

Nordic Interventions in African Sustainable Water Development: Addressing
Participation Deficits as a Primary Success Factor

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

Aligning with the beginning of a new sustainable development paradigm in 2000 and the introduction of the United Nations Sustainable Development Goals (SDGs) in 2015, the international community has developed more collaborative and innovative approaches for solving sustainable water development challenges. Unfortunately, most developed countries have not promoted sustainable development in least developed countries and have failed to produce effective and successful partnerships relating to SDG 6, centred on ensuring clean water and sanitation for all. Denmark and Sweden, however, are notable exceptions. Using the case studies of the Denmark-Uganda partnership and the Sweden-Mali partnership, in this thesis, I explore which sustainable water development partnership approaches and tools are most likely to help LDCs in Africa implement water accessibility and availability strategies, clean water and sanitation measures, and management (sustainable use) practices, according to the criteria set forth in SDG 6. Furthermore, I ask: Are partnerships between developed countries and LDCs which exhibit higher levels of participation amongst stakeholders, more likely to result in higher levels of water sustainability, as measured by the targets of SDG 6? Ultimately, I hypothesized that partnerships that exhibit higher levels of participation will result in higher levels of water sustainability, as measured by SDG 6 targets.

This thesis provides an overview of partnerships as a particularly helpful approach to fostering sustainable water development. I then discuss the different approaches taken by Nordic countries in achieving successful sustainable water development in least developed African countries. Comparing the Denmark-Uganda and Sweden-Mali partnerships, I observe that partnerships focused on prioritizing the participation of stakeholders - ensuring the participation of relevant actors in decision-making, problem-solving, and policy-making - are the most useful in advancing the agenda of SDG 6. Understanding how different approaches in partnerships can contribute to successful sustainable water development can provide a framework for developed countries and the broader international community to engage in partnerships with least developed countries designed to provide sustainable water development and implement the larger SDG framework.

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Table of Contents

List of Tables.....	vii
Chapter 1: Water Management in the New International Development Paradigm ..	1
Water: A Necessity for Life	3
An Introduction to Water Governance.....	5
A Brief History of the Transition to Global Sustainability Governance.....	8
The New Development Paradigm of the 21st Century	11
Chapter 2: Partnerships and the Advancement of the Sustainable Development	
Agenda	17
Partnerships and UN Promotion of Partnerships: Broad Context.....	18
The Challenges of Partnerships.....	22
Partnership Evaluation: What Makes a Partnership Successful?	26
The Application of Partnership Methodology in LDCs.....	28
Chapter 3: The Case Study of the Denmark-Uganda Partnership	30
Danish and Ugandan Development Plans/Strategies	31
Denmark and Uganda: Fruitful Partners for Sustainable Water Development.....	35
The JWESSP Initiative.....	38
JWESSP Results: Accessibility and Availability.....	41
JWESSP Results: Functionality	43
JWESSP Results: Water Quality.....	44
JWESSP Results: Household Sanitation and Hand-washing.....	45
Conclusion: Lessons Learned from the Denmark-Uganda Partnership.....	47
Chapter 4: The Case Study of the Sweden-Mali Partnership.....	53
Swedish Development Cooperation with Mali	54
Sweden: A Necessary Partner for Sustainable Water Development in Mali	57
The UNICEF Mali Initiative	58
Accessibility and the Distribution of Safe Water and Sanitation in Mali in 2015	63
Accessibility and the Distribution of Safe Water and Sanitation in Mali in 2016	65
Accessibility and the Distribution of Safe Water and Sanitation in Mali in 2017	68
Conclusion: Lessons Learned from the Sweden-Mali Partnership of Results	70
Chapter 5: The Centrality of Prioritizing Participation	73
The Differing Nordic Approaches to Sustainable Water Development.....	74
Successful Nordic Mechanisms used for Sustainable Water Development.....	78
A Framework for Future Sustainable Development Partnerships.....	85
References.....	89

List of Tables

Table 1.....	14
Table 2.....	33
Table 3.....	39
Table 4.....	40
Table 5.....	59
Table 6.....	61
Table 7.....	63
Table 8.....	65

List of Abbreviations

AFD = Agence Francaise de Developpement
BOD = Biochemical Oxygen Demand
CBO = Community Based Organization
CLTS = Community-Led Total Sanitation
CPI = Corruption Perception Index
CSO = Civil Society Organization
DANIDA = Danish International Development Agency
DHSCG = District Hygiene and Sanitation Conditional Grant
DHSP = Public Hygiene Division
DKK = Danish Krone
DNACPN = National Department of Sanitation and Pollution and Nuisance Control
DNH = National Water Resources Department
DNP = National Department of Education
DSCG = District Sanitation Conditional Grant
DWSDCG = District Water and Sanitation Development Conditional Grant
ECHO = Education Concerns for Hunger Organization
EU = European Union
GDP = Gross Domestic Product
GIZ = German Development Agency
GNI = Gross National Income
GPI = Genuine Progress Indicator
HDI = Human Development Index
HICs = Household Improvement Campaigns
IP = International Professional
IWRM = Integrated Water Resources Management
JWESSP = Joint Water and Environment Sector Support Programme
KfW = German Development Bank
LDC = Least Developed Country
MDGs = Millennium Development Goals
MF = Ministry of Finance
MPED = Ministry of Planning and Economic Development
MWE = Ministry of Water and the Environment
NDP I = Uganda National Development Plan
NDP II = Uganda Second National Development Plan
NGO = Non-Governmental Organization
NSPPHES = National Strategic Plan for the Promotion of Hygiene Education in Schools
NWSC = National Water and Sewerage Corporation
ODF = Open Defecation Free
PRDPG = Peace, Recovery, and Development Programme Grant
PROSEA = Malian Sectoral Programme for Water and Sanitation
SAM = Severe Acute Malnutrition
SDGs = Sustainable Development Goals
SEK = Swedish Krona
SIDA = Swedish International Development Cooperation Agency

SWA = Sanitation and Water for All
TSS = Total Suspended Solids
UGX = Ugandan Shilling
UN = United Nations
UNDP = United Nations Development Programme
UNICEF = United Nations International Children's Emergency Fund
UOs = Umbrella Organization
USAID = United States Agency for International Development
USD = United States Dollar
WASH = Water, Sanitation, and Hygiene
WASHFIT = Water and Sanitation for Health Facility Improvement Tool
WfP = Water for Production
WFP = World Food Programme
WHO = World Health Organization
WSDFs = Water and Sanitation Development Facilities
WSSD = World Summit on Sustainable Development

Chapter 1: Water Management in the New International Development Paradigm

Solving the global water management crisis is a valuable component of sustainable development. More specifically, developing innovative techniques to assist with global sustainable water development remains at the forefront of accomplishing the sustainable development agenda outlined by the United Nations Sustainable Development Goals (SDGs). Of the several innovative approaches developed by various stakeholders for sustainable development, creating partnerships between international actors continues to be celebrated. However, the lack of leadership displayed by developed countries to assist Least Developed Countries (LDCs), remains a significant barrier in fostering revolutionary developmental changes. Although the lack of leadership exhibited by developed countries continues to be a barrier towards global sustainable development, some developed countries are taking the initiative towards ensuring sustainability for current and future generations. Denmark and Sweden have out-performed many other industrialized nations in the realm of sustainable development and have displayed the necessary political will to undertake and foster partnerships with LDCs in Africa to accomplish Goal #6 – clean water and sanitation for all - of the SDGs.

Denmark and Sweden have founded unique partnerships - Denmark with Uganda and Sweden with Mali – and there are stark differences between the two partnerships. Although both partnerships have accelerated sustainable water development and improved the likelihood of meeting the objectives of SDG 6, the methods and indicators they used have differed. In this thesis, I explore which partnership approaches and tools are most likely to help LDCs in Africa implement water accessibility and availability strategies, clean water and sanitation measures, and management (sustainable use)

practices, according to the criteria set forth in SDG 6. Specifically, I ask: are partnerships between developed countries and LDCs, which exhibit higher levels of participation amongst stakeholders, more likely to result in higher levels of water sustainability, as measured by the targets of SDG 6? Ultimately, I hypothesized that partnerships between developed countries and LDCs aimed at water sustainability that prioritize the participation of relevant stakeholders will be more successful than partnerships that prioritize implementation over participation. This was confirmed in the analysis that follows. Although Sweden displayed the leadership necessary to effectively encourage the proper management of water in Mali, the Sweden-Mali partnership did not prioritize participation and was therefore less successful than the Denmark-Uganda partnership in contributing to sustainable water development.

This thesis uses a comparative case methodology with a most similar case design. My original intent for the project was to assess multiple partnerships between Nordic countries (these include Denmark, Sweden, Finland, Norway, and Iceland) and sub-Saharan African LDCs. However, there was a small pool of cases that had data in English: a partnership between Denmark and Uganda, and one between Sweden and Mali.

Denmark and Sweden are similar in that they are the leading Nordic donors in both of their respective partnerships, and are performing the best in regards to accomplishing the SDGs and fostering sustainable development opportunities (Kroll, 2015). As for their respective partners, Uganda and Mali, while there are significant differences between these cases (I elaborate on this point in the case analysis chapters),

both are among the lowest development performers in the world, specifically in sustainable water development.

Primarily, I followed qualitative research methods and operationalized the partnership comparisons through the application of literature and the development of partnership mechanisms. Participation was measured by the amount of collaboration between development partners, specifically the role of Community-Based Organizations (CBOs), Civil Society Organizations (CSOs) and Non-Governmental Organizations (NGOs) in encouraging the involvement of all water users.

