/>

² Work responsibilities can be gender segregated between domestic uses and agricultural and industrial uses of water, but this varies amongst societies and cultures. If women are responsible for the young and elderly, water scarcity can be more of a physical and emotional burden. Contextually, where there is poorer access to improved water sources, the effects forementioned can be more pronounced. See also Seager (2010).

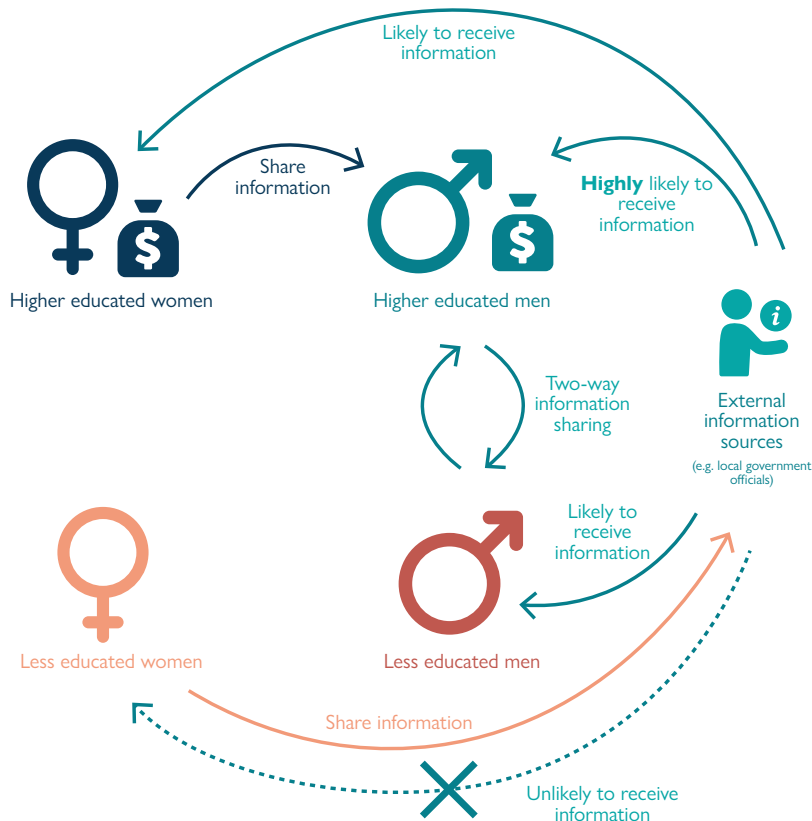


Figure 21 : Water information flows revealed in the analysis of water information networks by Dewachter, Holvoet and Van Aelst (2018) in a rural Ugandan community

Attributions: Female by Anarappi, Male by Anarappi, rich by Xela Ub and informations by Adrien Coquet from the Noun Project

of poor slum residents, including migrants, in the process of transition from informal water access to state-backed formal water supply systems. By differentiating urban citizens in terms of gender, class and migrant status, they conclude that class status tends to dominate claims to water access, both before and after the transition, but argue for additional granularity to capture the complexity of gender and migrant status through an intersectional lens. In particular, they highlight how poorer (lower class) women take on a far more prescient but stressful role in water provision, as both the member of the household primarily responsible for water and as busy participants on water user committees (WUCs). Conversely, wealthier women may have a direct connection to formal governance structures through which to not only claim a right to water, but to suppress this right amongst others. Castán Broto and Neves Alves (2018) summarises

that a “women’s ability to influence and participate in water resources management is related to their subject positions with regard to age, marital status, education and socioeconomic class.” (p. 375). More recent migrants, with weaker social networks, were less likely to have a claim to water access. Sultana also draws close links with power structures (including historical, political, economic, social and legal power), in particular the political influence of the wealthy, in creating areas of exclusion for water access, or exclusion from what they term “hydraulic citizenship” (Sultana, 2020, p. 4).

4.3.2.2. Intersectionality and access to water as a materiality

Ideas of social differences and how they co-constitute social relations and access to materialities form the backbone for much academic work around intersectional analysis. Crow and Sultana (2002)

argue that access to water, and the form that it takes, is rooted in social relations, and that such relations can be rationalised into four categories:

1. The first is **ownership** of land and a pump, where an individual or group has control over the resources and assets needed to provide them with a safe, accessible supply of water for meeting their domestic or economic needs.
2. The second is **market access**. This assumes that a market exists for water and those with the means and resources to extract water can sell to those who demand it. The ability to access and participate in such a market is critical.
3. Thirdly, **common property or communal rights**, which may be encoded in law or indigenous customs, may give individuals the right to exploit water resources for domestic or economic benefit.
4. Finally, **state-backed provision of water** encompasses the ability of municipal authorities to provide water services for free or for a fixed fee.

Throughout the process of migration, refugees may experience all these different forms of social relations for obtaining water.

Thompson (2016), through a review of multiple case studies from largely rural areas in Sudan and Bangladesh, similarly examines how materialities in water relate to intersectional social differences and highlights how water rights are closely related to property rights. They argue that the materialities of water consist of both scarcity and access to water, which she defines as the “spatial and temporal dimensions of water” (p. 1287). Additional materialities include factors associated with geology and rainfall patterns that influence the distribution and quality of water. A social analysis of social differences is, they argue, incomplete without incorporating such materialities within the ‘bigger picture’.

4.3.2.3. Theoretical developments of intersectionality in water

Thompson (2016) has used cases to progress intersectional theory with respect to the spatial and temporal dimensions of water through four concepts: simultaneity, situated specificity, relationality, and fluidity.

The latter three offer some particularly pertinent insights for researchers. ‘Situated specificity’ highlights how historical and cultural contexts intersect with present lived experiences – thus, gender roles, or class divisions, may or may not be played out depending on the current context. ‘Relationality’ highlights how “identity categories such as gender, race, or class are constructed and maintained relationally” (2016, p. 1296). Thus categories are not essential or innate, but are retained by social relations and societal structure, including gender (Walker, Frediani and Trani, 2013). The role of the researcher in, perhaps, propping up or maintaining such categories could also be considered. Finally, ‘fluidity’ sees social structures as processes across space and time. Again, this challenges the assumption of fixed categories.

Castán Broto and Neves Alves (2018) provide insights into how intersectionality can offer insights into a potentially improved model for service co-production, with possible applications to understanding water access through different modes of water service provision. They provide the following four suggestions (p. 379):

1. **Context-situated design**, with a focus on everyday practices, rather than fixed identity categories. Which users, values, uses and needs are prioritised at present?
2. **Collective organisation and participation**, the capacity of people to participate, the potential subject-forming that can arise through this process.
3. **Improving decision-making processes**, who is included and excluded, and the risk of the capture of such processes by the ‘elite’ in society.

4. Recognising **existing systems of oppression and exclusion** in society, and the potential to reproduce these in a new system.

4.4. Connecting the theoretical domains

The bubble sketch diagram, Figure 23 on page 64, shows some of the key concepts grouped into the three domains of poverty reduction; humanitarian relief & development aid; and intersectionality. It provides an overview of how certain ideas overlap and link across these domains.

Some concepts emerged which intersect all three domains. These centre around the political nature of socially-constructed relations; connections between social difference and power structures and implications for livelihood strategies within the humanitarian-development nexus.

Two of these bubbles (labelled **1** and **2**) are discussed below:

1. The importance of livelihood strategies for refugees could vary depending on whether the context exhibits humanitarian or developmental qualities. In the former case, water access is likely to be needs-based. Relief may be targeted based on social differences (or indicators of vulnerability) which are likely to be assessed externally to the community concerned. However, in the developmental context, social differences could become more significant for internal systems of water access mediation and governance. Claims to water access may form a more significant part of livelihood strategies, and aspects of gender, class and ethnicity could become more prominent for including or excluding people from this process.
2. Similarly, theories of intersectionality often expound social differences as a constructed set of relations which are maintained due to, amongst other reasons, the political context. This context may also vary significantly between the humanitarian and development sectors. These two sectors may, for example, be more



Figure 22 : A water pump in rural Uganda

Attributions: David Garlick, all rights reserved

or less inclined to recognise gender, ethnicity and class in decision making or the allocation of resources. Furthermore, in a humanitarian system, the social difference of being a registered refugee can grant rights to water access, but theoretical exclusion from local politics. The opposite could be the case under a system of development, where participation or political engagement may be a precursor to water access. Within the humanitarian sector, on-the ground work for water access is arguably becoming increasingly politicised, with agencies operating beyond the humanitarian 'present' and aligning more closely with government development goals. This can be termed the humanitarian-development nexus. The exclusion of refugees from the possibility of citizenship, for example, could affect their ability to claim rights where systems of water provision are more closely integrated with host populations. In the absence of a humanitarian system, the practical status of many as registered refugees could transition to one of a 'non citizen'. This could have implications for strategies towards poverty reduction, where there is a choice between focusing on needs and strengthening rights.

The use of an intersectional lens could, therefore, be most valuable when considering the wider context of poverty reduction and the humanitarian-development nexus. It highlights the need for a broad contextual understanding of how social differences arise within these contexts.

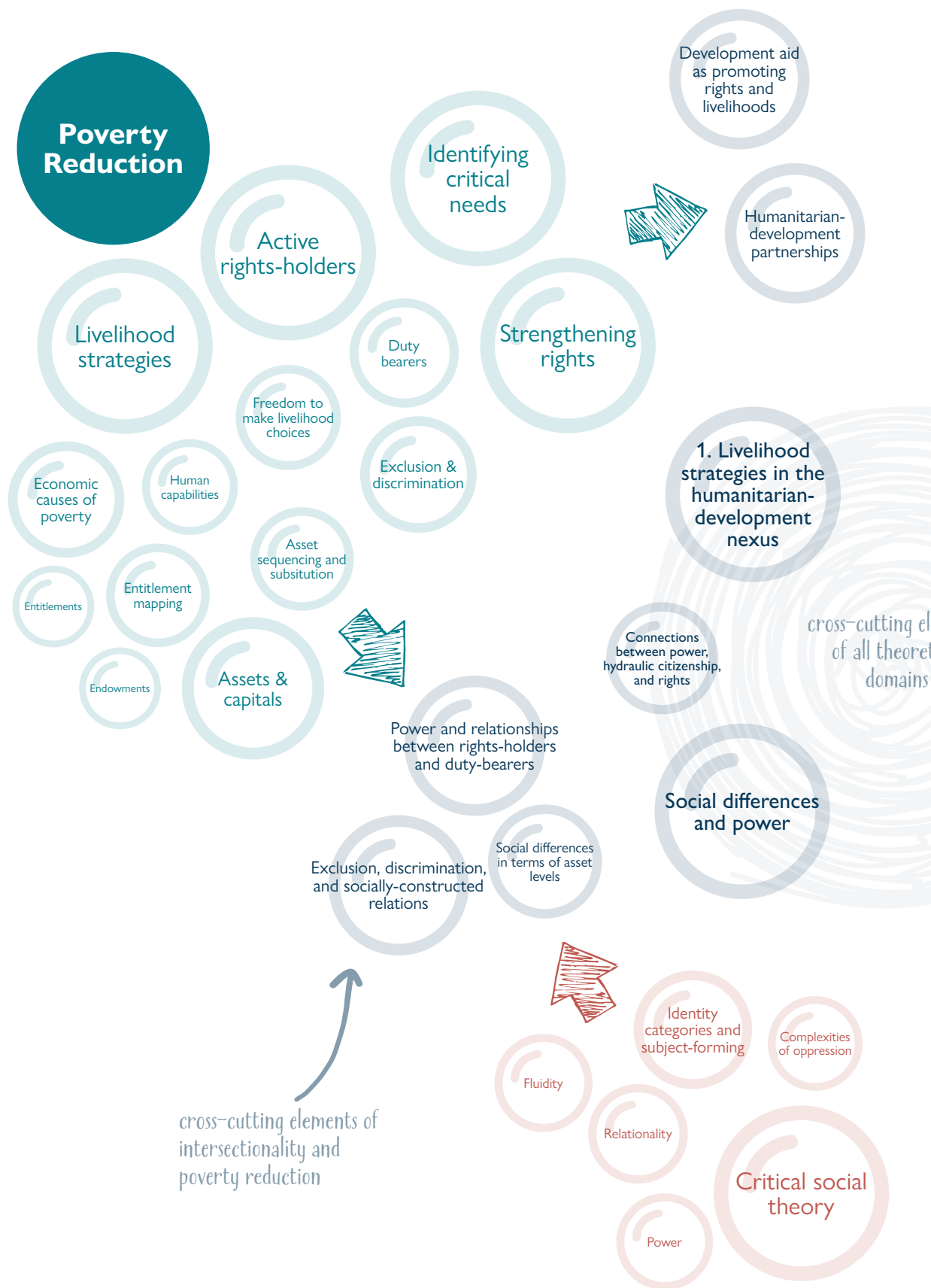
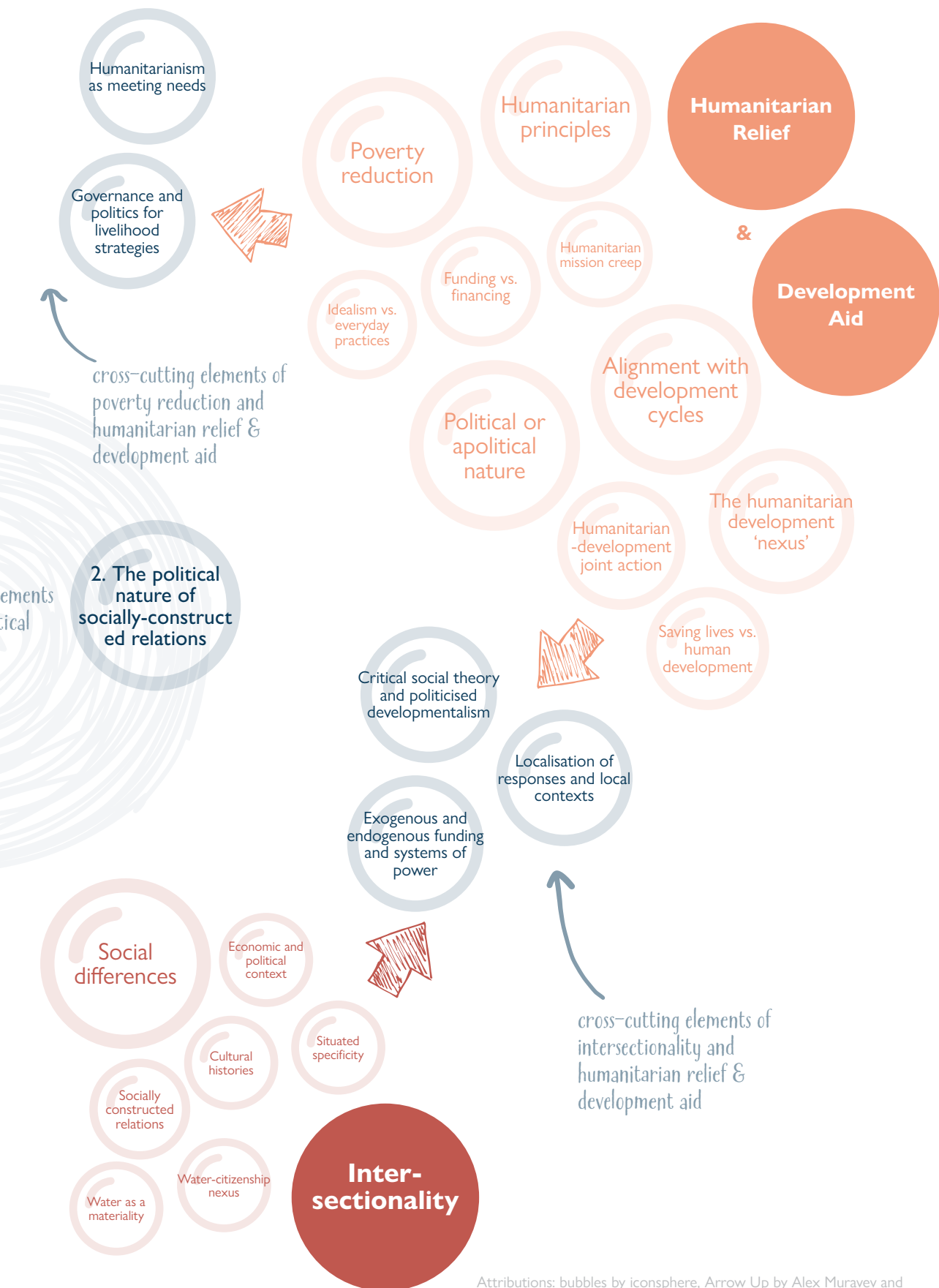


Figure 23 : Bubble sketch diagram showing cross-cutting elements of the theoretical domains



5. Theoretical Model

The Theoretical Model is a visual representation of how the key concepts and theoretical domains explored in the theory section can be integrated so that they have relevance for water security amongst refugees in Northern Uganda.