To understand the complexity of water, water governance, and global sustainable water initiatives, this introduction will discuss how water is important to all facets of life on Earth, the benefits and challenges of water management, and the similarities and differences in water policy of the last half century, including relevant concepts of global water sustainability. Also, the introductory section will consist of a brief history of key international arrangements and conferences that played a significant role in raising awareness for proper water management and shaping future sustainable development, along with focusing on the two major development ideas put forth by the UN - the Millennium Development Goals (MDGs) and the SDGs - and the importance of achieving the aims of SDG 6.

Water: A Necessity for Life

Water is essential for all life on Earth as it plays a critical role in the functionality, preservation, and productivity of all ecosystems on the planet (Savenije, 2002; Fallkenmark & Rockström, 2004, Scanlon, Cassar & Nemes, 2004). Ecologically, water

has a crucial responsibility in ensuring the success of ecosystems including maintaining biodiversity, food webs, and overall homeostatic conditions (Grey et al., 2013). Additionally, careless water management can lead to the pollution of water resources, the spread of invasive species in ecosystems, and the prevalence of harmful water-borne bacteria (Gleick, 1998). Correspondingly, water is a vital component in the preservation of human health, playing an active role in metabolism, it is used as a medium by the body for cellular transport and detoxification, and it is universally used in sanitation practices. Poor water management has direct human health implications as water-borne illnesses are the direct cause of millions of deaths worldwide (Gleick, 1998; Gleick, 2007, Neto, 2016) given that 4.5 billion people lack safely managed sanitation services, and 2.1 billion lack safely managed drinking water (WHO, 2017). In fact, as Peter Gleick emphasizes: “the failure to meet the most basic water requirements of billions of people has resulted in enormous human suffering and tragedy, and may be remembered as the 20th century’s greatest failure” (“The Human Right to Water”, 2007, p. 5).

Water-related risks continue to threaten cultures, economies, and societies (Grey et al., 2013). For instance, water holds great significance for many Indigenous peoples and cultures worldwide; economically, the poor management of water resources can have a severe impact on agricultural practices, fishing industries, and the productivity of major ecosystem services that enhance the prosperity of humanity. Moreover, water is recognized as both a common good, an economic commodity, and is influential in communal well being and economic development (Savenije, 2002; Gleick, 1998; Scanlon, Cassar, & Nemes, 2004; Neto, 2016; Hoekstra et al., 2017; Mugagga & Nabaasa, 2016). Furthermore, the mismanagement of water has damaged livelihoods and

communities, and has required developed countries, LDCs, and the international community to work together to solve the challenges associated with the mismanagement of water.

Due to the importance and complex nature of water, the proper management of water and natural resources continues to be a fundamental task for the international community. However, the mismanagement of water remains a challenging problem to solve for the international community and the lack of solutions pose a serious threat to current and future generations.

An Introduction to Water Governance

Comparing both the global North and South, there are significant differences in water management practices and perspectives on water governance (Grant et al., 2012): many LDCs lack comprehensive water quality standards (Gleick, 1998), proper accessibility to fresh water for citizens, and a lack of infrastructure/capital dedicated towards increasing sanitation measures and sustainable water usage. Recognizing these gaps, the central foci of international water governance have been to reduce poverty and enhance economic development (Gleick, 1998). However, many projects aimed at proper water management in the 20th century have ignored various environmental and social costs, such as ecological water requirements, the role of communities and cultures, and the sustainable use of water (Gleick, 1998). These failed initiatives have encouraged a change in the conventional development paradigm and water governance emphasizing the urgent need for sustainability.

Water governance of the 21st century has been shaped by the ideas of water scarcity and that water is a developmental, economic, and social need. Water scarcity has

spurred the advancement of two new concepts into 21st century water governance: water security and integrated water resources management (IWRM). The first concept, water security, is defined by the UN 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” (UN Institute for Water, Environment, and Health, 2013, p. vi). Water security has been an influential aspect of the emerging sustainable development paradigm and water management as the term emphasizes the need for participation amongst water users and focuses on water-related risks to the environment, economy, and society (Varaday et al., 2016). However, the idea of water security is often criticized because there is no reliable measure to distinguish between water secure and insecure; there has been a lack of conversation with vulnerable, less privileged populations; and water security aims have been difficult to translate into policy goals (Varaday et al., 2016).

The second concept, IWRM, building on the foundations of sustainability (Varaday et al., 2016) consists of three pillars: (1) economic efficiency; (2) environmental sustainability; and (3) social equity (Al-Saidi, 2017; Varaday et al., 2016). Internationally, the idea of IWRM has been presented in policy frameworks, such as the MDGs and SDGs. However, many UN member countries have been stagnant in implementing IWRM, likely due to the criticisms associated with IWRM; primarily the resistance of water vulnerable regions across the globe to implement IWRM practices, and the absence of significant results to solve unique communal, regional, or national issues (Neto, 2016). Most significantly, IWRM provides a holistic approach to governing water resources by engaging all water users in water management.

IWRM has been defined by *The Global Water Partnership* as “a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems” (Hassing et al., 2009). Additionally, IWRM encourages a participatory approach to water management by catalyzing coordinated action between basin, local, and national actors; the involvement of water users and interest groups represents a fundamental component to the outcome of IWRM (Hassing et al., 2009; IUCN, 2012). However, in order for IWRM to be successful, governments must be committed to the three pillars of IWRM and a bottom-up approach to water management: being receptive to water user involvement during problem-solving and decision-making opportunities promotes collaboration and inclusivity towards solving water management (IUCN, 2012).

Along with IWRM initiatives, water governance seeks to provide greater accessibility to and availability of water, better sanitation practices, and increased knowledge about the sustainable use of water. These three goals of water governance continue to garner support from actors across the global North and South and have contributed to the rise of the current development paradigm stressing sustainability and good governance. Simultaneously, the UN has demonstrated a concerted effort to improve environmental security through the better management of water resources and a more collaborative approach. Important concepts related to water governance were first introduced at the 1972 UN Conference on the Human Environment, initiating the transition from the previous development model to a new development paradigm focused on sustainability and environmental security.

A Brief History of the Transition to Global Sustainability Governance

The 1972 Stockholm Conference, the 1977 Mar del Plata UN Water Conference, the 1987 Brundtland Report, the 1992 Dublin Principles, and the 1992 UN Conference on Environment and Development, all signalled a monumental turning point for the global development agenda. The 1972 UN Conference on the Human Environment, also known as the Stockholm Conference, was the first major UN conference that focused on environmental insecurity. Some of the key assertions from the 1972 Stockholm Conference included recognizing the importance of the environment, the role of communities and societies in protecting the environment, and the interconnected nature of environmental problems with development issues (UN, 1972). The Stockholm Conference was also the first conference that focused on human interactions with the environment, and it played a major role in influencing global environment and development policy. In fact, the Stockholm Conference laid the groundwork for conceptualizing and transforming the traditional development model into a new, more innovative and participatory development paradigm.

Following the 1972 Stockholm Conference, the 1977 Mar del Plata UN Water Conference focused on the environment, with an emphasis on water. The major goals of the conference were to address water quality issues and water-planning strategies to limit the potential of a global water crisis (UN, 1977). The conference approved the Mar del Plata Action Plan, which stressed the need for a participatory approach to water governance and management (UN, 1977). The plan created recommendations covering several aspects of water management and developed 12 resolutions targeting important areas of water management such as the performance of water institutions, the relationship

between water and poverty, and water and sanitation measures (UN, 1977; Neto, 2016). The Mar del Plata Water Conference was an important milestone for reinvigorating water governance as LDCs played a significant role in the discussion of proper water management. Having representation from both the global North and South resulted in a deepened understanding of the importance of proper water management, capacity building, and sustainability to the environment and development agenda.

The 1987 UN Report of the World Commission on Environment and Development, also known as the Brundtland Report, continued on the trend of highlighting the importance of a more collaborative approach to managing the environment. The Brundtland Report represented a global agenda for change, including defining sustainability and the creation of a preliminary developmental framework. The Brundtland Report coined the definition of sustainability as “ensuring the needs of the present without compromising the ability of future generations to meet their own needs” (UN, 1987). Furthermore, one of the main components of the report was to increase cooperation between developed countries and LDCs and collaboration between member countries and other international organizations, while understanding the differences between developed countries, LDCs, and other international actors in addressing the environment the sustainability agenda (UN, 1987). However, it was not until the 1992 Dublin Statement for sustainable water management to be the focal point at a major international convention.

The 1992 Dublin Statement on Water and Sustainable Development was the first global discussion that focused on sustainable water management. This convention set out four defining principles, known as the 1992 Dublin Principles which stated that: (1) fresh

water is an essential, yet vulnerable resource; (2) a participatory approach is needed for effective water development and management; (3) women play an extremely important role in water management; and (4) water should be considered an economic good (UN, 1992a). The 1992 Dublin Principles were influential in understanding the need for global sustainable water development, and highlighted the importance of a participatory approach in realizing global sustainable water development.

Following the 1992 Dublin Statement on Water and Sustainable Development, the 1992 UN Conference on Environment and Development continued to pursue the idea of sustainability as a key component in building and promoting international environmental policy. The main component of the 1992 UN Conference on Environment and Development was the redirection of global participation towards alleviating the effects of inequality and climate change, and understanding the role of business and industry, along with the scientific community, to achieve the sustainability agenda (UN, 1992b). Building on the premises of General Assembly resolution 44/228, the UN Conference on Environment and Development was shaped to recognize the need to create a more balanced, integrated approach to achieving sustainable development.