The full model

The Theoretical Model, Figure 25 on page 68, is a simple systems model which combines concepts from the three theoretical domains discussed in the *Theory* section: intersectionality; humanitarianism and developmentalism; and approaches to poverty reduction. By identifying connections between concepts, and dynamic loops, it seeks to build knowledge around how refugees in Northern Uganda can experience water security or insecurity. The concepts are colour-coded based on the theoretical domains, with the domain of poverty reduction split into livelihoods and entitlements, and rights-based approaches.

The simplified model

A simplified version of the large diagram is shown in Figure 24, highlighting some of the most important connections within the model. The concepts that are most closely related to refugee households are shown towards the left-hand side of the diagram, including intersectionality, rights and capitals (including capabilities and endowments). The concepts most closely related to governance structures, including state institutions, NGOs and civil society structures, are shown towards the right-hand side of the diagram. Concepts include humanitarian relief and development aid and the role of the duty-bearer in rights-based provision. It should be noted that refugees themselves can also form a part of governance structures.

Model explanation

Refugee households experience intersectional socio-spatial differences (1), in the manner understood by Sultana (2020) and Thompson (2016). Such differences can include gender, class and ethnicity. These socio-spatial differences interact and influence the ability of refugees to exploit the materialities of water. Socio-spatial differences exist in a broad context, as detailed by Thompson (2016). Thus, these differences intersect with the historical and cultural context at the present moment, the ongoing relational maintenance of such differences, and change throughout space and time. The interaction and coincidence of such socio-spatial differences, and the resulting systems of inclusion and exclusion, influence the ability of refugees to access stocks of capital, build capabilities, and trade for endowments for entitlements (2) and, furthermore, their ability to assert or claim a right to access water (3). The ability of households to claim rights is, to an extent, also influenced by the stocks of capital and the endowments available to refugees, as well as their capabilities (4). Rights to access water from the rights-holders (refugees) are made against duty-bearers (5) including state institutions and non-governmental organisations. State institutions may, or may not, grant certain legal rights to water access to these rights-holders (6), which may be associated with international legal or domestic obligations towards refugees. As part of a rights-based approach to development, international or local agencies may engage in

The relationship between NGOs and civil society, and state institutions (9) can be seen through the lens of the humanitarian-development nexus. A humanitarian approach is likely to be apolitical, separated from development cycles, and needs-based. A development aid approach will be more closely linked with the programmes of state institutions. Through such on-going interactions, there is ultimately some form of control of access to water supply services by NGOs (10) or state institutions (11), which can ultimately determine who is supplied, when they are supplied and how.

The ultimate outcome of this systems model is access to materialities - consisting of both natural water resources, water infrastructure used to extract and exploit these resources, and the ownership and control of these materialities (14).



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Key theoretical domains

Intersectionality

Humanitarianism & Developmentalism

Livelihoods & Entitlements

Rights-based approaches

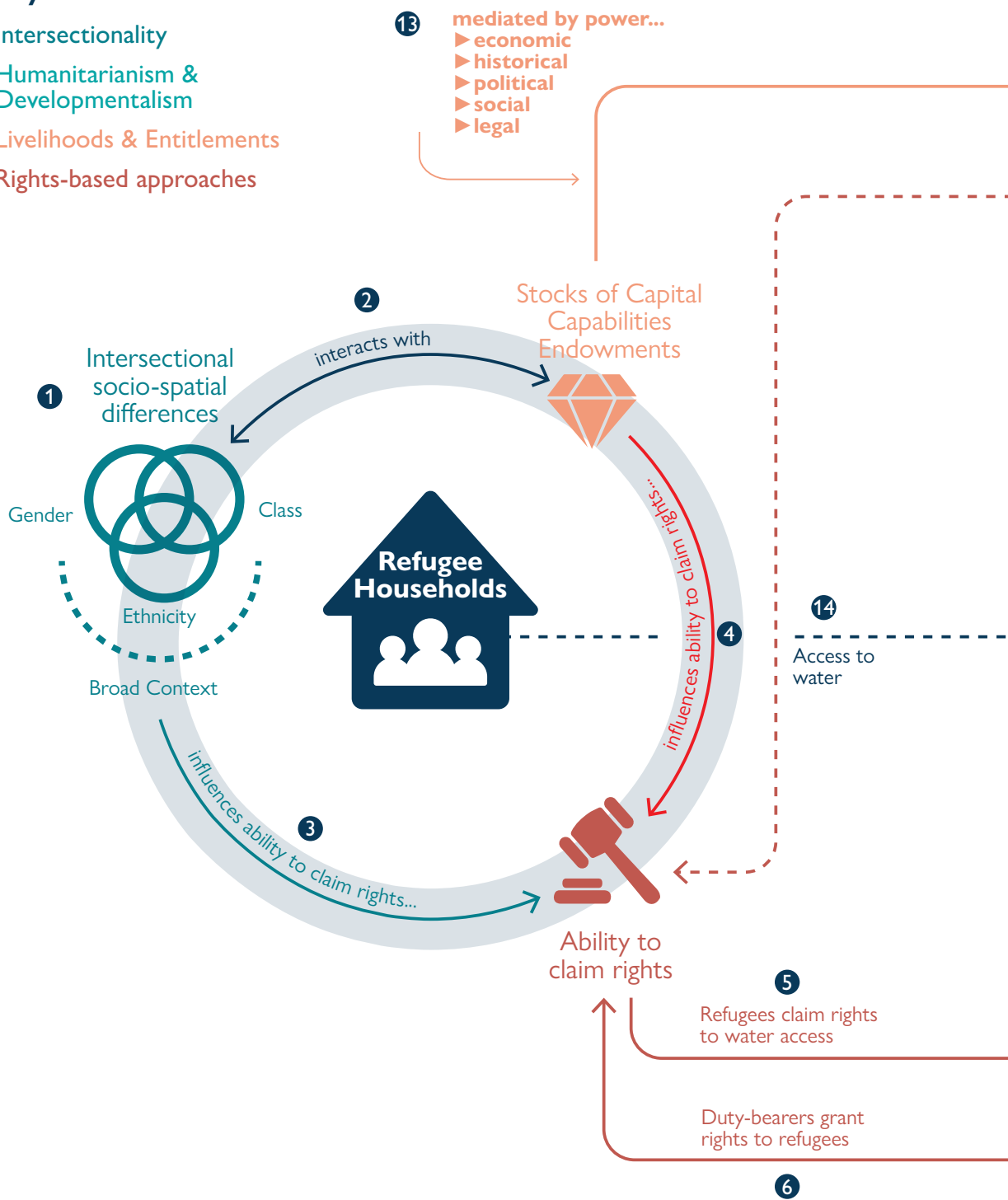


Figure 25 : The Theoretical Model

12 Stocks of capital affect ability to participate in governance structures

6. Case Analysis

The results from the qualitative and quantitative data collection exercises are presented here and analysed within the framework of the Theoretical Model. The validity of the methods is then explored and the results triangulated with the outcomes of the literature review.

6.1. Qualitative data

6.1.1. Coding

The 10 key informants represented international agencies, international and local NGOs and refugee representatives. Data were collected through semi-structured interviews which gathered information around both individual experiences of the case through the eyes of the interviewee and interpretative commentary on governance and wider approaches to refugee management in Uganda.

A first-pass analysis of the interviews revealed three primary overarching themes.

The first theme that was raised related to **social differences** amongst refugees. Gender was by far the most frequent topic to emerge, with respondents largely consistent in their view of gender as a powerful social difference in relation to water. Similarly, income, class or wealth was a widely noted social difference, with potential consequences for the new 'utility' model of water provision. For the purposes of further analysis in the *Discussion* chapter, class is sometimes assumed as tantamount to household assets or income. This was a simplification but did aid the integration of some datasets for the purposes of analysis. Finally, ethnicity was noted as a significant social difference that could lead to inclusion or exclusion from water.

The second theme related to the **context** within which migration was taking place, including 'issues' which arose within a context and the relationships between refugees and host communities in terms of access to materialities.

The final theme identified was **solutions** proposed by informants to improving water security and water security. Governance was raised as a common theme, as was data, and its presence (or absence) and hence usefulness for understanding social differences. Finally, participants shared a wide range of tools or approaches used to address different issues. A list of themes and codes is given in Table 3.

6.1.2. Insights

Insights gained from the interviews, and their potential significance, are discussed below and grouped around the three broad themes. The quotes attributed to the key informants were deemed by the researcher to be representative of their opinion, but may not always reflect the exact words used during the semi-structured interviews.

6.1.2.1. Social Differences

6.1.2.1.1. Gender

Attitudes

Gender was the topic most deeply expounded by key informants through normative views and empirical experiences. Representatives from both international NGOs and academia (K1, K2) felt that women should be put first in decision making and planning for water security, in part due to the very high proportion of refugee households in Northern Uganda that are women-led. There was general agreement that women use water access points more frequently than men, and K4 (representing an international agency) highlighted

Theme	Code	Total number of references
Social differences	Ethnicity	29
	Gender	40
	Class ¹	30
	Intersectionality	18
	Other social differences	1
Context	Issues	30
	Refugees and Hosts	9
Solutions	Approaches	34
	Data	19
	Governance	18
	Tools	51

Table 3 : Themes and codes used for qualitative analysis

¹ Class was previously referred to as 'income'. Although income and class cannot be considered as the same social difference, the generalisation was made to ease integration with the quantitative dataset during early-stage analysis.

how there are “*always gender-related risks*” in programming, especially sexual violence.

An academic (K2) highlighted how women often have specific health needs from water and may carry the burden of responsibility for household management. For these reasons women “*are most affected by water scarcity*”, according at a local NGO representative (K6). Overall, there was agreement that water security is highly gendered and deserves specific consideration.

There was mixed information around the role of women in governance of water. It was claimed by an academic that men play the dominant role in local decision making across Uganda in general, especially in rural areas, and thus the “*voices of women are very often unheard*” (K2). They also believed it is important to have women in the centre of decision-making or in positions of control over water access.

An example was given of men controlling the keys to access water points. Men in positions of power may be unaware of, or insensitive to,

the water needs of women at specific times of day, especially early in the mornings (K2). Two male key informants, an academic and NGO representative, claimed that women tend to be “*better financial managers*” (K7) and “*better managers of the environment*” (K2) than men, and thus favour positive discrimination to help them occupy key decision-making roles.

Planning

There was general agreement amongst key informants that women should be put first when planning for water security, and this sentiment appeared to be strongest amongst individuals who were not based in Uganda (K1, K2, K3).

“*Women keep money better than men, and don’t just spend it on drinking [alcohol]!*”. (K6)

Several NGOs have strong policies for promoting the inclusion of women. At least two of them typically reserve at least 50% of the spaces on water user committees for them (K1, K6) in addition to holding a woman in at least one 'key role', such as that of the treasurer (K6). This demonstrates how humanitarian agencies can try to address imbalances in power between men and women in relation to water security through curating or managing local power structures. Similarly, NGOs and the Ugandan Ministry of Water and Environment have gender strategies. These are designed to 'mainstream' gender-related considerations in programming, but a local NGO representative (K6) explained that the extent to which this is achieved depends on whether individual programmes decide to integrate them in practice.

The location of water points (and latrines) was raised as a gendered consideration, with open, visible areas typically deemed to be the safest for women by an international agency representative (K4). They reported working with local community leadership, or hiring refugees, to assist with locating new water supply tap stands to improve safety (K4). This indicated this agency has experience of working with local power structures when planning for water security.

On the other hand, one female local interviewee working for an NGO (K10) claimed that a discourse exists that *"women always look out for women"* in targeted programmes, sometimes to the exclusion of men. Such statements were backed up, they argued, by the claim that women-headed households have, on average, a higher net worth and higher levels of savings. This could indicate that a sense of injustice is felt by some where they feel data precludes the need for a 'women first' approach.

6.1.2.1.2. Ethnicity

Several of the key informants from NGOs recounted experiences whereby ethnicity, particularly tribal ethnicity, has influenced experiences of water access (K4, K8, K10). Around six different tribes from South Sudan are

represented amongst refugees in Uganda. Within refugee settlements, water point managers (who control access and systems of queuing) may favour individuals from the same tribe and discriminate against those from other tribes. Both international and local NGO key informants used the word *"chaos"*, sometimes repeatedly and on multiple occasions to represent the disorder generated by ethnic conflict within refugee settlements (K4, K8, K10). The use of this language could indicate real concern amongst practitioners around the potential for discrimination or exclusion at water points.

"violence and tribalism exists at water points"
(K8)

A local NGO representative indicated that the Office of the Prime minister collects data on tribal background, which is recorded on refugees' registration cards, in order to spatially separate them in refugee settlements (K8). This indicates that government authorities are, at least at times, resorting to serious spatial measures to reduce the risk of ethnic conflict.

"there are a lot of tribal issues that are cropping up with various South Sudanese tribes. We work with the Office of the Prime Minister to achieve tribal harmony in settlements." (K8)

Local representatives report that refugees within settlements appear to have been grouped by ethnic background to reduce the risk of conflict. This was described by two NGO representatives as working towards *"social cohesion"* (K8, K10). Another local refugee representative argued that *"the tribes can't coexist!"* (K6). This could indicate an underlying assumption that physical separation is the only way to avoid conflict amongst ethnic groups amongst

"Where a pump attendant is of a certain ethnicity, they may bias certain people for queueing... the prioritisation of ethnicity can cause chaos" (K10)

some local NGO representatives. On the other hand, one local NGO representative (K10) claimed that there was no planning for ethnicity, despite its importance for water access.

“At planning level there is no consideration for ethnicity. But when it comes to settling them, it is important to consider ethnicity for social cohesion. Ethnicity can lead to chaos in how people fetch water.” (K10)

However, some key informants also struck a more positive note. Ethnic divisions and conflict appear to be less significant in urban areas, according to a local NGO representative (K5). Language barriers between tribal groups have contributed to some issues, although the teaching of English amongst young refugees was reported as a unifying factor (K10). This indicates that there was some recognition of potential solutions for achieving long-term ethnic ‘harmony’ within settlements without resorting to physical segregation.

However, a local NGO representative acknowledged a lack of data around ethnic conflicts at water points (K8). There was also little evidence of policies or strategies for addressing possible differences in experiences due to ethnicity, with an interviewee from one large NGO claiming that they have yet to encounter a policy on ethnicity (K7).

There was broad agreement amongst local NGO representatives that increased household connections in the future, through the ‘utility model’, should reduce queuing at public water points and therefore ameliorate the ethnic dimensions of water security (K9, K10).

6.1.2.1.3. Class (including income and household assets)

A local NGO representative (K6) highlighted how the ability of refugees to pay for services, or to harness household assets, is becoming increasingly important as funding streams from donors reduce in Northern Uganda.