The highlighted global conventions - the 1972 Stockholm Conference, 1977 Mar del Plata UN Water Conference, 1987 Brundtland Report, 1992 Dublin Principles, and the 1992 UN Conference on Environment and Development - helped transform the traditional development paradigm: sustainability was to be incorporated into developing policy where environment issues, the management of water resources, and alleviating poverty through a participatory approach, are central foci. While these conferences marked the beginning of thinking sustainably, generating goals and objectives for the

international community to strive towards, including ensuring the proper management of water, posed a difficult task. However in 2000, the UN developed a more comprehensive development framework to solve the challenges of climate change and inequality, including the mismanagement of water, called the MDGs.

The New Development Paradigm of the 21st Century

The first step in the ground-breaking development agenda put forth by the UN was the adoption of an eight objective framework in 2000 called the MDGs (Loewe, 2012). The main objective of the MDGs was to lessen the effects of poverty and inequality of vulnerable regions and individuals (Loewe, 2012). They included a set of eight goals: (1) to eradicate extreme poverty and hunger, (2) to achieve universal primary education, (3) to promote gender equality and women empowerment, (4) to reduce child mortality, (5) to improve maternal health, (6) to combat HIV/AIDS, Malaria and other diseases, (7) to ensure environmental sustainability, and (8) to develop a global partnership for development (UNDP, 2000). The framework provided an initial response to the lack of sustainable development initiatives taking place worldwide by encouraging a participatory approach to developmental needs. The MDGs provided solutions aimed at alleviating poverty by recognizing the multi-dimensional aspect of poverty - rather than just a lack of income - and pursued goals aimed at human development. The other notable strength of the MDG framework was that the MDGs provided a clear, easily understood, and manageable set of objectives focusing primarily on LDCs.

However, the MDG framework was limited in that it had unambitious deadlines for implementing its objectives (Filho et al. 2018). The all-encompassing target achievement date of the MDGs was 2015, but the MDGs did not provide specific

deadlines for specific goals. The framework primarily focused on poverty reduction and protecting the environment, which resulted in other relevant categories such as good governance and peace and security strategies being intertwined with other goals instead of having goals directly addressing those areas. Due to this reason, the MDGs were perceived to be an incomplete agenda (Loewe, 2012). Additionally, the MDGs measured outputs and inputs rather than outcomes and impacts of development, making it difficult to measure the success of certain objectives. But the biggest failure of the MDGs was that they did not constitute truly global goals (Clémentçon, 2012): obligations to meet the objectives of the MDGs were ultimately put on LDCs (Loewe, 2012). These limitations aside, the MDGs were a positive first step in creating global goals aimed at sustainability and a more collaborative approach to sustainability.

Building on the failures and successes of the MDGs, the UN developed a new comprehensive framework in 2015 consisting of 17 goals with time-sensitive objectives that focused on all areas of sustainability called the SDGs. Emphasizing sustainability as an international priority, the SDGs provide a framework addressing several of the most critical issues facing member countries such as climate change, political instability, and poor sustainable development practices. As part of the new development paradigm, the SDGs were informed by both the successes and failures of the MDGs. The primary focus of the SDGs is to shape development policy stressing the importance of a “universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity” (UNDP, 2015). Considering there are 17 objectives as part of the SDGs as compared to eight for the MDGs, the SDGs constitute a wider range of goals addressing key issues like people (poverty, education, and health), the planet (environment,

sustainable consumption and production, and management of natural resources), prosperity (economically, socially, and politically), peace (inclusivity, promotion of human rights, and justice), and partnership (all relevant stakeholders emphasizing collective actions) (Loewe, 2012; Kumar et al., 2016; UNDP, 2015), and offer more opportunities for sustainable development in various areas.

Another improvement of the SDGs from the MDGs is the global nature of the goals. The MDGs were focused on LDCs and required LDCs to take initiative. However, the SDGs have a more global context, where both LDCs and developed countries have the opportunity to enhance their standing towards bringing prosperity to current and future generations (Adeel, 2017; Loewe, 2012). Due to the multi-faceted nature of the SDGs, the most notable improvement from the MDGs is the interconnected nature of the SDG framework. In addition, the proper management of water has been given its own development goal, SDG 6: ensuring the availability and sustainable management of water and sanitation for all (UNDESA, 2015). SDG 6 – providing clean water and sanitation for all - is a particularly striking example of the inter-related nature of the SDGs, since achieving the objectives of SDG 6 will also help reach the objectives and targets of other SDGs including SDG 3 (good health and well-being), SDG 9 (industry, innovation, and infrastructure), and SDG 12 (responsible consumption and production) (Kumar, et al., 2016). Due to the importance of SDG 6 and the amount of interconnectedness between SDGs, SDG 6 is thus a foundational SDG (Adeel, 2017; Mugagga & Nabaasa, 2016; Ait-Kadi, 2016).

The sustainable use of water can be defined as “the use of water that supports the ability of human society to endure and flourish into the indefinite future without

undermining the integrity of the hydrological cycle or the ecological systems that depend on it” (Gleick, 1998). In terms of the sustainable management of water, SDG 6 set out eight targets that correspond with specific indicators (Table 1).

Table 1. Targets and indicators for SDG 6 (UNDESA, 2015).

Targets	Indicators
6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	6.1.1 Proportion of population using safely managed drinking water services
6.2 By 2030, achieve access to adequate and equitable hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	6.2.1 Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water
6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	6.3.1 Proportion of wastewater safely treated 6.3.2 Proportion of bodies of water with good ambient water quality
6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.4.1 Change in water-use efficiency over time 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources

<p>6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate</p>	<p>6.5.1 Degree of integrated water resources management implementation (0-100) 6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation</p>
<p>6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes</p>	<p>6.6.1 Change in the extent of water-related ecosystems over time</p>
<p>6.A By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies</p>	<p>6.A.1 Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan</p>
<p>6.B Support and strengthen the participation of local communities in improving water and sanitation management</p>	<p>6.B.1 Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management</p>

These targets and indicators are essential for monitoring the progress of countries in achieving and implementing the objectives of SDG 6, and were constructed based on the indicators used for MDG Target 7.C - established to “halve by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation” (UNDP, 2000) - that saw strong progress made in accessibility to improved water sources: from 76% of the world’s population in 1990 to 89% in 2010 (Thomson & Koehler, 2016).

Global sustainable water development measures have begun to increase across the globe with the help of the SDGs. By using the key concept of sustainability, the

international community hopes to develop long-term strategies emphasizing the need for more effective water policies and the decentralized and collaborative management of water. However, the lack of leadership by developed countries in establishing partnerships with LDCs continues to be an obstacle to meaningful progress in sustainable water development. In order to ensure proper water management, there is a need for developed countries to assist LDCs with sustainable water development by creating effective partnerships. Importantly, partnerships that facilitate the achievement of SDG 6 will have broad benefits for LDCs and their environments.

Chapter 2: Partnerships and the Advancement of the Sustainable Development Agenda

This chapter aims to understand the complexity and nature of partnerships, the idea of partnerships as a necessary tool for sustainable development, and how to create successful partnerships that contribute sustainable results to sustainable water development. It will include a broad understanding of partnerships, including a literature review and the promotion of partnerships for sustainable development by the UN. Accordingly, this section will address the challenges of partnerships, specifically highlighting the vagueness of the concept “partnership,” followed by a section identifying the difficulty in evaluating partnerships and how collaboration enhances the success of partnerships. The last section will build upon the broad understanding of partnerships and how this can be applied to LDCs, particularly in Africa.

Developed countries that have provided assistance to LDCs have typically used interventionist methods for development; however, with the emerging development paradigm, these outdated strategies are beginning to be replaced by strategies that are more collaborative, such as partnerships. The international community, including the UN, have advertised the importance of partnerships to the SDG framework. Indeed, SDG 17 focuses specifically on “strengthen[ing] the means of implementation and revitalizing the global partnership for sustainable development” (ECOSOC, 2017). Furthermore, the UN views partnerships as a necessary tool to accomplish the entire SDG framework, including SDG 6 and the global sustainable water development agenda (Stewart & Gray, 2009; Ait-Kadi, 2016; Varaday, 2016).

Partnerships and UN Promotion of Partnerships: Broad Context

The partnership literature has been characterized as being a “definitional and methodological nightmare” (Dowling, Powell, Glendinning, 2004). However, generally speaking, partnerships can help create integrative solutions aimed at implementing water accessibility and availability, clean water and sanitation, and sustainable management practices. A partnership is a style of operation initiated to reach shared and individual objectives that would otherwise not be accomplished without the partnership (Stewart & Gray, 2009). Outlined by several distinguished authors, partnerships are created for three main reasons: (1) to enhance the effectiveness of actors, (2) to provide collective decision-making and problem-solving, and (3) to promote good governance while advancing the objectives set out by the partnership (Glasbergen, Biermann, & Mol, 2007; Stewart & Gray, 2009). Predominantly, there are two broad types of partnerships: Type I and Type II (Stewart & Gray, 2009). In a Type I partnership, the specific arrangement is between two governments, whereas a Type II partnership, commonly referred to as a multi-stakeholder partnership, is a “collaboration between national or subnational governments, private sector actors, and civil society actors, who form voluntary agreements to meet specific sustainable development outcomes” (Dodds, 2015). The UN has defined multi-stakeholder partnerships as “specific commitments by various partners intended to contribute and reinforce the implementation of the outcomes of the intergovernmental negotiations of the World Summit on Sustainable Development and to help with the further implementation of Agenda 21 and other development frameworks” (UNDESA, 2003). While the UN provides a definition for multi-stakeholder partnerships,

it is important to note that not only are multi-stakeholder partnerships complex, they are also unique (Dodds, 2015).

Although no two multi-stakeholder partnerships are alike, the World Summit on Sustainable Development (WSSD), known as the Johannesburg Conference, developed a comprehensive criterion for Type II partnerships stressing a decentralized and participatory approach to sustainable development. However, the following year the UN bolstered the criteria developed at the WSSD to include several additional guidelines, such as providing clearer roles for actors in multi-stakeholder partnerships, recognizing all the dimensions of sustainable development, and how to address official development assistance with partnerships.

In 2003, the Bali Guiding Principles were developed to strengthen and replace the criteria for multi-stakeholder partnerships developed at the WSSD. These guidelines were based on Principle 10 of the 1992 Rio Declaration, which called for better environmental governance, and were created to assist member states in presenting partnership proposals to the UN. The Bali Guiding Principles called for partnerships to:

- (i) Be voluntary, self-organizing in nature, based on mutual respect, and have shared responsibilities between partners;
- (ii) Complement intergovernmental agreed upon outcomes and should not be intended to substitute official development assistance or existing arrangements between actors while being global in nature and focusing on capacity-building in LDCs;
- (iii) Integrate economic, environmental, and social dimensions of sustainable development into development projects while involving a variety of actors from different areas following a bottom-up approach;
- (iv) Be established and implemented in an open and transparent manner with the outcomes of the partnership being shared equally amongst all partners;
- (v) Should define its intended outcomes and have clear objectives with measurable targets and appropriate time-frames;
- (vi) Should indicate the available and expected sources of funding and be able to mobilize additional funding; and

- (vii) Should not be an extension of a pre-existing partnership while developing a follow-up approach for monitoring purposes (UNDESA, 2003).

However, these guidelines were never extensively implemented.

Along the same trajectory, other prominent authors of partnership literature have created similar frameworks to the Bali Guiding Principles for the purposes of creating partnerships. Although the UN and relevant literature have created several different criteria for multi-stakeholder partnerships to follow, broadly, weak multi-stakeholder partnerships are characterized by having poor dialogue, an insufficient exchange of ideas, and reduced information sharing (Stewart & Gray, 2009). On the contrary, strong multi-stakeholder partnerships are usually indicated by collective decision-making, multi-annual financial arrangements, and most importantly, strategies aimed at encouraging collaboration and inclusivity amongst all stakeholders (Stewart & Gray, 2009). Additionally, strong partnerships are characterized by having an exit strategy so that the partnership does not turn into a dependency (Feinstein, 2010). Although the criteria developed by the UN and other relevant partnership scholars are different, all of the frameworks that have been developed to assist in creating successful partnerships stress the importance of a collaborative approach, especially for partnerships aimed at sustainable development.

Collaboration is argued to enhance the capacity of actors to realize global sustainable development and plays a significant role in the determination of strong and weak partnerships. Collaboration is defined as “a process through which parties whose different aspects of a problem can explore constructively their differences and search for solutions that go beyond their own limited vision of what is possible” (Lasker et al., 2001). Creating a collaborative partnership results in a partnership where “the whole is

greater than the sum of its individual parts” (Lasker et al., 2001). Due to the participatory nature of multi-stakeholder partnerships, these partnerships are able to link local initiatives with national and global frameworks, and operationalize the dimensions of sustainable development with the realities of on-ground situations (Bäckstrand, 2006). Through collaboration, partnerships aim to: enhance their ability to address an important issue; receive more expertise, funding, and knowledge in a given area; gain a better appreciation for all stakeholders involved, especially local communities; strengthen capacity to meet the objectives of the partnership; improve the utilization of resources and knowledge; establish and develop new relationships; and chiefly, realize the opportunity to make a considerable contribution to the community, region, country, and global community (Lasker et al., 2001).

Collaboration, especially dialogue, is a crucial characteristic of multi-stakeholder partnerships: “dialogue is the foundation for finding consensus solutions, which integrate diverse views and generates the necessary commitment to implementation” (Hemmati, 2002, p. 7). Thus, dialogue in multi-stakeholder partnerships stresses the need for a participatory approach for implementation purposes. Furthermore, a collaborative approach has been highlighted through IWRM and soft path approaches to water governance: both of these ideas stress the importance of involving all water users, especially those users at the local level, to address water issues and effective strategies to govern water resources (Hassing et al., 2009; Pacific Institute, 2014). Although criteria have been developed in an attempt to structure successful partnerships, there still exist several challenges when establishing partnerships aimed at sustainable water development.

The Challenges of Partnerships

Although partnerships are the favoured approach by the UN and the international community towards advancing the sustainable development agenda, there remain challenges. The most difficult decisions for a partnership are how to address regulatory, implementation, and participation concerns and which urgencies should be prioritized. Partnerships are expected to address regulatory priorities by seeking to encourage additional opportunities for cooperation and collaboration where intergovernmental regulation is lacking (Biermann, 2007). Although addressing regulatory priorities has merit, addressing implementation and participation priorities are vital to the understanding of this project and play a fundamental role in the success of partnerships.

Like addressing regulatory priorities, partnerships are also expected to prioritize implementation: to reinforce the implementation of internationally agreed upon developmental frameworks and regulations (Biermann, 2007). Correspondingly, for partnerships to effectively prioritize implementation, they must:

- (1) Have the appropriate amount of capacity: financial and human resources;
- (2) Create additional and more efficient sources of funding;
- (3) Focus on improving policies rather than bureaucratic procedures; and
- (4) Implement projects in LDCs prioritizing the objectives of the SDGs (Biermann, 2007).

Although prioritizing implementation is seen as one of the foremost reasons for partnerships, many partnerships reinforce a “bureaucratic procedural model” rather than directly addressing implementation priorities.

Partnerships can also be expected to prioritize participation and ensure the proper representation and participation of relevant stakeholders, in particular the participation of

marginalized populations. For partnerships to successfully prioritize participation, they must:

- (1) Have a balanced distribution of lead partners from the global North and South;
- (2) Have a balanced distribution of partners from state and non-state actors; and
- (3) Include the participation of marginalized populations (Biermann, 2007).

Currently, there is no consensus from the international community as to what should be prioritized in partnerships: regulatory, implementation, or participation urgencies (Glasbergen, Biermann, & Mol, 2007; Stewart & Gray, 2009). Addressing all three components, primarily implementation and the participation priorities, at the same time and to the same degree have proven to be difficult for partnerships. Traditionally, partnerships have focused more on the implementation of strategies to meet the development agenda. However, the SDGs have noted the importance of prioritizing participation, especially in terms of global sustainable water development. Prioritizing participation in global sustainable water development is crucial, as many actors are needed to produce successful water management strategies. This is especially evident in sub-Saharan Africa as farmers, rural and urban residents, and women play a significant role in the management of natural resources.

There are several other challenges associated with partnerships. One challenge to the partnership model is creating rules and mechanisms for the purposes of addressing poor performance and inaction by partners (Stewart & Gray, 2009). Without these mechanisms in place, there are no parameters for constructively dealing with inaction towards addressing the objectives of the partnership. Another challenge to partnerships in sustainable development is the need to encourage collaboration between the global North and South. Correspondingly, building trustworthy and respectful partnerships is a time-

consuming task and can be difficult in diverse partnerships; where there are different actors with varying levels of experience and motivations (Lasker et al., 2001). However, these problems also exist in homogeneous partnerships where partners can provide the same amount of expertise/funding/knowledge and feel the need to compete with one another (Lasker et al, 2001). More significantly, one of the major challenges to partnerships is figuring out how to enhance collaboration with LDCs.

Pursuing collaborative partnerships with LDCs, allow LDCs the opportunity to advance necessary sustainable development measures to better the livelihoods of vulnerable populations in these countries. Prior attempts at initiating partnerships to encourage global sustainable water development between the global North and South have been counterproductive, largely due to inaction by developed countries. Significantly, discussions have arisen between LDCs and developed countries that urge developed countries to finance and help tackle issues related to water accessibility, quality, and sustainable management, but few arrangements have been executed. Notably, developed countries have maintained that to meet the objectives of the global sustainable development platform, there must be more investment from rich countries, further collaboration between the global North and South, and a bottom-up participatory approach to development challenges (Adeel, 2017; Cléménçon, 2012; Ait-Kadi, 2016).

Fostering partnerships between LDCs and developed countries requires developed countries to take on a leadership role and emphasize the importance of shifting away from an interventionist approach to a more participatory approach. National governments of developed countries must take a leadership role towards assembling partnerships by creating the environment in which partnerships can prosper, and continuing their

involvement in the sustainable water development agenda, even after the objectives of the partnership are accomplished. Although it is expected that developed countries initiate partnerships between LDCs, governments of the global North should play a less intrusive role in partnership development, shifting away from the traditional strategy of “direct intervention.” Instead, developed countries should focus on providing LDCs with strategies aimed to encourage a participatory approach for sustainable water development while providing increased awareness, expertise, and knowledge, rather than strictly capital; implying the need for further collaboration between international actors. Furthermore, the UN has played a chief role in facilitating action from developed countries in creating partnerships with LDCs, highlighting the importance of involving the global South in the sustainable development conversation.