At present, some public standpoints continue to be available for free to refugees, but according to

“We are in the era of ‘every drop of water has to be paid for’” (K6)

one international NGO informant, some are now chargeable (K4). A local NGO representative (K8) outlined difficulties in identifying those too poor to pay for water supply services. Individual or household income is rarely collected, although there have been some efforts by the Office of the Prime Minister to obtain income levels upon registration. Proxy indicators, such as the number of household dependants, are often used, particular as part of a needs assessment or vulnerability index (K8). This indicates that some NGOs attempt to use indicators to target needs more effectively to counteract the effect of some social differences.

“It is important to have the specific mechanism that ensures there is water for all whilst considering differences in income. Poor women shouldn’t pay the same amount as men” (K2)

An international agency representative (K4) explained that local water user committees are responsible for collecting fees for public water access points such as hand-pumps or motorised pumps where fees are chargeable. In these cases, the local knowledge of refugee committee members is invaluable for identifying the poorest members of the local community, and hence those who are unable to pay. This informant claimed this approach to identifying needs can be more effective than top-down indices.

A local NGO representative and a refugee representative highlighted how, in urban areas, refugees must pay for water in some form (K3, K5). An academic (K2) explained that, in the presence of limited funds, urban refugees may pay for items based on priority – with food and water being amongst the items at the top of the list. Refugees may forgo water for less-essential purposes, such as bathing, to focus on drinking. This indicates that water security is sometimes seen as part of a suite of livelihood opportunities and options where entitlements, or assets, are limited.

A local urban refugee representative (K5) claimed that payment systems for public water points in urban areas can lead to discrimination against refugees by Ugandan nationals. Typically, a Ugandan elected member of the community is responsible for maintenance of a water access point and for collecting fees. Such an individual may discriminate against refugees, charging them more than Ugandan nationals.

However, one local NGO representative (K10) claimed that, particularly as some refugees benefit from remittances from abroad, many have a higher net worth than host families. Similarly, the expenses of refugee families in many areas could be lower than for hosts – especially if they are not paying for education and health in refugee settlements. Thus, it was important to avoid any assumptions that refugees have an inherently lower asset base, or are necessarily less financially secure than the host population.

The transition to a utility-led model for water supply could add importance to the class, and level of assets and income, of refugees. A local NGO representative (K7) claimed that a shift to the utility-led model also implies a cultural shift in the rationale for water provision. The goal of institutions such as the ‘Northern Umbrella’ is to create demand for water, they claimed, which in turn supports the viability of a utility-led business model. This is different to the humanitarian model for water provision, which is more focused on meeting critical needs. This cultural shift could have implications for those least likely to be customers of the utility, such as the poorest. In ensure a high level of take up, the utility is temporarily subsidising the cost of initial water supply connections to encourage as many households as possible to become customers.

An international refugee representative (K4) expects that public water access points will still be available following a transition to the utility model, but there is a lack of clarity over whether fees will be charged for these in the future.

6.1.2.1.4. Intersectionality

A Ugandan academic (K2) echoed the sentiments of some other respondents that “*gender and income can go side by side*”, and that poor women should be treated differently from poor men in the course of water provision due to the fact that “*women are more affected by water scarcity*” (K6).

A local NGO representative (K8) stated that these three social differences (gender, class and ethnicity) could be better understood through data collection, particularly as part of monitoring and evaluation (M&E). They explained that this could help to identify causal relationships and inform programme planning and practice.

None of the informants highlighted examples of examining ethnicity at the same time as gender and class.

6.1.2.1.5. Links to the Theoretical Model

The interviews concurred with the conclusions of Thompson (2016) and Sultana (2020) that gender can be an important social difference that affects access to materialities such as water resources. Similarly, the importance ascribed by Davis (2008) to power, and power relations, in co-constituting social differences is arguably reflected in the importance prescribed by key informants to the promotion of women in decision-making bodies. Such a decision could help ameliorate the gendered effects arising from poorly located water supply systems.

Links between gender and class were recognised by the key informants to an extent, and hints of intersectionality arose where some informants claimed that poor men and poor women should not be treated in the same way, due to the inherent differences in their relationship to water access and to cultural factors. Such differences include expectations around household responsibilities, which typically fall on women, hygiene needs which apply only to women, and the cultural context from which South Sudanese refugees originate. This reflects the view of Harris et al. (2016), who argues

through an analysis of two cases that gendered experiences in themselves may be weak when observed in pure isolation, but are significantly mediated by work responsibilities, socio-cultural expectations and contextual factors.

Ethnicity was recognised as a key social difference through the personal experience of informants, with some claiming that it can generate conflict, injustice, and ‘chaos’ at water access points. However, none of the informants drew parallels between this and other social differences in an integrated way.

Following the transition to a utility-led model, where refugees start to access water services in similar ways to Ugandan nationals, the ‘water-citizenship nexus’ as described by Sultana (2020) could become more significant. Water access could have a more prescient role in shaping refugees’ claims to citizenship and relations to systems of power, as refugees will become increasingly reliant on the mechanisms of the state and the Northern Umbrella of Water and Sewerage. This will take place within a context where refugees have no direct contact with the political process.

6.1.2.2. Context

6.1.2.2.1. Issues

An international agency informant (K4) implied that complexity was a challenge for water provision amongst refugees, due to the involvement of many partner agencies in cooperation with government. UNHCR, for example, works with multiple implementing partners for the delivery of water infrastructure which typically change every two years.

The operation and maintenance (O&M) of water supply systems was also highlighted as a key challenge for emergency water supply systems in general, with one local NGO representative (K8) claiming that water supply systems in developing countries will “always” require some form of subsidy or external support. They claimed that the utility model aims to solve this by improving the

sustainability of financing for maintenance. A local NGO representative (K6) claimed that, in many cases, payment for water is vital for the sustainability of supply.

“When system breaks down, it’s because someone hasn’t paid” (K6)

An international NGO representative (K4) and local urban refugee representative (K5) stated that humanitarian support for refugees within cities is generally unavailable, with UNHCR having no presence at all in the northern city of Arua. Refugees are also unable to officially register their presence in Arua, and therefore must regularly travel back to a settlement, typically monthly.

Access to data around water security was also raised as an issue by several respondents. A local NGO representative (K7) claimed that data is typically held in multiple databases, without being aggregated together, and agencies are often forced to collect data themselves that could already be available. This could indicate that the potential value of good data for understanding water security is not being fully exploited.

6.1.2.2.2. Refugees and Hosts

Some key informants (K3, K5) gave examples of discrimination of refugees by host populations, especially in urban areas. An example was given of access to boreholes, where an elected member of the host community, responsible for collecting fees, may charge refugees around 1/3 more than Ugandan

“It’s hard for a foreigners to be treated as a local person straight away. Some examples of discrimination. E.g. you find people lining up to access water, people fighting in queues. ‘This is our water not yours, you should wait until we have finished’.” (K3)

nationals (K5). However, the researcher gained the impression that this is not considered a very pressing issue by the local NGO and refugee representatives.

There is, however, a clear divide between refugee and host population in access to governance. A local refugee representative (K5) emphasised that refugees are forbidden from any involvement in political campaigning, and that younger refugees, in particular, are at risk of arrest.

“Refugees are not allowed to be involved in politics – the refugee act doesn’t allow participation.” (K5)

The local representative (K5) also stated that refugees can’t communicate directly with the local government in Arua to raise issues or discuss problems. Instead, they can only communicate through a local refugee association. Furthermore they claimed that in urban areas individuals often require a national ID number to obtain a household water connection. Refugees may have to resort to unofficial or informal methods, such as borrowing the ID number of a Ugandan national, to access these services.

6.1.2.2.3. Links to the Theoretical Model

Poverty, from the definition of Wagle (2018), in terms of the basic need for water access amongst refugees, was not raised as an issue within refugee settlements. However, when considering wider definitions of poverty, informants indicated that refugees appear to face some significant barriers to freedom. Sen in Wagle (2018) considers a lack of poverty to include a freedom to make livelihood choices. Therefore, exclusion from the political process arguably restricts refugees’ abilities in this respect.

Respondents highlighted both top-down and bottom-up approaches to understanding and targeting water needs, including vulnerability indices and the use of local knowledge through water user committees. Such needs-based approaches, as described by Nel (2018), are largely problem-orientated with a focus on deficiency.

There is less evidence, at present, for the use of Sen’s entitlement approach, including detailed assessments of endowments (assets or capitals available to refugees) and approaches to entitlement-mapping as described by Devereux (2001). The Office of the Prime Minister has attempted to capture and record the income of refugees on arrival, and some NGOs use proxy indicators for assets, but there was little evidence for a deeper understanding of Sen’s approach.

Nevertheless refugees, especially those in urban areas, appear to make use of livelihood strategies to achieve positive livelihood outcomes, as described by DFID (2008). Refugees have harnessed social assets, such as social networks, to leverage access to physical assets, such as water. An example given by respondents was the informal ‘borrowing’ of national ID numbers to gain a household water connection in urban areas. Similarly, where refugees may lack capitals in urban areas, livelihood strategies can include traveling to refugee settlements on a regular basis to register and take advantage of provisions. Therefore a lack of household assets within urban areas, such as financial or social capital, can be ‘substituted’ for other types of capital allocated to them in refugee settlements, following DFID’s model of asset substitution.

6.1.2.3. Solutions

6.1.2.3.1. Approaches and Tools

The representative of one large international NGO (K1) advocated working closely with the private sector to support the financial sustainability of water supply systems, through cost recovery and stimulating behaviour change. In addition, they argued that there is a need to create demand for access to water, which in turn drives accountability for water access and the sustainability of systems.

This reflects the opinion of a local NGO representative in Uganda (K10) that the drive of the Ugandan government is to stimulate demand for water within a market-based system.

“The Government of Uganda mostly sees people as creating demand [for water]” (K10)

Many key informants offered their opinion on how fair payment systems could function for poorer refugees. Both an international NGO representative (K4) and local refugee representative (K5) argued that local people are best placed to identify those who should receive water for free, as they have the best understanding of the living situation of their neighbours.

The NGO representative (K4) argued that sensitising refugees towards the idea of payment takes time and effort, implying that the acceptance of payment schemes might be separate from the ability to pay. Another local NGO representative (K3) stated another approach is to focus on boosting the incomes of refugees, through livelihood programmes and increased employment opportunities. This indicates that both needs-based and entitlement (or livelihood-based) approaches are being utilised amongst humanitarian agencies.

An international NGO representative (K1) stated that accessibility audits can be used to address imbalances in access to water services, but these are generally not a part of programme policy and may depend on the individual attitudes of implementing staff. This could indicate that strategies or policies at a higher level do not always lead on-the-ground implementation of the principles embedded in them.

An international NGO representative (K4) favoured using local structures over top-down techniques, including hiring refugees where their knowledge could be considered valuable.

“When placing water points, we try to identify relatively safe areas... these include village hygiene promoters and refugees hired by NGOs who are always very aware of the locations specifically” (K4)

A local NGO representative claimed that there is an increased focus on the willingness and ability of refugees to pay for services where possible, combined with vulnerability indices (K8). Payment systems may support those unable to pay through subsidies (K6, K8), vouchers or informal local arrangements (K4). There appears, therefore, to be a diversity of approaches towards the challenge of ensuring sufficient access to water in the context of vulnerability and differing levels of income.

6.1.2.3.2. Data

Data was a cross-cutting issue which has been discussed in relation to social differences and the wider context. A Ugandan academic (K2) reflected the views of other informants in claiming that *“lots of data is available”* around water security, but that this data is seldom shared effectively amongst those who need it. Similarly, another local NGO representative claimed that multiple datasets may not be comparable or cannot be integrated (K8). Another local NGO representative (K6) claimed that there was an apparent spike in data collection schemes during the Covid-19 pandemic, likely due to the potential implications of lockdown measures on already vulnerable households. In summary, data availability, reliability and a lack of integration was widely raised as a barrier to usefully understanding and responding to social differences in project programming.

“Data availability depends what decision levels you’re looking at. National or regional – there is no central cloud or repository. There are multitudes of data sources.” (K8)

A local NGO representative emphasised how bias in data reporting can reduce confidence in the reliability of datasets.

“There is a risk of dependency syndrome, as people may lie and bias because they expect some sort of service as a result of the survey” (K8)

They stated that using proxy indicators for class, household assets or income, such as household size, can help to avoid the potential for bias associated

with direct indicators. Key informants widely agreed that data has great potential to support their work in securing water access for refugees. However, the same representative highlighted that *“correlation doesn’t equal causation”*, and it was important to be careful when drawing conclusions with multiple uncontrolled variables.

6.1.2.3.3. Governance

Governance was raised by multiple key informants, particularly in relation to gendered experiences and to the sustainability of water supply systems. As discussed, NGOs and agencies may play a strong role in the formation of water user committees (WUCs) in refugee settlements, and use positive discrimination to secure the inclusion of women on them.

A local NGO representative (K5) stated that refugees are forbidden from engaging directly in local or national politics or political campaigning. In urban areas, refugees instead rely on intermediaries for communicating with urban governance structures, such as the South Sudanese Refugees Association in Arua. The association summates and communicates issues to the Arua City Development Forum. This indicates that there is some distance between the needs of refugees and governance structures that affect them in urban areas.

An NGO representative (K4) stated that water supply in Northern Uganda will be serviced by the Northern Umbrella of Water and Sanitation (NUWS), also termed the ‘utility model’, in the future, including in refugee settlements. The informant suggested that NUWS has transitioned to a private organisation, at arms-length from the government. The researcher did not identify any additional literature to support this, and the exact nature of the organisation remained unclear. Despite multiple attempts, the researcher was unable to contact anyone from the organisation. An international agency representative (K4) confirmed that contacting individuals from NUWS can be difficult.

Respondents were generally positive around the potential for the new Northern Umbrella utility, and its governance structure, to tackle issues previously discussed. However, there was broad agreement that the primary driver of the government is to *“create demand”* (K10) and *“get more customers and connections on board”* for *“efficiency gains”* (K7). None of the informants were able to clarify how the utility could affect those who may experience water insecurity due to socio-spatial differences, such as those of a lower class or income. However, it was claimed by a local NGO representative that UNHCR will continue to be a *“key partner”* for the Northern Umbrella looking at *“income, gender and ethnicity”* (K7).

6.1.2.3.4. Links to the Theoretical Model

The complexity of the protracted displacement into Uganda, and the involvement of multiple humanitarian and development agencies in alignment with governmental goals, indicates the presence of what Lie (2020) describes as the ‘humanitarian-development nexus’. Respondents indicated close alignment between the work of NGOs and government, including for the transition to the ‘utility model’ of water provision. Funds are therefore being used beyond immediate humanitarian purposes, as described by Buchanan-Smith and Maxwell (1994).

The interviews reinforced the relevance of the humanitarian-development nexus to water security amongst refugees in Uganda, and the extent to which the utility model could herald a new development aid-led approach. Respondents claimed that the utility-led model is designed to increase efficiency by maximising demand for water, and to help ensure more sustainable operation and maintenance in the long-term. This principle is closely aligned to the ideas of development aid presented by Kocks in Idris (2020). The role of UNHCR and other international NGOs in supporting this process indicates that these traditional humanitarian actors are embracing what Lie (2020) describes as the ‘development nexus’, through moving into the traditional development

arena in order to help manage a complex humanitarian situation. These actors have also, to an extent, embraced the localisation of action through employing refugees and working closely with water user committees in the implementation of projects, a recommendation from Stamnes (2016) for working within the humanitarian-development nexus.

Under the utility model, NGOs have proposed both needs-based, livelihoods and rights-based approaches to addressing poverty. Several respondents highlighted the value of data around water availability and vulnerability for targeting those most in need. Others, seeing water security as part of the broader picture of livelihood strategies, proposed boosting incomes or using subsidies – not dissimilar to the principle of sequencing assets (DFID, 2008). This involves increasing the value of one capital (liquid assets) to boost the value of another (physical water infrastructure). There was little direct discussion around rights-based approaches, but the change to the utility model implies a shift in the ‘duty bearer’ (Uvin, 2007) from humanitarian providers such as UNHCR, to the Northern Umbrella and the government. The lack of direct access to governance could conceptually present barriers to rights-holders wishing to claim their rights against these duty-bearers.