Along with recognizing the importance of partnerships in facilitating, implementing, and accomplishing the SDGs, the UN has made involving LDCs in the discussions of addressing sustainable development a requirement; many LDCs are in regions most vulnerable to climate change, yet do not possess the infrastructure to support comprehensive and inclusive environmental/sustainable development policy. Due to the lack of infrastructure needed to support sustainable development, the UN has assisted the global South in playing a more robust role than they have in previous development models. Developed countries have welcomed LDCs into the discussion of sustainable development and partnerships, as highlighted by the UN Conference on Sustainable Development, where both LDCs and developed countries came together to develop strategies towards creating sustainable development. Additionally, at the UN Conference on Sustainable Development, developed countries reiterated their

commitments to encouraging and helping LDCs with sustainable development by agreeing to provide LDCs with:

regular and timely indicative information on planned support in the medium term... We consider that innovative financing mechanisms can make a positive contribution in assisting developing countries to mobilize additional resources for financing for development on a voluntary basis (UN, 2012).

With the international community and the UN focusing on building sustainable partnerships to accomplish the SDGs and support the overall sustainable development agenda, the idea of development cooperation continues to be an important approach for countries in providing aid and facilitating participatory approaches such as partnerships.

The UN has expressed the importance of international development cooperation in achieving sustainable development and building partnerships. According to the UN, development cooperation is a mechanism used by the international community to facilitate partnerships (Alonso & Glennie, 2015). Development cooperation can provide assistance in investment, support for policy-making, and increased knowledge of development objectives. Many countries have relied on using development cooperation as a way to create pluralistic and innovative approaches to sustainable development. The literature regarding partnerships and development cooperation generally focuses on donor-recipient relationships relating to mutuality, participation, sustainability and trust (Stewart & Gray, 2009). However, the role of partnerships in development cooperation involves inviting all relevant parties to the sustainable development discussion. Ultimately, development cooperation has proven a useful tool in building better relations between the global North and South, and can be used to drive and support sustainable water development initiatives and collaborative partnerships.

Partnership Evaluation: What Makes a Partnership Successful?

Evaluating partnership performance has proven to be a difficult task due to the ambiguity of assessment criteria. Partnership performance has been defined as “the extent to which a partnership realizes its potential in terms of establishing new relationships and producing new outputs” (Glasbergen, Biermann, & Mol, 2007). The partnership literature has conflicting ideas for whether to assess partnerships based on their processes or outputs (Dowling, Powell, and Glendinning, 2004). However, multi-stakeholder partnerships should not be evaluated purely based on processes or outputs, but rather “as a process and an output towards a social good” (Taylor, Nalamada, & Perez, 2017, p. 114). The assessment of partnerships should be considered through an evolving process: partnerships require trust-building, making it difficult for partnerships to be immediately successful. Furthermore, current literature states that the clarity of objectives, leadership type, and the participation of all relevant stakeholders are required attributes in assessing the success of partnerships (Beisheim, 2014; Glasbergen, Biermann, & Mol, 2007).

In terms of what makes a partnership successful, following the Bali Guiding Principles is the first step towards constructing an effective partnership assessment tool. Additional mechanisms that should be part of evaluating partnerships include whether or not the partnership outcomes contribute to sustainable results (meeting the objectives and targets of SDG 6), and the recognition that without the partnership sustainable water development would not be achieved. Ultimately, partnerships are about achieving results; the international community criticizes partnerships that do not accomplish objectives and targets. As partnerships get criticized for not meeting its desired objectives, the capacity for developed countries to assist LDCs diminishes. However, due to the vulnerability of the majority of LDCs to climate change, it is imperative that developed countries

continue to focus on creating partnerships and solving the issues associated with various partnership methodologies.

The Application of Partnership Methodology in LDCs

LDCs in Africa are some of the most vulnerable countries to climate change and the overall water crisis. Additionally, these countries have exhibited poor water management strategies due to corruption/poor governance and a lack of finances. Hence, partnerships with developed countries have been used as a solution to help these countries create and implement sustainable water management initiatives. As of July 2018, 375 commitments had been recorded for sustainable development in Africa with 25 of those commitments focusing on SDG 6 (UN, 2018b). Since the inception of the SDGs, there have been 300 documented initiatives aimed at achieving the different indicators of SDG 6 (UN, 2018a). However, although these initiatives are all aimed at accomplishing SDG 6, the existing partnerships differ drastically in terms of actors, issues, scope and the extent/nature of collaboration. Furthermore, attracting developed countries to partner with LDCs to encourage sustainable water management has been an exhausting task. Denmark and Sweden have exhibited a willingness to achieve the outcomes of the SDG framework, including SDG 6.

Most notably, Denmark and Sweden have been leading the way in terms of accomplishing the SDG framework, and have openly expressed hopes of achieving SDG 6 in particular. These Nordic countries have been celebrated as they have successfully implemented initiatives from the MDGs and SDGs within their own borders and have developed national policies emphasizing the MDGs and SDGs. Denmark and Sweden rank 3rd and 1st respectively across all dimensions of the SDG index, which tracks the

performance of 34 OECD countries based on the 17 SDGs and 34 indicators used in the study (Kroll, 2015). Based on this index, Denmark and Sweden are two of the best prepared countries to meet the objectives of the SDG framework (Kroll, 2015). Furthermore, Denmark and Sweden have established partnerships with LDCs in Africa - Uganda and Mali - to achieve the objectives of SDG 6. In the subsequent 2 chapters, by observing the different partnerships established by these Nordic countries, I will demonstrate how these partnerships differ in numerous ways, most importantly in terms of success and the strategies used by these partnerships to implement water accessibility and availability strategies, clean water and sanitation measures, and management (sustainable use) practices. Correspondingly, those partnerships, between developed countries and LDCs, which exhibit a greater intensity of collaboration/participation, are more likely to achieve the objectives of SDG 6. In the conclusion, I will discuss how prioritizing participation rather than implementation, can lead to more successful partnerships aimed at accomplishing the objectives of SDG 6.

Chapter 3: The Case Study of the Denmark-Uganda Partnership

Denmark has been involved in providing development assistance to LDCs for almost half a century, primarily by offering expertise, funding, and knowledge to initiate sustainable growth. This has resulted in Denmark being credited as a development frontrunner as shown by its standing on the SDG Index (3rd out of 34 developed countries) (Kroll, 2015). Denmark is a reputable partner for sustainable development as it boasts impressive scores on several internationally recognized indices: it had a score of 0.925 on the Human Development Index (HDI) in 2015 (UNDP, 2016), a GINI score of 28.5 in 2014 (World Bank Group, 2018), and a Genuine Progress Indicator (GPI) score of 1.34, ranking first on that index (Knoema, 2018a). These scores indicate that Denmark has great capacity for human development, income equality, and peacefulness therefore making them suitable partners for sustainable development. Not only do these scores illustrate the virtue of having Denmark as a partner for sustainable development, they also illustrate, along with Danish development cooperation strategies, why Denmark is an influential advocate of the SDGs. Prior to the creation of the SDG framework, Danish development cooperation had focused on reaching the targets outlined in the MDGs. Since 2016, Denmark has used the SDG framework to set out its priorities and interests for development cooperation, and it continues to pursue the targets of several SDGs including SDG 6.

The first section of the chapter will review Danish development cooperation strategies following the creation of the SDGs. The following section will discuss the two major development plans created by the Government of Uganda and their alignment with international development frameworks, and subsequently, how Denmark helped Uganda

achieve their desired results for sustainable water development. The remaining sections will review the results of the Denmark-Uganda partnership under the Joint Water and Environment Sector Support Programme (JWESSP) according to the key indices of accessibility, functionality, quality, and sanitation and hand-washing – all of which are important objectives of SDG 6 - and will evaluate the importance of prioritizing participation for effective sustainable water development.

Danish and Ugandan Development Plans/Strategies

Denmark has been one of only five countries to routinely meet the standard of using 0.7% of a country's Gross National Income (GNI) for development assistance (DANIDA, 2015). By meeting this standard, Denmark has been an influential provider of development cooperation. Denmark has also incorporated the SDGs into their development cooperation strategies. In 2016, Denmark's development cooperation strategy highlighted four priorities: (1) recognizing democracy, good governance, and human rights as fundamental attributes of sustainable societies, (2) reducing poverty, (3) encouraging women's rights (economically, politically, and socially), and (4) providing peace and stability in fragile states (DANIDA, 2015). Additionally, Danish development cooperation aimed to approach and influence LDCs to use the SDG framework to structure their own development strategies (DANIDA, 2015). Ultimately, through the Danish International Development Agency (DANIDA), Denmark provided approximately DKK 16.05 billion (\$2.37 billion USD) in development assistance in 2016 (DANIDA OpenAid, 2017).

The priorities for Danish development cooperation in 2017 continued to revolve around the SDG agenda: poverty reduction, gender equality, peace and security, and

economic growth in LDCs (DANIDA, 2016). In 2017, Denmark provided an estimated DKK 14.88 billion (\$2.4 billion USD) for development cooperation purposes (DANIDA OpenAid, 2018). The priorities and strategic focus areas of Danish development cooperation for 2018 were identical to those outlined in 2017, with Danish development assistance expected to total DKK 15.88 billion (\$2.63 billion USD) (DANIDA, 2017a). The introduction of the SDGs not only influenced the development strategies of Denmark, but has also played a significant role in shaping the development plans of Uganda.

With help from Denmark and other development partners, Uganda has made incredible strides towards successful sustainable development as part of the National Development Plan 2010/11-2014/15 (NDP I) and the NDP II 2015/16-2019/20. The previous and most current national development plans - NDP I and the NDP II - incorporated aspects of the MDGs and SDGs into its frameworks. Principally, Uganda focused on proper water management as the Ugandan government views proper water management as fundamental for sustainable development (Government of Uganda, 2015a). Through the NDP I, Uganda reached reputable water and sanitation sector targets including increasing the access to safe water in rural and urban communities to 65% and 77% respectively, having 65% of the overall population living within 1km of an improved water source, an 84% functionality rate of existing water sources, and 70% of the population having appropriate sanitation coverage (Government of Uganda, 2015a). Overall, the NDP I helped nearly 79% of the population have reasonable access to water and 19% of people have access to improved sanitation facilities (Government of Uganda, 2013a). The current development plan, the NDP II, has a 69% alignment rate with the

SDGs (DANIDA, 2017c), including boasting water-specific indicators and targets (Table 2).

Table 2. Indicators and targets outlined in the Uganda National Development Plan (NDP II) 2015-2020 (Government of Uganda, 2015a).

Indicator	Baseline	Targets				
	2012/13	2015/16	2016/17	2017/18	18/19	19/20
Household hand-washing with soap	24%	30%	32%	34%	36%	38%
Increase rural access to safe water supply	65%	72%	74%	76%	77%	79%
Increase urban access to safe water supply	77%	86%	90%	94%	97%	100%
Increase rural access to sanitation facilities	34.1%	43%	47%	52%	55%	60%
Increase urban access to sanitation facilities	32.8%	41%	45%	50%	53%	57%

Along with addressing the insufficiency of water accessibility and sanitation coverage, the NDP II aims to educate people on the importance of having safe water and sanitation facilities. Safe water coverage in urban centres stands at a respectable 77%, but only 6% have properly piped sewage, whereas the rest of the country requires on-site sanitation measures (Government of Uganda, 2015a). Recent construction projects have helped rural and urban communities reach a decent standing for safe water coverage (55%-60%) and have reduced travel times for women and children when collecting

water. However, many communities still lack critical infrastructure such as piped water and proper sanitation disposal (Government of Uganda, 2015a). Furthermore, the vast majority of households (92%) do not have access to clean water and soap and subsequently, proper hand-washing facilities (Government of Uganda, 2015a).

To mitigate the continuing issues in the water and sanitation sector in Uganda, the NDP II has two general themes: (a) to encourage and increase the sustainable use of natural resources and (b) to achieve equitable access to education and training for all (Government of Uganda, 2015a). Along those general themes, the NDP II has six core objectives:

- (1) Increasing access to a safe water supply for rural and urban communities;
 - (2) Increasing access to improved sanitation and hygiene services in rural and urban areas;
 - (3) Improving national capacity for IWRM;
 - (4) Improving the planning and regulation of water resources;
 - (5) Improving water assessment, information, and monitoring services; and
 - (6) Improving the protection of Uganda's interest in international waters
- (Government of Uganda, 2015a).

By following these paths of intervention, the Government of Uganda believes it can reach milestones of 79% of rural areas having access to safe water, 100% of urban areas having access to safe water, 100% of the population with access to safely piped water by 2020 (Government of Uganda, 2015a), and by 2040, 100% of Ugandans will have access to safe water (Government of Uganda, 2013a).

Although Uganda has reached milestones in the water and sanitation sector, the mismanagement of natural resources continues to dampen the efforts of the NDP II towards effective sustainable water development. Uganda has an abundance of water resources - one third of Uganda's surface area is water with a sizeable amount being renewable sources (43.3 billion m³/year) (Government of Uganda, 2013a) - yet the poor management of those water resources has resulted in a substantial difference between the accessibility and quality of water in urban and rural settings. Furthermore, water resources across the country face several challenges including the deterioration of water infrastructure from economic activities and population growth, negatively impacting the quality and quantity of water supplies (Government of Uganda, 2013a). Coupled with the high cost of innovative technologies, high inequality, lack of funding and prioritizing, population growth, and unreliable existing infrastructure and maintenance strategies, reaching the objectives for the water and sanitation sector in the NDP II will be difficult. However, as part of the *Uganda Vision 2040*, the Ugandan government plans on facilitating sustainability in the water and sanitation sector by building large water treatment facilities, constructing extensive piping systems for clean water and sanitation, supporting a bottom-up, more collaborative approach to water management, and supporting the recycling and reuse of water resources (Government of Uganda, 2013a). Denmark aims to help Uganda facilitate sustainable development in the water and sanitation sector by providing funding, expertise, and knowledge, and hopes to contribute to Uganda's principal goal of becoming a middle-income country by 2040.

Denmark and Uganda: Fruitful Partners for Sustainable Water Development

Although Uganda is a relatively stable country, conflict in the Northern part of the country and political instability, including political opposition and corruption, represent significant challenges. Additionally, 33% of Ugandans live below the poverty line and have inadequate educational, health, and sanitation services (DANIDA, 2017b). Uganda fares poorly on international development indices. It placed 163rd out of 188 countries on the HDI in 2015 (UNDP, 2016), 105th out of 188 countries on the GPI in 2017 (Knoema, 2018b), 151st out of 180 countries on the Corruption Perception Index (CPI) in 2017 (Transparency International, 2018), and scored 41.0 on the GINI in 2012 (World Bank Group, 2018). These scores demonstrate the challenges of inequality and corruption in Uganda's pursuit of becoming a middle-income country. Although Uganda has made positive progress in the water and environment sector, there are still issues with accessibility to safe water and sanitation.

Currently, 60% of the Ugandan population continues to lack basic sanitation and access to safe water (Government of Uganda, 2013a) and the inability to educate rural communities on the demand for improved sanitation services, insufficient and out-dated technologies, poor enforcement mechanisms, and poor prioritizing by local governments has resulted in poor sanitation coverage and the grounding of sustainable development in rural communities. Due to Denmark's past involvement in Uganda and their expertise in sustainable development, with the emergence of a new development paradigm, Denmark and Uganda have established a partnership seeking to: (1) contribute to poverty reduction, (2) promote democracy, gender equality, and human rights, and (3) support stabilizing Uganda and the East African Region (DANIDA, 2017b). One way Denmark hopes to reduce poverty is by helping Uganda properly manage its natural resources,

especially water, and create infrastructure and policies to enhance the sustainable development of water. To attain these goals, Denmark has insisted on strengthening their commitment to LDC development in Uganda, and the overall partnership has emphasized the importance of working with civil society organizations, multilateral organizations, private sector actors, research institutions, and other development partners.

Each development cooperation agenda recognized Uganda as a priority country to receive Danish development assistance in the climate change, energy, and natural resource management sectors, largely due to the country's vulnerability and susceptibility to climate change. The Danish-Ugandan partnership has existed for over 30 years with the overall aim of the partnership being:

to contribute to the continued development of a stable and democratic Uganda which through inclusive and sustainable growth improves the prospects for the population and brings the country closer to a status as a middle-income country, and which plays a stabilizing role in the region (DANIDA, 2017b, pp. 3).

Uganda is an influential actor in East Africa as it is part of a group of relatively stable countries that show the potential for significant economic growth. Unfortunately, Uganda continues to face many challenges on its way to becoming a middle-income country.

Attaining the goals of the Danish-Ugandan partnership and the overall aim of the Ugandan government - to become a middle-income country by 2040 - will be difficult due to numerous constraints on Ugandan development such as high corruption, inadequate human resources, insufficient revenue collection, limited government investment in strategic and emerging industries, slow accumulation of modern infrastructure, and weak public sector management (Government of Uganda, 2013a). Another significant challenge to Uganda towards becoming a middle-income country by

2040 is the mismanagement of water and the lack of sustainable measures to protect water. Furthermore, due to the interconnectedness of the water and sanitation sector with other sectors like education and health, improving water governance, water and sanitation infrastructure, and water management are essential for meeting the goals of the partnership and the overall Ugandan goal of becoming a middle-income country by 2040.

With the aim to overcome some of these significant barriers, the JWESSP was developed as the foremost initiative aimed at improving the water and sanitation sectors. Denmark, along with five other main development partners - Austria, Germany, the European Union (EU), African Development Bank, and the Food and Agriculture Organization, with France and the World Bank providing coordinated support - jointly initiated the JWESSP with the Ministry of Water and the Environment (MWE) as the implementing agency in 2008 (Government of Uganda, 2013b). With Denmark as one of the leading partners, the JWESSP has helped turn the water and sanitation sector into one of the best performing sectors in the country (Government of Uganda, 2013b), and has contributed a significant amount of capital, expertise, and knowledge to the initiative.

The JWESSP Initiative

The JWESSP consists of 11 indicators with Danish support rooted in indicators 1, 2, 3, 5, 7, 9, 10, and 11, focusing their involvement on rural water supply over sanitation (Table 3). For this project, I am looking at the indicators focused on measuring water accessibility and availability, clean water and sanitation, and sustainable use practices, therefore focusing on indicators 1, 2, 4.1, 4.2, 5, and 8. Even though sanitation and hand-washing did not receive primary Danish support, it is still a vital component of the JWESSP and the targets of SDG 6. A numerical overview of the results of the JWESSP

show that only four of the indicators used for this project saw a decrease from the beginning of the initiative until its completion (Table 4). The following sections will summarize the results from the table above, and provide some other notable achievements pertaining to the specific indicator.

Table 3. List of indicators for the JWESSP and those supported by Denmark (Government of Uganda, 2013b).