6.2. Quantitative data

6.2.1. Introduction

Quantitative data was analysed in an attempt to add richness to the themes revealed through the qualitative semi-structured interviews, and to identify if current data collection methods could be of use for identifying and isolating intersectional experiences.

Analysis of both the World Bank Household Survey of 2018 and the Joint Multi Sector Needs Assessment of 2018 aimed to examine the relationship between gender, class, and access to water, and both social differences in combination. When filtered down for lower level analysis, the data samples were frequently small and provided a weak or no indication of trends. The datasets are, furthermore, too small for formal analysis of statistical significance.

Some graphical analysis, where some relationship between variables may be apparent, is presented here. Graphical analysis which produced less

conclusive results, or presented weak trends (whether these trends can be correlated with the qualitative data or not) are presented in Appendix 3.

For the quantitative analysis, the determinants of water security were: the typical time spent waiting at the primary drinking water source, the typical time taken to and from the primary drinking water source, and the typical number of days spent per week collecting water.

6.2.2. World Bank Household Survey

The researcher attempted to perform intersectional analysis with gender of the head of the household and the total value of household assets, but the analysis produced weak or unreliable conclusions. Therefore, only results related to gender and water security are presented here.

6.2.2.1. Gender and water security

Initial analysis sought to examine purely gendered aspects of water security for refugee households.

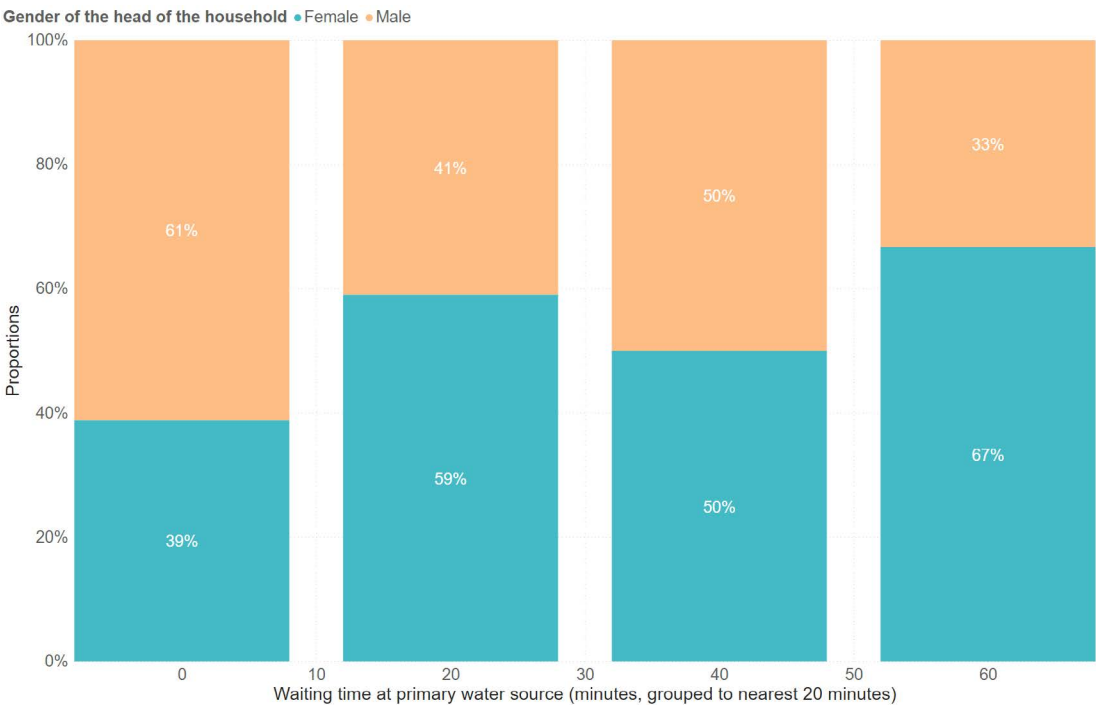


Figure 26 : Gender and waiting time at primary drinking water source (World Bank Survey)

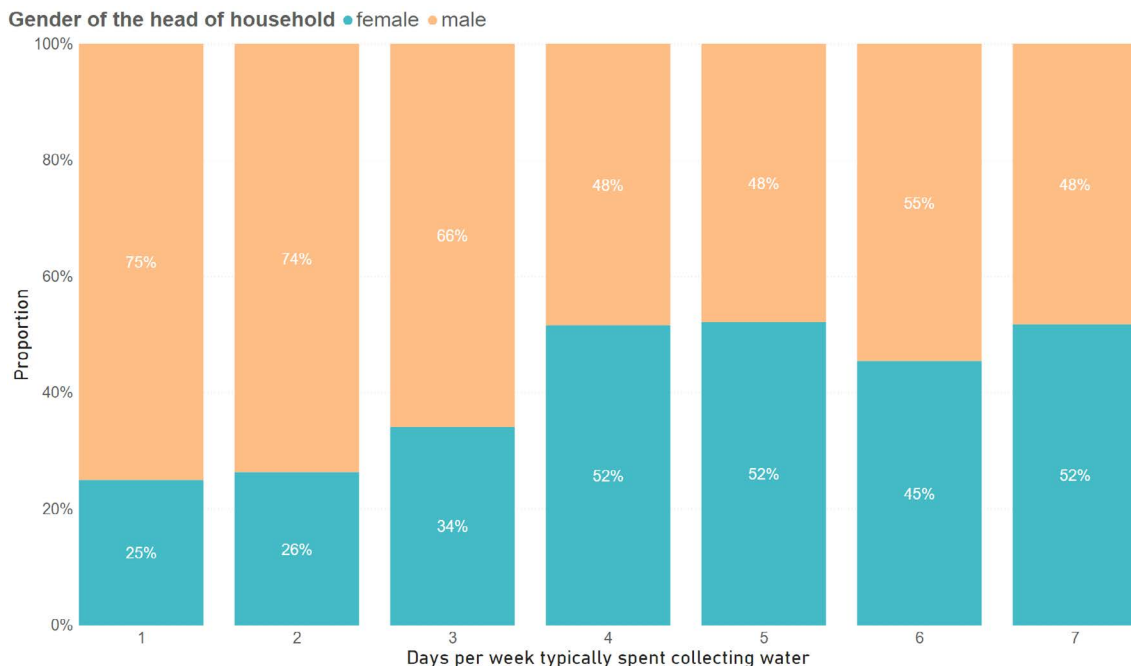


Figure 27 : Typical number of days per week spent collecting water (JMSNA)

The strongest relationships was observed when comparing gender and the typical waiting time at the primary source of water. As a proportion, male-headed households spend on average less time waiting at the primary water source, as shown in Figure 26 on page 80. Of those waiting on average around 60 minutes at the primary water source, over two-thirds were female-headed households.

Similarly, Figure 27 shows that a greater proportion of male-led households spend fewer days (one, two or three days a week) collecting water. Of those who collect water an average of just one day a week, 75% were men. Considering they experience, on average, shorter waiting times and fewer days spent collecting water, it appears that men may experience greater water security within this dataset.

6.2.3. Joint Multi Sector Needs Assessment (JMSNA)

6.2.3.1. Gender, class and water

Analysis of gender and water security indicators, and gender and class indicators, revealed weak or inconclusive trends and were not considered useful.

Therefore, these results have not been presented in the main text but can be found in Appendix 3.

6.2.3.2. Intersectional analysis

The comprehensive nature of the Joint Multi Sector Needs Assessment (JMSNA) made it possible to examine intersectional effects through the sub-division and random sampling of data points by both gender and a proxy indicator for class (type of housing).

Figure 28 on page 82 shows that, when considering those with 'low' class, there is little proportional difference by gender in the time taken to access the household's primary drinking water source. However, as shown in Figure 29 when considering those with 'high' class, the effects are much more significant. A greater proportion of women than men appear to spend more than 30 minutes accessing their primary household drinking water source.

6.2.4. Critiques

Analysis for this study involved taking random samples from sub-divides datasets of ever decreasing

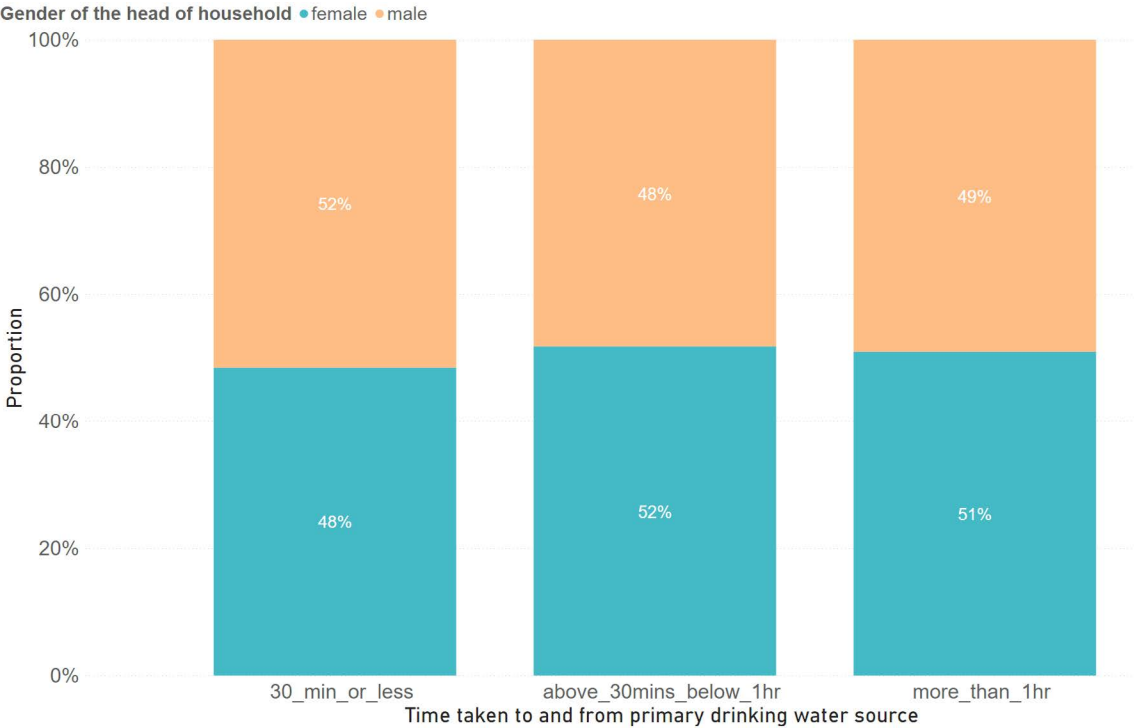


Figure 28 : Gender, and time taken to and from the primary drinking water source for households with low class

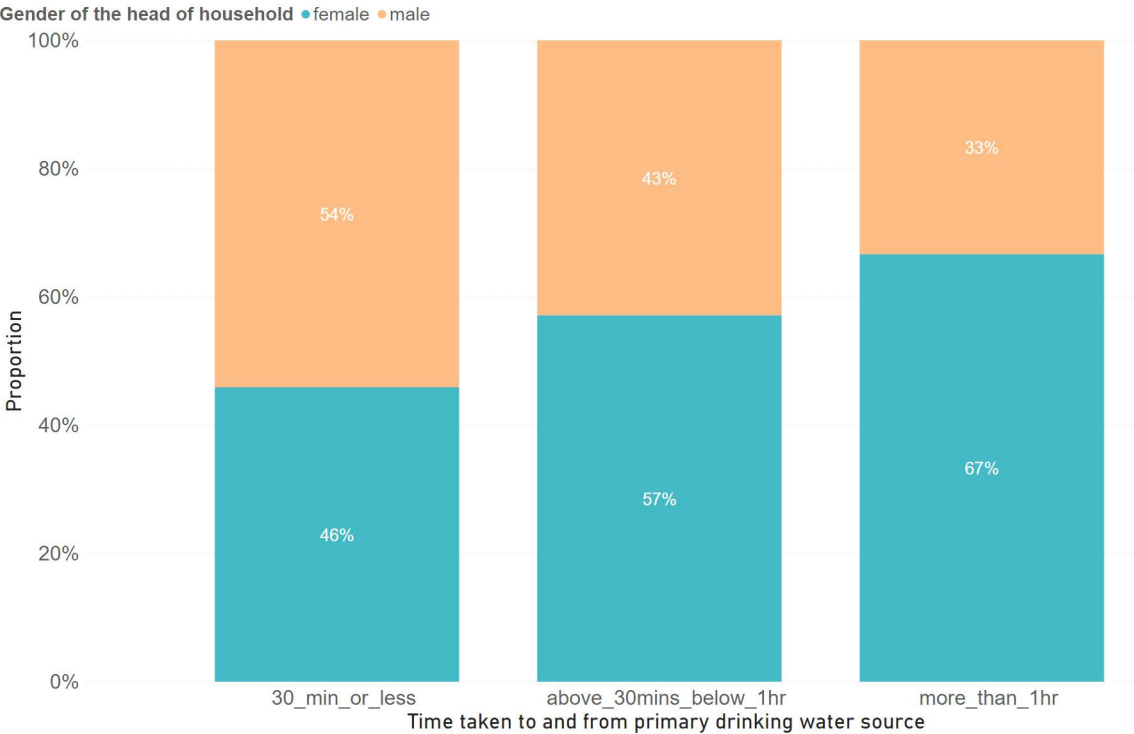


Figure 29 : Gender, and time taken to and from the primary drinking water source for households with high class

size to control variables related to gender and class. For the intersectional analysis as part of the Joint Needs Assessment, the final sub-datasets used for comparison were very small - the male and female datasets for 'high' asset households had just 44 data points each. Such a small sample size is unlikely to be sufficient to prove a correlation between variables.

Within the JMSNA, amongst South-Sudanese refugees just 500 of the households surveyed were male, compared with 2,391 households in total. This reflects the fact that there is a proportionally greater number of female-led households amongst the refugee population, but this makes intersectional analysis difficult due to the small sample size of men.

Household-level surveys were used from both datasets, and the only useful indicators of gender was the reported sex of the head of the household. This ignores the fact that other members of the household, male or female, could be involved in water access, with potentially gendered implications.

6.2.4.1. Uncontrolled variables

There were multiple uncontrolled variables with potential relationships to the data observed. Such variables could include date of arrival in Uganda, household composition, education level, and others.

6.2.4.1.1. Date of arrival

Conceptually, the date of arrival could have been a significant factor when considering the livelihood strategies of refugees.

In addition, female-led households were more likely to have been established in Uganda for longer than male-led households. Of the households surveyed, 592 arrived in Uganda from 2012 to 2015, in the earlier stages of the civil war. Of these, 9% were male led, and 91% female led. 1,701 of the households surveyed arrived between 2016 and 2018. Of these, 25% were male-led and 75% female-led. Therefore, assuming that the Joint Survey was sufficiently robust in selecting survey

samples, the proportion of male-led households arriving on an annual basis has increased over time. Female-led households are therefore proportionately more likely to have been established in Uganda longer than male-led households. Therefore, some intersectional effects could be indirectly related to length of stay, and not directly to the gender of the head of the household. For example, over time the average plot size allocated to refugees has fallen. This could have created challenges for more recently arrived households, but this is not revealed through the data.

6.2.5. Summary of quantitative data

From a singular point of view, the gender of the household head appears to have a weak relationship to determinants of water security: the time spent collecting water and waiting time at the primary water source. Class (with the type of housing used as a proxy) appears to have a minor impact on the adequacy of water provision by men and women, with female-led high-asset households more likely to spend longer collecting water than male-led high-asset households. Such effects were not observed with low-asset households. This could indicate that men could have a greater ability to harness, or 'sequence' assets as part of livelihood strategies to improve water security to a degree. The quantitative dataset, whilst inconclusive, does indicate some gendered and intersectional effects.

6.3. Validity and triangulation

6.3.1. Validity

6.3.1.1. Interviews

The key informants who took part in interviews and the focus group can all be considered 'experts' in their field – that is, they have specific knowledge around matters concerning refugee management in Uganda, including water provision. However it is likely that everyone was, to some extent, guided by policies and goals of their organisations in giving answers.