Golden Indicator	Danish Involvement
(1) Access: % of people within 1,000m (rural) and 200m (urban) of an improved water source.	Danish Primary Involvement
(2) Functionality: % of improved water sources that are functional at time of spot-check (rural/WfP). Ratio of actual hours of water supply to the required hours (small towns).	Danish Primary Involvement
(3) Per Capita Investment Cost: Average cost per beneficiary of new water and sanitation schemes (USD).	Danish Primary Involvement
(4.1) Household Sanitation: % of people with access to improved sanitation	Lacking Danish Involvement
(4.2) School Sanitation: Pupil to latrine/toilet stance ratio	Lacking Danish Involvement
(5) Water Quality: % of water samples taken at the point of water collection, waste discharge points that comply with national standards.	Danish Primary Involvement

(6) Cumulative Water for Production Storage Capacity (million m ³)	Lacking Danish Involvement
(7) Equity: Mean Sub-County deviation from the national average in persons per improved water point.	Danish Primary Involvement
(8) Hand-washing: % of people with access to (and using) hand-washing facilities.	Lacking Danish Involvement
(9) Management: % of water points with actively functioning Water & Sanitation Committees (rural/WfP)/Boards (urban).	Danish Primary Involvement
(10) Gender: % of Water User committees/Water Boards with women holding key positions.	Danish Primary Involvement
(11) Water Resource Management Compliance: % of water abstraction and discharge permits holders complying with permit conditions.	Danish Primary Involvement

Table 4. List of indicators and results used for reporting in this project (Government of Uganda, 2017).

Indicator			13/14	14/15 (target)	14/15	15/16	16/17 (target)	16/17
1	Accessibility	Rural	64%	77%	65%	67%	68%	70%
		Urban	73%	100%	73%	71%	73%	71%
2	Functionality	Rural	85%	90%	88%	86%	86%	85%
		Urban	89%	95%	92%	94%	95%	92%

			WfP	74%	90%	75%	84%	85%	85%
3	Household Sanitation	Rural		75%	77%	77%	79%	80%	80%
		Urban		84%	100%	84.1%	84.6%	85%	86%
4	Hand-washing	Household (rural)		33%	50%	33%	36%	50%	37%
		School		38%	50%	38%	34%	50%	35%
5	Q u a l i t y	Protected Rural Source	E.coli	53%	95%	36%	41%	95%	59%
		Large Towns Drinking Water	E.coli	100%	100%	99%	99%	100%	99.6%
			Colour	90%	100%	93%	93%	100%	91%
		Wastewater	BOD	41%	60%	40%	46%	90%	44%
			TSS	73%	67%	42%	45%	90%	53%

JWESSP Results: Accessibility and Availability

In 2015, the JWESSP noted the importance of the availability of freshwater and achieving sustainable development stressing that “the availability of freshwater is key to sustainable development and an essential element in food production (food security), health, and poverty reduction” (Government of Uganda, 2015b, pp. 74). The indicator for accessibility and availability of water for the JWESSP is defined as: “the % of people

within 1,000m (rural) and 200m (urban) of an improved water source” (Government of Uganda, 2015b, pp. ix). In 2013/14, 64% of rural Ugandans had access to safe water and by the end of the JWESSP (2016/17), 70% of rural Ugandans had access to safe water, constituting a 6% increase from the beginning of the initiative (Government of Uganda, 2017). The JWESSP was also able to meet the target set in 2016/17 of 68% (Government of Uganda, 2017). For urban areas, 73% of Ugandans residing in urban areas had access to a safe water source in 2013/14 and by the end of the initiative, 71% of urban Ugandans had access to a safe water source in 2016/17, representing a 2% decrease since the beginning of the JWESSP (Government of Uganda, 2017). The urban parameter of the accessibility component also failed to meet the target for 2016/17 of 73% (Government of Uganda, 2017). Neither parameter met the 2014/15 target, however, this difference in rural and urban access makes sense considering that Denmark’s primary focus was on rural accessibility.

Investments from the MWE, the District Water and Sanitation Development Conditional Grant (DWSDCG), the Peace Recovery and Development Programme Grant (PRDPG), and the involvement of CBOs, CSOs, NGOs, and IGOs, helped provide access to safe water in rural and urban areas (Government of Uganda, 2015b). Overall, the accessibility component of the JWESSP served 6,310,824 people, representing 79% of the target population (8,002,874) and constructed/rehabilitated 17,009 water sources (Government of Uganda, 2017). However, inadequate funding and poor distinction between rural and urban areas, resulting in overestimating targets, noticeably impacted the accessibility and availability component of the JWESSP.

JWESSP Results: Functionality

The functionality (sustainability) of water supplies was divided into three categories: rural, urban (small towns), and water for production (WfP). For the three components, functionality was defined as “the % of improved water sources that were functional at time of spot-check. Ratio of actual hours of water supply to the required hours (small towns)” (Government of Uganda, 2015b, pp. ix). Furthermore, functionality was determined by “the number of functioning improved water sources divided by the total number of improved water sources” (Government of Uganda, 2015b, pp. Annex 11). For the functionality component of the JWESSP, the rural parameter saw no change from the 85% measure in 2013/14, with the measurement staying the same in 2016/17 (Government of Uganda, 2017). This parameter also failed to meet the 2014/15 and 2016/17 targets. For the urban component of the functionality indicator, although the parameter failed to meet the targets set in 2014/15 and 2016/17, urban functionality increased from 89% in 2013/14 to 92% in 2016/17, constituting a 3% increase since the beginning of the initiative (Government of Uganda, 2017). Lastly, WfP functionality was measured at 74% in 2013/14 and finished at 85% in 2016/17, meeting the target of 85% set for 2016/17, and representing an increase of 11% (Government of Uganda, 2017).

The increase in functionality of rural water supplies was credited to large investments in rehabilitating existing water facilities under the DWSDCG and an increased budget to the functionality component of the JWESSP, and involvement from various CBOs, CSOs, NGOs, and IGOs. In total, 372 safe water sources were rehabilitated, 61 sustainable management systems were developed, with 221,555 people benefitting from these activities (Government of Uganda, 2017). Several constraints

impacted the functionality component including the breakdown of important water infrastructure and components, inactive water user management committees, siltation, and the illegal activity of water user committees and politicians.

JWESSP Results: Water Quality

The water quality indicator for the JWESSP is defined as “the % of water samples taken at the point of water collection, or waste discharge points that comply with *National Standards for Drinking (potable) Water* (2008) and *Water (Waste) Effluent Discharge Standards* (1999)” (Government of Uganda, 2015b, pp. ix). The parameters for the water quality indicator are: (1) the presence of *Escherichia coli* (*E. coli*) in protected/improved rural water sources, (2) *E. coli* presence in urban drinking water supplies, and (3) Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) in municipal and industrial wastewater (Government of Uganda, 2015b).

For the protected rural water sources parameter, in 2013/14, 53% of sources were free of contamination and by 2016/17, 59% were protected from contamination (Government of Uganda, 2017). Although this parameter failed to meet the targets in 2014/15 and 2016/17, the change from 2013/14 to 2016/17 represented a 6% increase in the quality of protected rural sources (Government of Uganda, 2017). For the drinking water in large towns parameter, 100% of sources were free from *E. coli* contamination in 2013/14 and by 2016/17, 99.6% of urban water sources were free of *E. coli* contamination, representing a 0.4% decrease since the beginning of the JWESSP (Government of Uganda, 2017). In regards to the colour component for drinking water in large towns, 90% met national standards in 2013/14 with 91% of sources meeting national standards in 2016/17, constituting a 1% increase (Government of Uganda, 2017).

Both parameters of the urban drinking water quality component failed to reach targets in 2014/15 and 2016/17. For the wastewater parameter of the quality indicator, the BOD component saw an increase of 3%: 41% of wastewater sources complied with national standards for BOD in 2013/14 and 44% in 2016/17 (Government of Uganda, 2017). In measuring TSS levels in wastewater, 73% of sources complied with national standards in 2013/14 and by 2016/17, only 53% of sources complied with national standards, representing a 20% decrease since the beginning of the JWESSP (Government of Uganda, 2017). Both components of the wastewater parameter failed to meet the targets in 2014/15 and 2016/17.

Various actors including CBOs, CSOs, NGOs and IGOs, had crucial responsibilities for this component. Monitoring activities were directed by the National Water and Sewerage Corporation (NWSC), in which 119 national water quality-monitoring stations were established. However, the water quality component was challenged by a severe cholera and typhoid outbreak, an increase in sample collection, the poor regulation of sanitation facilities, the poor enforcement of environmental regulations, and the lack of financial resources.

JWESSP Results: Household Sanitation and Hand-washing

Uganda met the MDG for sanitation by achieving sanitation coverage of 72% by 2015, and hopes to achieve the objectives and targets of SDG 6 by 2030 (Government of Uganda, 2015b). The main indicator for sanitation in the JWESSP - Household Sanitation - is divided into two parameters: rural and urban. The rural household sanitation indicator is defined as “the % of people with access to improved sanitation in rural areas” (Government of Uganda, 2015b, pp. ix). For the rural household sanitation parameter of

the household sanitation component, 75% of people living in rural areas had access to appropriate sanitation in 2013/14 and in 2016/17, 80% of people had access to adequate sanitation measures (Government of Uganda, 2017). This represented a 5% increase while meeting the targets in 2014/15 and 2016/17 (Government of Uganda, 2017). In terms of the urban household sanitation parameter, 84% of people living in urban areas had access to adequate sanitation in 2013/14 and 86% of urban residents had access in 2016/17, constituting a 2% increase (Government of Uganda, 2017). Furthermore, the urban parameter for household sanitation was unable to meet the target in 2014/15 but was able to meet the 2016/17 target of 85%.