There were some notable differences in the views on gendered experiences of water access between those representing NGOs or agencies at an 'international' level and those representing them at a 'local' level. Those representing at an international level, and the academic, tended to emphasise the vital importance of women in project programming from a general standpoint, and in terms of organisational values. However, those representing at a local level appeared to have a more nuanced and contextual understanding. Some expressed that, in terms of net worth, female-led refugee households can out-class men and therefore that the focus on women in project programming could be excessive under some circumstances. Therefore, the usefulness and validity of some of the data gathered from the key informants could be better where it was rooted in and related to the local context.

6.3.1.2. Quantitative data

The JMSNA survey was carried out by a reputable organisation with experience of monitoring and evaluation, and used statistical information on refugee populations to randomly select households in settlements and host communities based on the density of population. The dataset was relatively large and included a wide variety of livelihood indicators which were justified in detail in supporting documentation. The dataset was also contained in a single database, and details were given around the data collection methodology for each indicator. It was therefore considered a reasonably valid source for this study.

The World Bank survey used similar random population-weighted sampling methods to the JMSNA. However, the researcher did not judge the sampling methods to be so robust, particularly in Kampala. Sampling within Kampala was based on refugees recorded in the 2014 census, four years before the survey took place. In addition, the sample size was only around a third of that of the JMSNA. Data collection methodologies for all the indicators were not always available, including for estimating household assets. It was therefore more difficult to

verify the validity of this source, and it is considered less useful for the study than the JMSNA.

As the researcher did not present all the quantitative analysis in this section, there is a risk of observational bias in how they are interpreted. The researcher tried to mitigate this by strictly excluding graphs which demonstrated weak or erratic trends, no matter whether these trends were expected or unexpected in terms of their directionality.

6.3.2. Triangulation of sources

There were several common themes that could be correlated across multiple interviews. In particular, all informants thought that gender, class and ethnicity were important and significant considerations. In general terms, many key informants argued that greater livelihood responsibilities put additional burdens on women refugees, and that they are generally poorer. On the other hand, when asked specifically about Northern Uganda, it was claimed that female-led households often have a higher net asset worth, and that some programmes can focus on women to the neglect of men. There is therefore some uncertainty about the directionality of the effects of some socio-spatial differences within the case itself.

The quantitative analysis similarly revealed some evidence of gendered effects of water security, in particular some evidence that women spend more days per week collecting water on average. However the gendered effects of other indicators for water security are less clear.

Both the interviews and quantitative analysis revealed some intersectional effects when considering gender and class. The interviews, and the literature review, gave the impression that women could transcend systems of oppression when they have high asset levels, reflecting the view of Sultana (2020) that class dominates. However, the quantitative data gave the opposite impression, with greater divisions around water access between male and female-led households amongst those with a higher class, favouring male households. This could indicate that male-led households benefit from

what DFID (2008) describes as ‘sequencing’, and are better placed to utilise assets (property value) to gain better access to other physical assets, such as water. This challenges the assumption that class could transcend social differences. However, such a narrative did not emerge through the interviews. However, there was common agreement amongst key informants that data is, at present, insufficient for guiding policy and practice, and there were calls for more consistent and widespread data collection.

There was a lack of clarity around the structure of the Northern Utility of Water and Sanitation

(NUWS) when considering the interviews and literature review. The literature review claimed that NUWS is an association of water and sewerage boards, and a government limited company, whilst key informants claimed that it is, in essence, operating as a private company, with activities dictated by the market. The researcher was unable to interview any representatives from NUWS, and thus the uncertainty around NUWS’s operating model remains.



Figure 30 : A water storage tank in BidiBidi Settlement, Northern Uganda, 2016

7. Discussion

7.1. Water access

Refugees in Northern Uganda access water through manual or motorised boreholes, public standpipes, tankers, rivers and piped connections to households. The humanitarian sector, particularly agencies operating under the auspices of UNHCR, supplies water for refugees at present. Most water provision in refugee settlements is free, and some members of host communities also benefit from these free sources. There is an on-going drive to shift away from 'unsustainable' and expensive methods of water delivery such as tankers and towards public standpipes and household connections, as the displacement of South Sudanese refugees becomes increasingly protracted. The shift is being driven by both the Ministry of Water and Environment and UNHCR.

In parallel, the operating model of water supply services is dramatically changing. A utility, the Northern Umbrella of Water and Sanitation (NUWS) will gradually replace the humanitarian sector for service provision in refugee settlements. NUWS has begun offering subsidised household water supply connections within the settlements, and plans to significantly increase revenue collection for water. Online sources describe it as a government limited company and deconcentrated support structure. Interviews with key informants indicated, however, that the operating model has transitioned to one more representative of a private company. The structure of the organisation, and the extent to which it is driven by a profit motive, is unclear. Associated with this is a great deal of uncertainty around how those who are unwilling or unable to pay will be able to access water following the transition to a utility-led model, and who the 'duty bearers' for more vulnerable members of society are likely to be. It is anticipated that the UNHCR will continue to have some role in the

provision of free or highly accessible water, but it is unclear whether public standpipes will remain free at the point of use, and what form the longer-term relationship between UNHCR and NUWS will take.

Within urban areas such as Arua and Kampala, refugees generally share the same water services as the host population. With sufficient funds, they can also benefit from household connections. However, there is evidence from interviews that they may have to 'borrow' the national ID number of a Ugandan citizen in order to access this. This could contradict the information obtained in the literature review that refugees should have the same rights to access services as Ugandan nationals.

7.2. Water security and insecurity

Rates of safe water access amongst refugees are statistically high and can be significantly better than levels experienced by the local host population. The extent to which water security and insecurity arises based on gender, class, and ethnicity can be examined through the lens of the three theoretical domains: poverty, livelihoods and vulnerability; humanitarianism and developmentalism; and intersectionality.

7.2.1. Poverty, needs, rights, livelihoods and vulnerability

Root causes of poverty identified by Wagle (2018) and Mahembe and Odhiambo (2019) appear to have some relevance for poverty, and water security, amongst refugees in Northern Uganda. Social exclusion and discrimination, particularly discrimination based on ethnicity and nationality undoubtedly arises in both settlements and urban areas, and there is some evidence from all sources that human capabilities (such as household value)

could better enable households to transcend barriers to water security. At present, humanitarian agencies such as UNHCR have undoubtedly been using needs-based approaches to provision, and thus economic means may be less significant for achieving water security. However, with the development of the utility model, economic means and the ability to pay for a household water supply connection could play greater role in water access, especially when seen as part of wider livelihood strategies due to the costs of the utility-led model.

Several agencies mentioned the use of vulnerability frameworks as a tool for identifying those at risk and targeting water service provision. However, a risk in such an approach is that needs are manipulated, due to bias in survey responses. Vulnerability frameworks may therefore rely on various proxy indicators, such as household size, for understanding class, assets, or income. Local knowledge, often gathered informally or through water user committees, is widely reported as a very effective way of identifying those with critical needs, such as the poorest in society. Interviews suggest that the Office of the Prime Minister attempts to collect income data upon entry, but both interviews and the literature review indicate that such direct indicators can be at significant risk of bias.

Refugees appear to employ a variety of methods, including diversifying local income sources, or harnessing remittances, to reduce their vulnerability to shocks and stresses. There is no doubt that the freedoms afforded to refugees provide a wider diversity of opportunities, in parallel to humanitarian aid.

Livelihood strategies and the ability of refugees to convert assets into livelihoods outcomes were evidenced in the data. Both the literature review and interviews revealed different strategies such as engagement in agriculture, employment and remittances to complement or supplement humanitarian allowances. The evidence of a possible positive relationship between high housing quality and water security outcomes amongst male-led households, which enables them to achieve better

water security than female-led households, could be evidence for an effective strategy of sequencing assets DFID (2008). It is such a strategy that may benefit male, rather than female-led, households due to the nature of social relations, which could make entitlement mapping more difficult for women.

Human capabilities amongst South Sudanese refugees are overwhelmingly linked to rural agricultural production, with limited higher education skills compared to host populations (World Bank Group, 2019). Therefore, the decision to allocate plots of land as part of the settlement scheme arguably recognises such capabilities as part of wider livelihood strategies. However assets, DFID (1999) argues, should not be seen in isolation. For example, access to physical capital (such as land) can frequently be harnessed as a collateral for loans, permitting access to financial capital. Refugees do not have titled access to land provided as part of the settlement scheme. Thus, although land can provide sustenance, it theoretically provides limited opportunities for leveraging or transforming it into other forms of capital, especially financial. Around 22% of refugees in Uganda benefit from remittances as their main source of income, and the World Bank Group (2019) reports these refugees as experiencing lower levels of poverty than refugees relying on other income sources.

There was agreement amongst some informants that there is, and will be increasingly, a link between class (or income) and the ability of refugees to obtain household water supply connections, and that the cost of connection and on-going service provision is a barrier for many. Informants explained that a successful utility model is likely to require a minimum viable level of uptake in the system, and there was agreement amongst some informants about the need to create or induce demand for such a system to be successful. It is unclear whether humanitarian agencies or the government plan to examine the willingness or ability of refugees to pay under the utility model, or the potential for income or livelihood-boosting activities to support this transition. The growth of the utility model, under a framework of development aid, is likely

to rely on the on-going support and guidance of large international humanitarian and aid agencies. There could be an intensely political process within the humanitarian-development nexus, and it is unclear whether organisations such as UNHCR will separate their traditional humanitarian considerations from their developmental ones. Despite the fact that informants were generally positive around the potential water security outcomes of the utility model, Sultana (2020) in their analysis of a case in Dhaka highlight how a formalisation of service provision does not necessarily transcend systems of inclusion and exclusion (such as ethnic inclusion and exclusion) but can reproduce them. This narrative did not emerge through the key informant interviews.

A significant proportion of refugees have chosen to move to urban areas to benefit from additional freedoms and opportunities which may not be available in settlements. Some refugees with sufficient means, especially in urban areas, have paid for household water connections. Despite this, some formal barriers to accessing water services appear to exist – such as the need for a national Ugandan ID number to gain a household connection. In these circumstances informal methods, such as the harnessing of social capital to ‘borrow’ the ID number of a friend, provide an example of a coping mechanism or strategy used by urban refugees to increase the security of their water access. It is also an example of how local negotiations may be necessary for refugees to gain access to water in certain contexts, removed from the legislative or policy context which grants refugees certain theoretical freedoms.

The rights of refugees in Uganda have undergone a significant evolution, stimulated by international best practice such as the Global Compact on Refugees. The granting to refugees in Uganda of a broad range of freedoms has, at least theoretically, given many the ability to claim rights against duty holders for the use of public services in settlements and in urban areas. However, whilst the duty-bearers have formerly been humanitarian agencies, primarily coordinated by UNHCR,

this responsibility could increasingly shift to the Government of Uganda or the Northern Umbrella of Water and Sanitation (NUWS) in the future. At present, refugees only have indirect contact with the political system and are banned from taking part in any form of political campaigning, or voting. In the absence of a route to citizenship for refugees there is a more limited scope for their involvement in broader governance and public participation in the long-term. Ideas of citizenship and belonging, and the legitimacy of claims to citizenship and property rights, are very closely related to the role of the state in water provision by offering a connection to formal governance structures. Pipes, pumps and taps are therefore more than infrastructure but are “symbolic and meaningful” (Sultana, 2020, p. 7) in validating citizenship claims and claims to water.

Whilst, at present, UNHCR and other agencies facilitate and promote a gender balance on local water user committees (WUCs), participatory structures for refugees don’t appear to be directly facilitated by the government. Therefore, where such humanitarian agencies increasingly withdraw, it is unclear whether these participatory structures will be maintained. In this case, increased consideration may be needed for what route refugees could use to claim rights to water against duty bearers in the future, without direct access to the government or political systems. The gender balance of future power structures, and the significance of women for decision making may not, in addition, be maintained. Some informants indicated that a form of partnership approach, involving UNHCR or other agencies, is a potential outcome that could support refugees in claiming their rights. Such partnerships have been identified as a theoretical solution for rights-based approaches by Cornwall and Nyamu-Musembi (2004), through the strengthening of both the ability of refugees to claim rights and the capacity of the government to act as a duty-bearer.

There is a close conceptual relationship between the concept of refugees as rights-holders and entitlement mapping. Rights can be considered as a part of the endowment set, which can be used to obtain water,

part of the entitlement set. The relationship between rights-holders and duty bearers, and the ability of the former to claim access to water against the latter, is part of the process of entitlement mapping. Where government, or government agencies, primarily control access to water, non-governmental agencies can nevertheless support the development of this process of entitlement mapping.

7.2.2. Humanitarianism and developmentalism

The interviews and literature review revealed that water access for refugees within settlements has been granted primarily through systems of humanitarian relief, underpinned by humanitarian and refugee law. The principles of humanitarian relief, as outlined by Kocks in Idris (2020), have largely been followed: water access has been unconditional, provided rapidly, and has the objective of saving lives and alleviating suffering. The legal basis has been international refugee law and the granting of refugee status to those entering the country.

Discourses around water access for refugees in Northern Uganda are increasingly taking on the language of development through the alignment of humanitarian agencies with government development agendas, and the formation of the Northern Umbrella for Water and Sanitation (NUWS) utility to take ownership of water supply services within settlements. Following Stamnes (2016) and their practical advice for operating in the 'nexus' space in the literature review, the interviews revealed evidence of joint action between humanitarian and development organisations amongst refugees in Northern Uganda. Humanitarian agencies such as UNHCR and GIZ are working closely with government and are operating in broad alignment with their planning cycles, and the World Bank is working with the government to support them in integrating refugees into national development planning (Government of Uganda, 2017). Financial models have become more flexible and appear to be more focused on long-term water supply systems as opposed to short-term emergency provision, with a very significant



Figure 31 : An elderly lady reconnects with a friend in a refugee transit centre

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focus on investment in host communities in addition to refugees.

Analysis of data sources suggested that the very nature of the work now being undertaken by some humanitarian agencies is inherently political. This includes the strategic endorsement of using humanitarian funding beyond humanitarian needs, as shown by the ReHoPE strategy. Furthermore, some agencies are directly involved in the transition to a utility model of water provision. The transition to the utility model is complicated by the possibility that UNHCR will maintain a long-term presence for those in most need, especially for refugees who may be unable or unwilling to pay for water tariffs.

How the utility model will work in practice is inherently uncertain, and many of those interviewed with significant knowledge of the process are still unable to give a clear picture of the structure of NUWS, its operating model, and its relationship to government at UNHCR.

In the process of transferring the responsibility of water services from the humanitarian sector to government utilities, some parallels can be drawn with the end of the civil war between the Government of Uganda and the Lord's Resistance Army in Northern Uganda in 2008. Upon a reduction in hostilities, the government rapidly closed the camps for internally displaced people and led a shift in rhetoric towards one of recovery, accompanied by the loss of humanitarian water services in protected villages. In light of the need to conform with the policies and activities of the government the response of NGOs was to either: withdraw from their activities, relocate elsewhere, or refocus their activities on development (Lie, 2020, p. 9). Within the case described in this thesis, given the protracted nature of displacement in Northern Uganda, many NGOs and agencies appear to have chosen the latter approach. Such a move can be argued as a pragmatic response to realities on the ground, or a move which undermines humanitarian principles.

The long-term prospects for a development-led approach to water access could be limited by the

political legitimacy of refugees. Around 25% of the population of Arua city are refugees, and yet refugees are excluded from direct participation in local decision making and are forbidden from any form of political action. Therefore, their ability to advocate for livelihood strategies or hold NUWS or government to account is unclear.

7.2.3. Intersectionality

The data revealed some evidence for Harris' four gender-differentiated dimensions of water: access, knowledge, participation, and lived experiences (Harris et al., 2006). Access and use of water, in terms of how, when and why it is used, is clearly gendered amongst refugees within the case, in common with global experiences and what can be termed 'common knowledge' within the sector. Facilitating the participation of women in governance is seen as critical amongst humanitarian and development agencies, with specific targets for integrating a minimum proportion of women where possible. Lived experiences of water also vary - with the risk of sexual assault another key consideration for agencies. Women are at risk of gender-based violence when accessing water points at case scale, whilst there is a wider suggestion that the livelihoods of women are more dependent on safe water access.

In common with Harris' findings from Accra and Cape Town, it appears that some gendered dimensions of water security, such as access to and lived experiences of water, are more strongly apparent when seen through an intersectional lens. The interviews and literature review revealed that the social differences of gender, class and ethnicity all have a relationship to water security. Ethnicity, particularly tribal ethnicity appears to be a very significant factor which affects the fair allocation of water at public drinking water standpipes, as revealed through examples in the interviews. Several key informants used the word 'chaos' during interviews to describe the scenario of ethnic discrimination. Conceptually, it appears that such experiences could overlap with gendered experiences of public water point access. Class is

likely to correlate with the willingness and ability of people to pay for household water supply services, particularly with the introduction of the utility model, which is being progressively expanded. For those that benefit from a private connection, this could ameliorate the gendered experiences associated with public water points. However, those unable to benefit from a private water connection could be left behind.

Participatory structures, currently strongly facilitated by humanitarian and developmental agencies to overcome gendered experiences, are open to change following a transition to the utility-led model. The experiences of refugees in urban areas show they are largely excluded from political processes. There is a great deal of uncertainty around how participatory processes will become manifest within refugee settlements as humanitarian considerations become less important.

Many key informants, supported by literature, claimed that women should be at the centre of decision making due to their greater reliance on safe water services, greater household responsibilities, and to counter the effects of gender discrimination. This correlates with the “common wisdom” that women are more affected by water insecurity, as observed internationally (Seager, 2010, p. 1). At a case level, examples were given where male management of access to water points (such as times of access) discriminates against the needs of women. Locally, there was broad opinion that women can be more effective at asset and financial management than men and are better placed as key members of local power structures, such as water user committees (WUCs). On the other hand, some key informants claimed that men can be excluded from programmes due to an excessive focus on the needs of women.

The quantitative data made, weakly, the case that men with higher asset levels may experience greater water security than women of a high class. As this trend is not observed amongst lower asset households, the researcher was not able to provide a firm hypothesis for this. It is possible that additional

indicators and contextual factors were excluded from analysis that would have offered a richer narrative, and highlighted the vital importance of contextual knowledge in interpreting a case.

Ethnicity is not considered in planning for water security, except for allocation of land in settlements, to separate different ethnic groups. Furthermore, there were no intersectional elements linking ethnicity to gender or class that emerged through the interviews, and no quantitative datasets on ethnicity were available to the researcher. However, conceptually, following the transition to a utility model it is possible to envisage significant ethnicity–asset intersections. Under the utility model it is possible that poorer families, unable to afford household water connections, continue to queue at public standpoints (where they exist). Intersections with class could then become very significant if lower-asset households are less likely to gain a household connection and are therefore more exposed to queuing systems at public water points. Furthermore, the manipulation of access based on ethnicity could continue. If the service quality experienced at public water points is reduced due to an uptake of household connections, this could also disproportionately affect poorer households. This follows the concepts of Crow and Sultana (2002) that social relations that arise from social differences play a role in mediating access to water and how this can lead to water security or deprivation.

Within refugee settlements, ethnically grouped social bonds appear to be used as a method for prioritising water security, according to multiple practical examples given by key informants. The researcher considers this to be a negative coping mechanism, as it reinforces the social difference of ethnicity as a factor influencing water security. Therefore social exclusion could play a greater role amongst refugees compared to host populations, due to tribal or class divisions being more present, and due to the contextual tribal roots of the conflict in South Sudan.

The literature review revealed the importance of considering the context within which social

differences can arise. Erdal and Oeppen (2017) consider the process of migration to include the act of leaving the country of origin, the journey itself, and entrance and settlement and finally return and onward possible migration. Therefore, for refugees in Northern Uganda, the context, expectations, and responsibilities around water may be continuously changing throughout this process. Many forcibly displaced individuals, especially in urban areas, may suffer from a loss of social capital and social support networks (Crisp, Morris and Refstie, 2012). However, data suggested that longer established households may be able to increase their class base, and that younger refugees are far less affected by ethnic discrimination that can extend into water security. Similarly, Harris et al. (2016) argues, from their cases, that household water connections could significantly reduce gendered dynamics in water access, as could be the case in refugee settlements under the utility model. On the other hand, power structures, and the ideas of hydraulic citizenship (Sultana, 2020) could become even more significant following a retreat of humanitarian needs-based provision, where subject positions and class, take on a more prescient role in water access. Considering the ideas of Crow and Sultana (2002) around social relations and access to water, market access and ownership will become vitally important in the presence of a shrinking humanitarian presence. Therefore, the fluid nature of intersectionality, and the changing context over time, could have a significant impact on the experiences of refugees.

The insights of Castán Broto and Neves Alves (2018) into models of intersectionality for co-production have some relevance for a theoretically fairer method of water service delivery. These provide some potential recommendations for how to mitigate the risk of exclusion, due to intersectional social differences, for this case. Potential considerations could include:

1. **Context-situated design** – under the utility model, it is unclear whose values, uses and needs are prioritised. There is the potential to use vulnerability indices, developed with local participation, to better target households and individuals with more acute needs.
2. **Collective organisation and participation** – future participatory structures, which could be used to allow refugees to express and hold to account duty-bearers, could be established with the guidance of UNHCR.
3. **Improving decision-making processes** – there is a risk of ‘elite capture’ of decisions in a more market-based model for water access, and thus a better understanding around potential future mechanism of exclusion could be required.
4. **Recognising existing systems of oppression** – the risk of replicated existing gender, class, and ethnicity-based divisions amongst refugees in a utility-based model of water distribution is a distinct possibility. A better understanding of these existing systems of oppression amongst government and agencies could help mitigate the risk of their replication under the utility model.



Figure 32 : Young South Sudanese refugees at Impevi Camp

8. Conclusions & Implications

Limited access to data inherently limits the extent to which knowledge generated around the case is generalisable. Nevertheless, both the quantitative and qualitative methods provide insights which have relevance for the research questions. In particular, evidence from the case, and the sector at large, points to the potential for intersectionality to be a valuable tool for practitioners more widely.

8.1. The Research Questions

RQ1: How do South Sudanese refugees in Northern Uganda access water?

South Sudanese refugees in Northern Uganda residing in refugee settlements access water using hand pumps, motorised supply systems and water delivered by tankers. The volume of water provided to settlements by tanker is slowly reducing over time as both humanitarian and government agencies seek to improve and expand the reach of more 'sustainable' distribution systems. Systems in settlements are generally commissioned by large humanitarian agencies, in partnership with the Office of the Prime Minister, but are operated and maintained by several local delivery partners. Systems in urban areas may be provided by local partner organisations, or the National Water and Sewerage Corporation, or the Northern Umbrella of Water and Sanitation. Water user committees appear to be closely involved with maintenance and access of systems both in urban and rural areas. Within urban areas, many refugees may rely on market access to meet their needs – or the ability to purchase water from an owner of land, a method of extraction and possibly a means of transportation. Refugees in urban areas share water access systems with the host population, which includes wells, rivers and piped water supply systems.

Queuing and delivery of water is typically managed by an elected individual, who has responsibility for fair allocations. Only Ugandan nationals can fulfil this role outside refugee settlements. Some refugees may use rivers or other sources for some purposes, particularly non-drinking services.

Supply services in refugee settlements are slowly transitioning from a humanitarian model of provision to a utility-led model, through the Northern Umbrella of Water and Sanitation. The extent to which this organisation is an arms-length government body or a private company is uncertain.

RQ2: To what extent do South Sudanese refugees in Northern Uganda experience water security or insecurity based on socio-spatial differences, in particular gender, ethnicity, and class, and their intersections?

There is evidence, internationally and within the case, that water security is gendered. Women, in particular, tend to rely heavily on safe water and take a greater responsibility for water-related household tasks. Sexual and gender-based violence around water and sanitation points were cited by key informants. However causal relationships between gender and water security remain relatively opaque at a case level. Ethnicity can lead to discrimination in water access, especially in cases

of local allocation and control of water points. Families of a higher class are likely to benefit those wishing to obtain household connections, and there is evidence that some households may be more effective at asset building. There was some suggestion of intersectional linkages between gender and class from key informants, weakly supported by the quantitative data, with evidence that higher class male-led households may benefit from better water security.

RQ3: How is intersectionality explicitly or implicitly understood and operationalised at present? Could it be a valid frame of reference for planning, implementing, and monitoring water supply services amongst refugees?

Intersectionality appears to be of use for “explaining and criticising” (Collins, 2019, p. 4) discrimination in water access amongst refugees, and helps to link the experiences of refugees to the policies and practices of both non-governmental organisations and the government. It raises important questions around whether, in planning for water security, sufficient consideration is given to the nuances of social difference and context beyond gender.

There is a significant focus on gender in the planning and operation of water supply schemes, most notably within the humanitarian sector. There is an appreciation that women may have an increased reliance on safe water supply during needs-based assessments and can reap greater benefit from safe water as part of their livelihood strategies. Less appreciation exists around the experiences of different ethnic groups to access water, beyond the intention to zone new arrivals into separate physical areas of refugee settlements. There is some recognition that different households have different levels of ability to pay (both for upfront household water connections and on-going private or public services), but proposed solutions are diverse. There was no evidence of specifically targeted support to enable those with a lower class to gain household water supply connections, apart from general,

temporary, connection subsidies. Evidence for intersectional experiences from the quantitative dataset is unclear and it is likely that other contextual factors (such as length of stay) could also affect water security outcomes. Nevertheless, from qualitative insight through the expert interviews, there is clear recognition that gender, class and ethnicity do play a role. Wider evidence from other academics and from other more data-rich cases suggests such social differences do interlock and can create effects that are ‘greater than the sum of their parts’.

8.2. Implications for practitioners

The case was considered revelatory due to the large scale nature of the displacement, over a short time frame, within a uniquely liberal policy context. However, in the context of increasing migratory movements around the world, there is the possibility that other countries will implement the Comprehensive Refugee Response Framework at a domestic level, especially if it is judged as successful in Uganda. Therefore, implications for planning, implementing, and monitoring water supply services amongst refugees could have wider applicability. Implications from the case, with international applicability, could include:

1. Intersectionality remains, at present, a primarily academic rather than practical tool with low levels of knowledge, appreciation and practical application within the case described.
2. A strong focus on gender, at a general level, may at times miss the interlocking effects of multiple social differences and the importance of context. There is a risk that ideas of gendered water security could become a truism where a focus on local context and knowledge is absent.
3. Examining gender, in context, alongside other socio-spatial differences, can reveal more complex systems of inclusion and exclusion.
4. Intersectionality, and examination of interlocking social differences, is likely to offer a useful lens for understanding security and

insecurity in water access. Such differences could be significant in the transition from a humanitarian to a developmental model for water security, where changing contextual factors could create new modes of exclusion.

5. Developmental and humanitarian actors could collect data more widely and consistently around multiple social differences. In particular, data on class and ethnicity would benefit from improved and more robust metrics or proxy indicators that avoid the possibility of bias.
6. A sufficient volume of data within a specific localised case, such as an individual community or settlement, should be collected to allow for intersectional analysis. This could, where possible, be backed up by a rich narrative to give a deep understanding of context within which socio-spatial differences arise. In other words, a recognition of situated specificity is important. This could provide useful, practical insights for practitioners inside and outside government for reducing water insecurity amongst refugees.
7. Great potential could exist for developing effective working models that seek to ensure fair access to water, and water security, through the practical applications of the principles of intersectionality. This would include a recognition of robust and reliable indicators, collected across agencies and government, that can be effectively compared and integrated and used for monitoring, evaluation, learning and ultimately decision-making.

8.3. Implications for theory

The generation of knowledge around the case led to the identification of new concepts not captured within the original theoretical modal. Analysis of data revealed that the role of contextual livelihood strategies is likely to be more significant than anticipated, and that informal elements of these strategies should also be captured. The role of civil society structures, particularly water user committees, in supporting data-gathering and decision-making, or the localisation of governance,

was seen as highly effective for water security planning. Finally, the role of the 'duty bearer', in the case of rights-based provision, was identified as important, but that this role could change or be shared between governmental and non-governmental organisations.

To reflect these important findings, a revised theoretical model has been presented in Figure 34 overleaf. Important changes have been highlighted and labeled in black.

Analysis of data collected during the research exercise suggested that examining social differences in isolation or together may still be insufficient for identifying risks to water security. Important factors are likely to include length of stay in the country, the cultural context from and through which households have travelled (including expectations around household roles) and the method of water provision used in a particular place. In other words, situated specificity, how historical and cultural contexts intersect with present lived experiences, appears to play a stronger role than was originally anticipated, necessitating consideration beyond mere socio-spatial difference (1). The consideration of household assets and capitals has been expanded to encompass the livelihood strategies and entitlement mapping strategies. Entitlement mapping, the relationship between endowments and entitlement, has a close conceptual relationship to refugees as rights holders, who claim their rights against duty-bearers. Such strategies may vary from household to household, and between urban and rural areas, and may be highly contextually dependent (2). As the model for understanding water security in Northern Uganda transitions towards a more developmental, utility-led, model, the role of NGOs and civil society in strengthening livelihoods strategies and entitlement mapping strategies arguably becomes more prominent (3), especially through their role in income-boosting, skills development and the facilitation of participation. The data revealed that water user committees and refugee associations, in both settlements and urban areas, play a critical role in connecting refugees to structures of governance.

Where government is considered to be the primary duty-bearer, the ability of refugees to claim rights could change and thus the role of these two institutions could become even more critical (4). In addition, water user committees have been revealed as essential sources of knowledge for NGOs and civil society of a whole, for livelihood strengthening and targeting needs (5). Despite the wide range of freedoms granted to refugees, the role of informal processes for claiming access to water should not be ignored (6) such as through ‘borrowing’ national ID numbers for gaining household water connections in urban areas.

8.4. Final conclusions

This study explored a range of concepts associated with intersectionality and developed a theoretical model to better understand how refugees in Northern Uganda can experience water security and insecurity. The data suggested merit in looking beyond gender towards other socio-spatial differences, at the same time, to better understand

systems of inclusion and exclusion. The study also pointed towards the vital importance of the historical and cultural context, as part of a rich narrative, for understanding the situated nature of inclusion and exclusion.

Intersectionality is primarily, at present, an academic pursuit and there are few examples of practical applications in the humanitarian and development sectors. Nevertheless, as these sectors overlap and integrate, as observed in the case, the need for new tools becomes more apparent.

Intersectionality is still some way from becoming a critical social theory with relevance for understanding and planning for water security. Nevertheless, this study points towards the potential for more useful models of reality that integrate this concept. Through additional theoretical development, and close alignment with the needs and objectives of humanitarian and development actors, there is every possibility that intersectionality could grow as a useful tool for helping to bring secure water access to everyone, everywhere.



Figure 33 : A young South Sudanese boy at the Uganda-Sudan border

Key theoretical domains

Intersectionality

Humanitarianism & Developmentalism

Livelihoods & Entitlements

Rights-based approaches

Water user committees are also an essential sources of knowledge for **strengthening livelihoods** and **meeting needs** in a targeted way

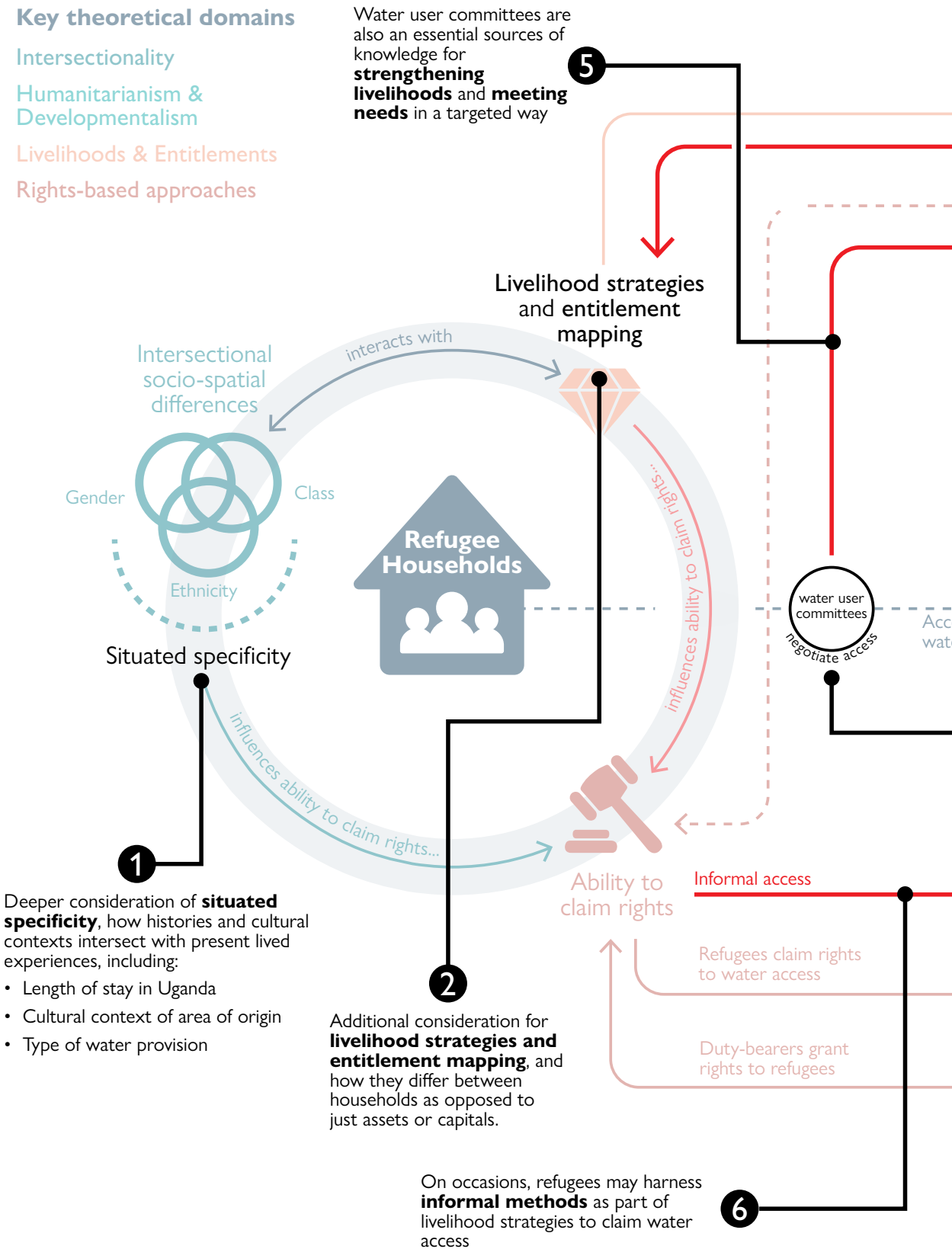
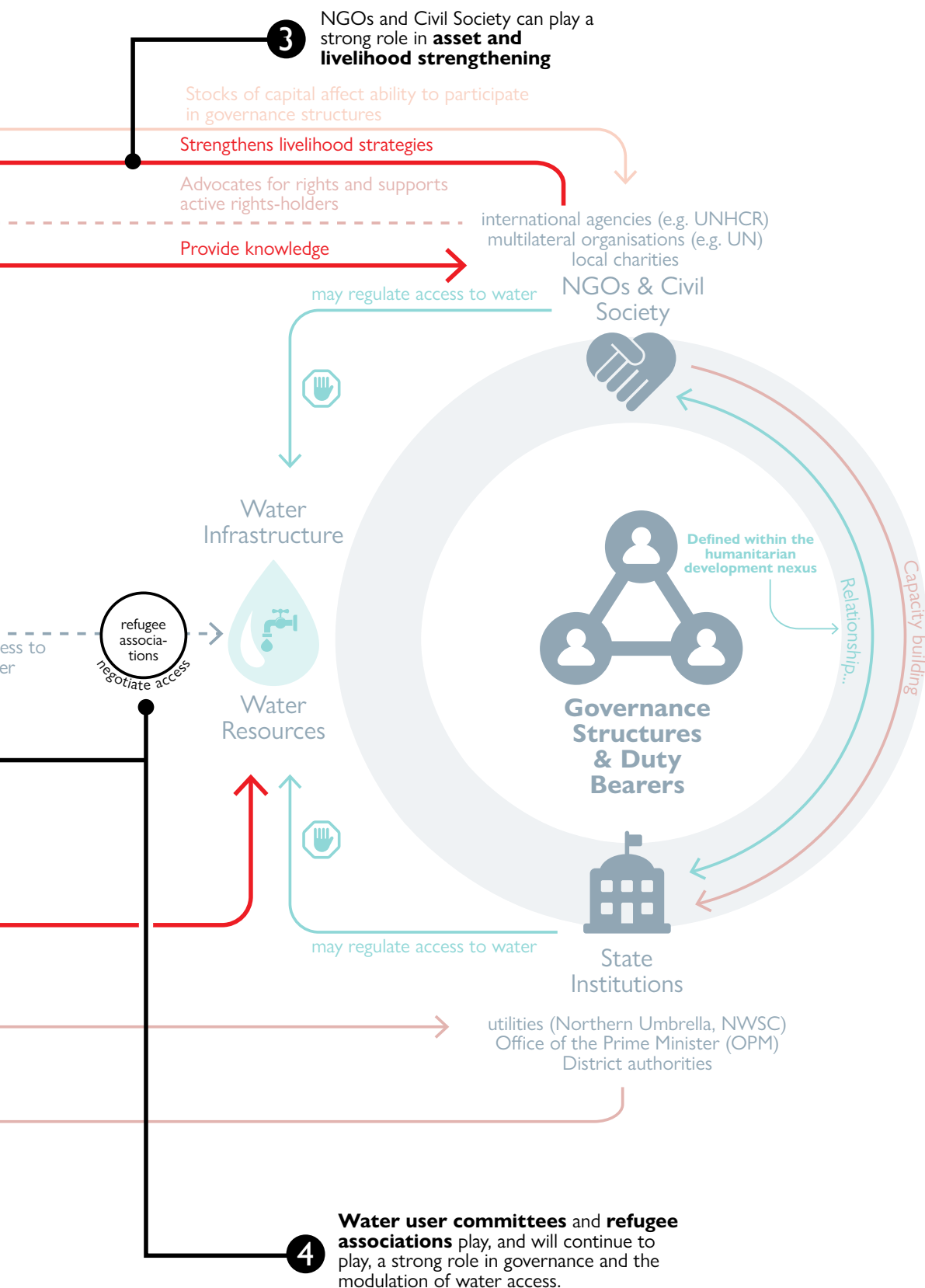


Figure 34 : Revised Theoretical Model



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10. Appendices

Appendix 1: Interview Guide

Interview Guide

Author: Hamish Hay

Master's Student in Urban Ecological Planning

Department of Architecture and Planning,

Faculty of Architecture, NTNU

Sentralbygg 1 Gløshaugen,

Alfred Getz vei 3, 7034, Trondheim, Norway

The objectives of this interview (private)

- Consider KAP model – knowledge, attitudes, practice – in terms of application of intersectionality to WASH
- To give a basic explanation of the concept of intersectionality
- To understand the role of the interviewee in relation to WASH and refugees
- To understand the extent to which elements of intersectionality are considered in project planning.
- The extent to which they feel elements of intersectionality contribute to WASH security and insecurity

1. Background Information

- Date
- Organisation
- Position
- Gender
- Observations

2. Objectives

The objective of this interview is to understand whether social differences amongst refugees (gender, income and ethnicity), when considered together and at the same time, can contribute to security or insecurity in terms of water, sanitation and hygiene. I'm a water engineer with experience of development work, and have always been excited (but at times frustrated) at how safe water, sanitation and hygiene can transform people's lives by allowing them to pursue education and employment, for example. It can be especially empowering for marginalised or oppressed societies or individuals in societies. I'm currently pursuing another degree in Urban Ecological Planning and have gained a broader insight into human ecology, including a focus on development and migration.

For this study, I'm particularly interested in how such social differences interact with forms of service delivery in different areas where refugees lives – such as camps, settlement and urban

areas, how such differences are considered in project planning, and how they interact with the process of claiming rights and entitlements. I want to do this to understand if the lens of intersectionality is a valid and useful one for designing projects and programmes, especially where the social assets of recipient may be absent, divergent or changing, as can be the case amongst refugees.

Would you be happy for me to record and transcribe this interview?

I may wish to use short clips of this discussion as part of a video presentation at the end of my Thesis. Would you be happy for me to do this?

I've been reading up on your organisation – **summarise my existing understanding.**

3. Introduction

- What is your position in your organisation, and could you describe your role?
- What previous roles have you occupied?
 - Has his role included direct or indirect engagement with refugees, or those forcibly displaced? Had it related to refugees in settlements, urban areas, or in both?

4. Intersectionality and WASH

Practice – how you and your organisation consider gender, ethnicity and income in WASH service provision at a practical level in terms of projects, programmes and ways of working.

- Could you describe your service delivery model for delivering WASH services?
- Do different groups or individuals have different levels of access to WASH? In which ways? Can you give examples?
- After carrying out a WASH service delivery scheme, what monitoring and evaluation processes do you have in place?
- When planning WASH service provision, does your organisation consider gender in how this is carried out?
 - If so, how?
 - Are gender specific issues captured in processes of monitoring and evaluation?
- When planning WASH service provision, does your organisation consider ethnicity or country of origin in how this is carried out?
 - If so, how?
 - Are ethnicity or specific issues of nationality captured in processes of monitoring and evaluation?

- When planning WASH service provision, does your organisation consider the income, assets or class of individuals in how this is carried out?
 - If so, how?
 - Are ethnicity or specific issues of nationality captured in processes of monitoring and evaluation?
- Are there other social differences that can lead to differentiated access to WASH?
- Are you aware of policies and procedures, at an organisational level or otherwise, that address gender, ethnicity and income-based differences?
- Do you think your organisation has changed in the last five years in how it considers gender, ethnicity and class? If so, how?
- Does your organisation work with other stakeholders in the consideration of gender ethnicity and class? If so, how? Can you give an example?

Knowledge – the extent to which you, and your organisation, hold knowledge about theory and methods for considering WASH service provision alongside gender, ethnicity and income

- Are you familiar with any industry best practice in how to consider gender, ethnicity and income in WASH service planning, delivery, and monitoring?

Attitudes – attitudes of you and your organisations towards gender, ethnicity and income in WASH. Whether you feel it is important. How you feel it could or should be addressed. Reflections on attitudes more widely within the sector.

- Do you think that considering ethnicity, gender and income has relevance for the WASH sector? Why? Could you explain in more detail?
 - What barriers do you think exist for collecting this data? Why does this data not exist?
- What do think data on gender, income etc would **add** to WASH service provision? What would it change? (is it important for them or not)
- What is your opinion of the effectiveness how your organisation considers gender, ethnicity and income in WASH service delivery?
- Through the service delivery models that you utilise, do you think there are *incentives* for considering these social differences?
- Are there other barriers to considering gender, ethnicity and income in the WASH sector? Consider economic, social, technical, political and legal aspects.

- Which service delivery model(s) do you think are best for considering such social differences?

Closing questions

- Do you have any questions for me following this conversation?
- Do you have any data that could be useful?
- Are there other people you would recommend speaking to for this study?

Appendix 2: Interview Consent Form

Norwegian University of Science and Technology
Faculty of Architecture
Department of Architecture and Planning

Researcher: Hamish Hay (hamishh@stud.ntnu.no)
Supervisor: Rolee Aranya (rolee.aranya@ntnu.no)
Co-supervisor: Mrudhula Koshy (Mrudhula.Koshy@ntnu.no)

Research Consent Form

To whom it may concern,

I have invited you to take part in an interview as part of a research project in support of my Master's Thesis. The primary objective of the study is to understand whether **intersectionality is a valid lens of analysis for understanding the security of water, sanitation, and hygiene (WASH) services for refugees** with a focus on protracted forced displacement in Uganda. By **intersectionality** I consider the social differences of gender, race and income level, and how they interact together and with material differences in access to WASH services.

The purpose and form of the interview

The purpose of this interview will be to understanding how you, and the organisation that you represent if applicable, consider such social differences as part of your role in WASH service delivery. Such an understanding will be built on the principles of knowledge, attitudes, and practice. I would also like the opportunity to explore your personal views on whether such a concept could offer insights for WASH service delivery methods.

The interview will last a maximum of **45 minutes**, with a loose series of questions but with ample opportunities for us to pursue lines of inquiry that interest us both.

The information gained in the interview will be used to support the analysis as part of my master's thesis.

Your personal privacy

We will only use your personal data for the purpose of supporting the production of my master's thesis. I will process your personal data confidentially and in accordance with data protection legislation (the General Data Protection Regulation and Personal Data Act). In addition:

- The information given by you will be accessed only by me and my project supervisors.
- I will replace your name and contact details with a *code*. A list of names, contact details and respective codes will be stored separately from the rest of the collected data on an **encrypted online drive**, only accessible by myself.
- Unless explicitly permitted by yourself, your personal details will not be recognised in any publication produced as part of my thesis.
- The collected data will be fully anonymised at the end of the research project, expected to be **10th June 2021**.
- By default, interviews will not be recorded. However, I will ask you whether you will be happy for the interview to be recorded at the beginning. You have the right to withdraw this permission at any time during or after the interview.

Your consent

I have read and understood the information in this letter. I consent to participate in an interview. I also give consent for my personal data to be processed until the end date of the project.

SIGNATURE	DATE
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Appendix 3:

Additional Quantitative Data

World Bank Household Survey

Gender and water

As shown in Figure 35, women on average spend less time accessing their primary water source than men. A slightly higher proportion of men appear to spend longer (20-30 minutes) accessing their primary source of water. However, the trend in the data is relatively weak.

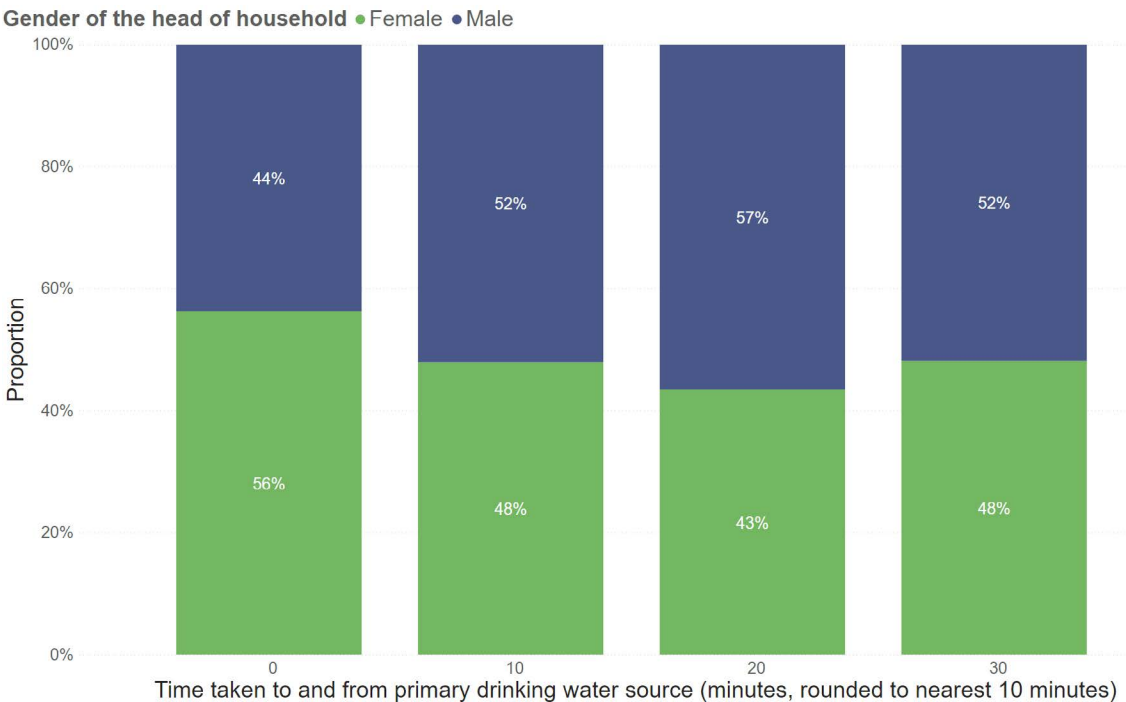


Figure 35 : Gender and time taken to primary drinking water source

Class and water

Figure 36 indicates a mixed relationship between the gender of the head of the household and the estimated total value of assets, without a clear trend being demonstrated.

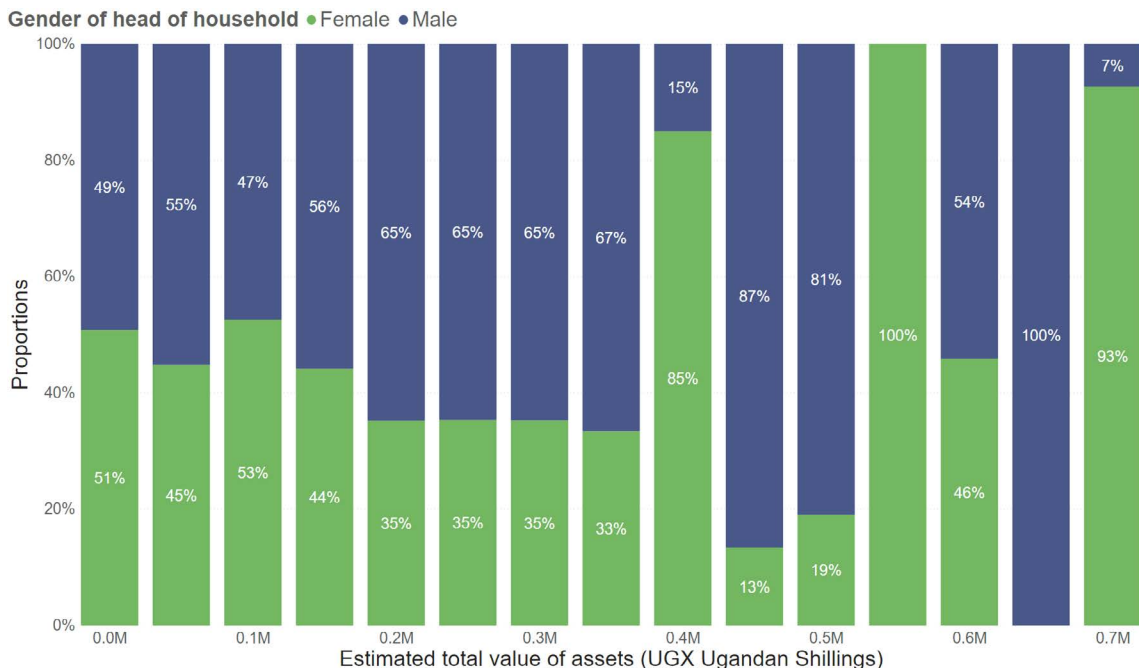


Figure 36 : Gender and estimated total value of assets

Joint Multi-Sector Needs Analysis

Gender and water

The proportion of male and female-headed households taking: under 30 minutes; 30 minutes to 1 hour ; or over one hour to and from their primary drinking water source, is shown in Figure 37. It shows little evidence of gendered effects, with almost equal proportions of male and female respondents for each category.

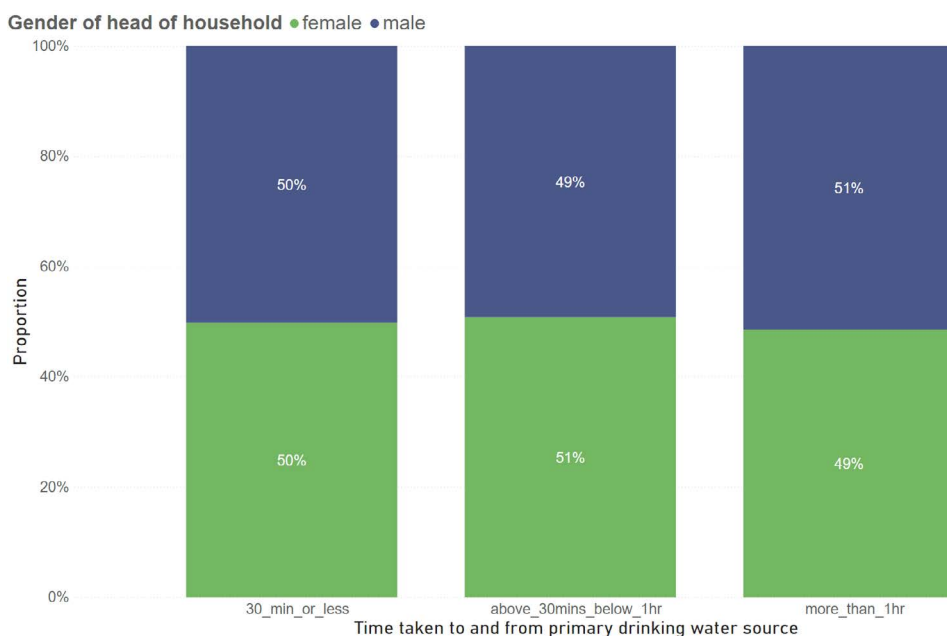


Figure 37 : Gender and time taken to and from primary drinking water source

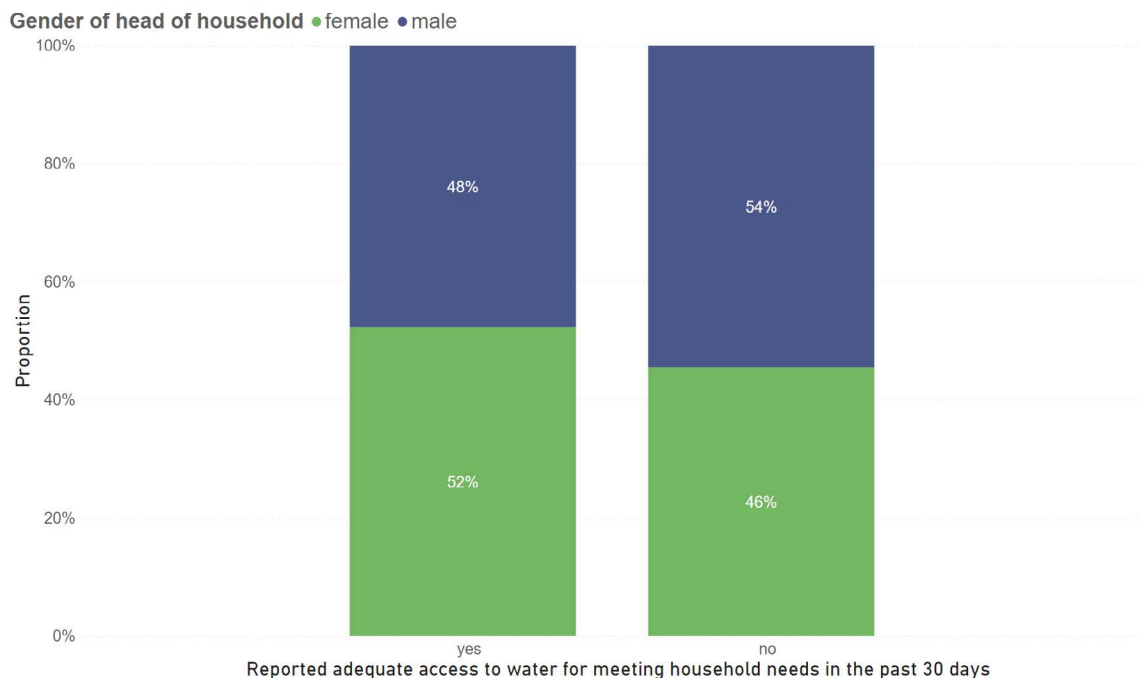


Figure 38 : Adequacy of access to water in the past 30 days

As shown in Figure 38, there is a weak relationship between the reported adequacy of water access and gender of the head of the household, with men slightly more likely to report not having adequate access to water.

Perception of adequacy

Furthermore, the perception of adequacy can change depending on the context. Harris et al. (2016) demonstrates, as discussed in the *Theory* section, that perceived indicators of water access are contextual. Thus, if women-headed households collected water more often than men but live in a context where such an observed effect is normal, such a situation could still be judged as ‘adequate’. Men collecting water at the same frequency could, for example, see such a situation as ‘inadequate’. Thus, some gendered effects could be hidden in survey data where the respondent is asked for their subjective opinion.

Class and water

The relationship between class and indicators of water security was also analysed, in a similar way to the relationship between gender and water security. Figure 39 appears to reveal no clear relationship between class and time taken to and from the primary drinking water source. Figure 40 on page 116 reveals that, of those who collect water just one day a week, the majority are high class. However, no clear trend was observed for the rest of the data. Therefore, these graphs have been excluded from the main analysis.

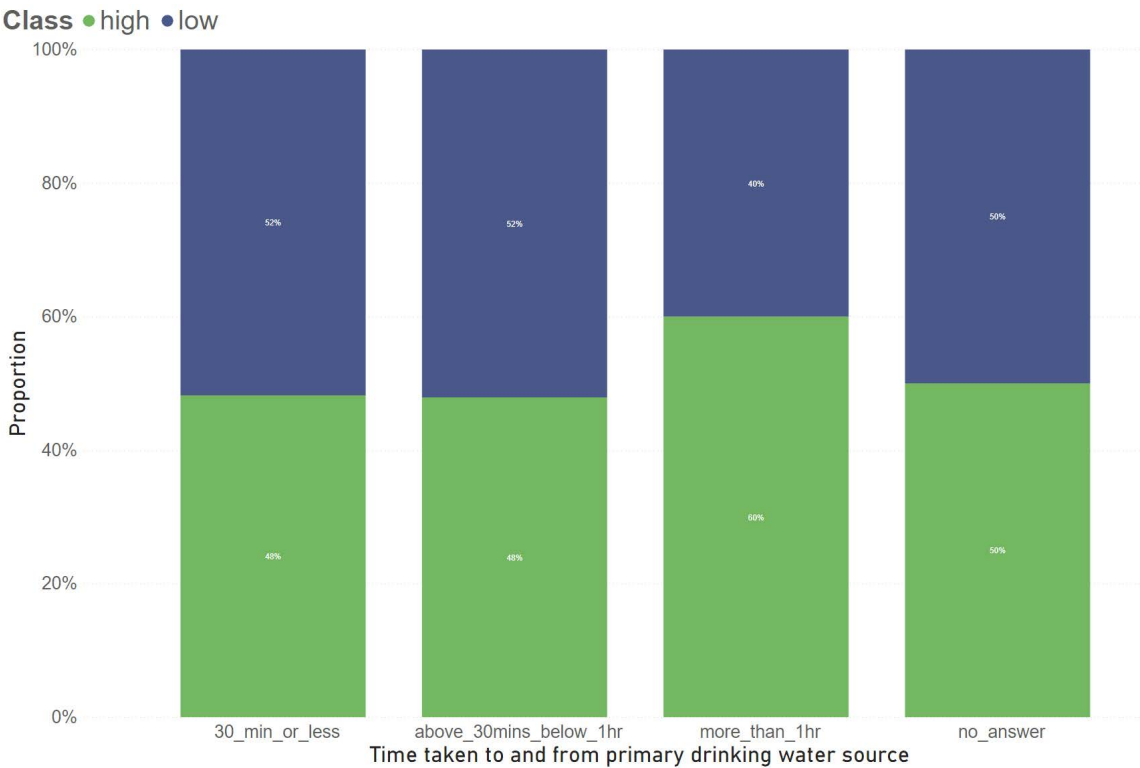


Figure 39 : Class and time taken to and from primary drinking water source

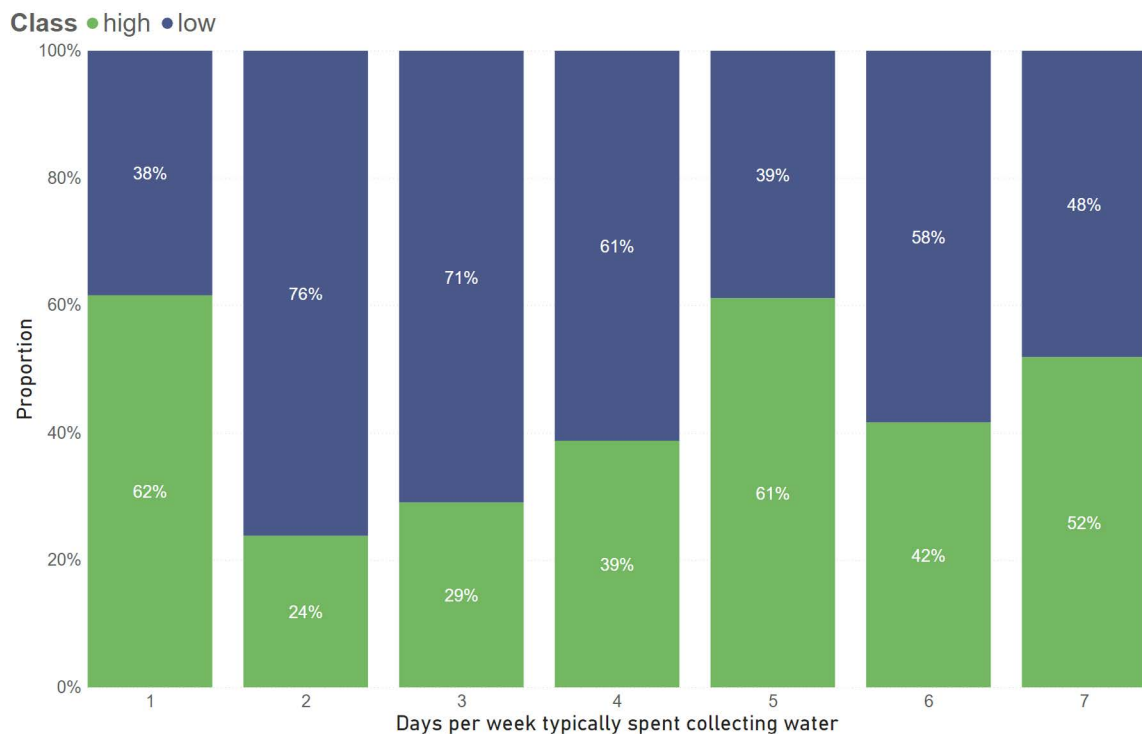


Figure 40 : Class and time taken to and from primary drinking water source

Data indicators used

World Bank Household Survey

Household identifier - **hh**

The time taken to and from the primary water source of drinking water - **HC08**

The time typically spent waiting at the primary source of drinking water - **HC08b**

The type of main drinking water source - **HC07**

The estimated total value of assets - **HA06**

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Whether the respondent considered that they had 'adequate' access to water for meeting household needs over the past 30 days - **V99 adequate_water**

The typical amount of time spent collecting water from the main water point - **V117 water_collection time**

The number of days per week typically spent per week collecting water by a member of the household - **V119 collect_water**

The type of shelter - **V325**

Links to full datasets

The links below provide access to the full datasets used for analysis. Please note that permission may need to be requested from the World Bank or UNHCR to access these datasets, with an appropriate reason given.

World Bank Household Survey

<https://microdata.worldbank.org/index.php/catalog/3867>

Joint Multi-Sector Needs Assessment

<https://microdata.unhcr.org/index.php/catalog/229>