The hand-washing indicator is split into two parameters - rural households and schools - and is defined as “the % of people with access to hand-washing facilities” (Government of Uganda, 2015b, pp. ix). For the hand-washing component of the JWESSP, 33% of people had access to hand-washing facilities in 2013/14 and 37% of people had access as of 2016/17 (Government of Uganda, 2017). This represented a 4% increase while failing to meet the targets in 2014/15 and 2016/17. For the hand-washing in schools parameter, 38% of students had access to proper hand-washing facilities in 2013/14 and 35% of students had access in 2016/17, representing a 3% decrease since the beginning of the JWESSP (Government of Uganda, 2017). Both parameters of the hand-washing component were unable to meet the targets in 2014/15 and 2016/17.

Investments through the District Sanitation Conditional Grants (DSCG), the District Water and Sanitation Development Conditional Grant (DWSDCG), and the District Hygiene and Sanitation Conditional Grant (DHSCG) were used to promote Community-Led Total Sanitation (CLTS) or Household Improvement Campaigns (HIC)

to help villages become Open Defecation Free (ODF) (Government of Uganda, 2015). Additionally, Water and Sanitation Development Facilities (WSDFs) built 24 school sanitation facilities while improving approximately 150 sanitation facilities (Government of Uganda, 2015b). CSOs, NGOs, UOs, UNICEF, and the MWE helped promote CLTS and HIC campaigns, construct latrines, and provided substantial financial contributions. Overall, these actors assisted in building over 580,000 toilets, 185 latrines, 39,028 hand-washing stations, and helped nearly 7,500 villages become ODF, and 1.2 million people receive improved access to sanitation (Government of Uganda, 2015b; Government of Uganda, 2016; Government of Uganda, 2017). Similarly to other components of the JWESSP, the sanitation and hand-washing component lacked sufficient political and financial support, which severely impacted the results of the component.

Foregrounding Participation in the Denmark-Uganda Partnership

Understanding the risks associated with a particular partnership is crucial. For the Denmark-Uganda partnership and the JWESSP initiative, the first risks are fiduciary and governance related: the flow of capital from the national government to regional and local governments has been mismanaged in the past. To solve this problem, the national government and development partners are introducing measures to better regulate the allocation and management of funds. The second risk involves poor sector funding by the Ugandan government: low prioritizing to the water and sanitation sector risks jeopardizing current and future achievements of the sector. The creation of new districts and continuous population growth intensifies this risk by putting constraints on financial and human resources. Even with the risks, the Denmark-Uganda partnership, under the JWESSP, was able to effectively contribute to sustainable water development.

Looking at the outputs of the JWESSP, it can be observed that the partnership has helped Uganda make progress towards the goal of sustainable water development by placing more attention on prioritizing participation rather than implementation. This was exemplified through the importance put on encouraging all relevant actors to get involved and the participation of actors from the public sector - the MWE, local governments, the Ministry of Finance (MF), and the Ministry of Planning and Economic Development (MPED) - the private sector (infrastructure contractors, consultants, and operators), and civil society through community-based organizations (CBOs), civil society organizations (CSOs), and non-governmental organizations (NGOs) (Government of Uganda, 2013b). Thematic groups, with assistance from the Uganda Water and Sanitation NGO Network (UWASNET), registered over 200 CBOs, CSOs, and NGOs, which helped prepare detailed action plans for the implementation of projects (Government of Uganda, 2016).

NGOs, such as Voluntary Action For Development (VAD) and Joint Efforts to Save the Environment (JESE), CSOs such as the Environmental Management for Livelihood Improvement Bwaise Facility (EMLI), and CBOs including the Kagando Rural Development Centre (KARUDEC) and other community associations, played key roles in community management activities including capacity building with vulnerable groups, the formation and training of health club officials, and hosted several activities to introduce water users to the idea of sustainability. DANIDA, as chair of the official group of development partners in Uganda (UWASNET, 2015), has assisted in encouraging the additional participation of CBOs, CSOs, and NGOs as part of UWASNET. With an array of new and unique CBOs, CSOs, and NGOs becoming part of the initiative as the initiative continued, JESE has been involved since the beginning of the initiative.

JESE is an indigenous NGO focusing on improving household food security, agricultural production, and natural resources management and promotes improving environmental and natural resources governance and WASH activities. The mission of JESE is “to facilitate innovative actions for sustainable water and natural resources management and improved livelihoods” (Global Water Rights, 2018). JESE has played an important role in the JWESSP initiative by creating an increased capacity to manage hand pump mechanics, has supplied household water filters and safe water containers to primary schools, and have trained masons, parents, students, and teachers in the construction of water services for households, and in promoting child-friendly WASH activities (Government of Uganda, 2015b). The involvement of JESE and other CBOs, CSOs, and NGOs made a difference to the JWESSP initiative as these entities increased the capacity of the overall initiative and performed necessary tasks such as educating and training water users on the importance of sustainability and WASH activities. Furthermore, the involvement of these actors emphasized that Denmark focused on prioritizing participation and the representation of all water users before prioritizing implementation.

Denmark’s emphasis on the prioritization of participation was displayed through not only the involvement of all actors on the ground such as CBOs, CSOs, NGOs, and other groups representing marginalized populations in Uganda, but also the importance of increasing the autonomy of local communities in governing water resources and involving all water users as part of the JWESSP (DANIDA, 2017b). Correspondingly, Denmark and other development partners focused on ensuring a bottom-up approach: capacity development, decentralizing governance, district participation in the planning

process, and private sector involvement in the maintenance of water supply infrastructure, which has been the approach advocated for in UN documents – such as the 1972 Stockholm Conference and the 1977 Mar del Plata Water Conference – and in 21st century water governance through IWRM and soft path approaches. Furthermore, in collaboration with the MWE and UN-water, an inter-agency initiative called “integrated monitoring of water and sanitation related SDG targets” (GEMI) was created, with Uganda chosen as one of six countries to be part of the project. This initiative found that the way in which Uganda was striving towards SDG 6.3-6.6 targets were successful in terms of methodologies, and indicators were found to be appropriate and useful (Government of Uganda, 2017). Thus, prioritizing participation not only brought all relevant stakeholders to the discussion of proper water management and sustainable water development, but this methodology was also found to be helping Uganda work towards accomplishing the objectives of SDG 6.

Conclusion: Lessons Learned from the Denmark-Uganda Partnership

While the JWESSP is concluding in 2018, the Government of Uganda is looking to develop a second JWESSP (JWESSP II). The new JWESSP II will consist of less flexible funding arrangements since several partners are ending financial contributions to the sector. Additionally, an independent consolidation study of the JWESSP reported that “there is a need for a no-cost extension of the JWESSP by 12 months to complete outstanding activities that cannot be concluded by the end of the programme” (Government of Uganda, 2017, pp. 19). The most fundamental challenge to the JWESSP was inadequate funding: quarterly releases by government and development partners fell short of quarterly and annual projections, making objectives and targets unrealistic.

Although inadequate funding was a central challenge of the JWESSP, Denmark provided a substantial amount of capital to the water and sanitation sector as the largest partner in the water and sanitation sector (Government of Uganda, 2013b). Over a 5-year period, Danish development cooperation will provide Uganda with DKK 755 million (\$125 million USD) (DANIDA, 2016). The majority of funding from Denmark is channelled through the Joint Partnership Fund and Sector Budget Support, which makes up 51% of total funding (Government of Uganda, 2013b). The Government of Uganda provides the JWESSP initiative with 3% of the total national budget, making up 56% of the total budget of the JWESSP (Government of Uganda, 2016). However, the 3% target of the overall national budget spent on the project, has not enabled the water and sanitation sector to meet the objectives and targets of the JWESSP. Furthermore, the under-releasing of funds from development partners and corruption challenges with the Government of Uganda have impacted the progress of accomplishing the objectives of the JWESSP. Although the Government of Uganda has provided the JWESSP with adequate funding, political corruption remained a large risk to the Denmark-Uganda partnership. However, even by acknowledging these risks, Denmark was able to assist Uganda with sustainable water management through the JWESSP.

Prioritizing participation was a useful part of the Denmark-Uganda partnership structure and contributed to providing sustainable water management through the JWESSP. By evaluating partnerships based on its processes and outputs towards a social good, it is evident that the processes of the Denmark-Uganda partnership – prioritizing participation - influenced the outputs of the initiative. In contrast, the Sweden-Mali case study seems to place a greater importance on prioritizing implementation: reinforcing the

implementation of developmental frameworks, regulations, and projects (Biermann, 2007). As the next chapter will demonstrate, prioritizing implementation can help LDCs reach reputable standing in the water and sanitation sub-sector and is an additional approach to achieving sustainable water development.

Chapter 4: The Case Study of the Sweden-Mali Partnership

Sweden, like Denmark, has demonstrated the leadership needed to encourage and implement sustainable development, especially in the water and sanitation sector. Evidently, Sweden is the best-positioned country to foster sustainable development as it ranks 1st on the SDG Index (Kroll, 2015). Additionally, Sweden maintains remarkable scores in various internationally recognized measurable indices: Sweden ranked 14th out of 188 with a score of 0.913 on the HDI in 2015 (UNDP, 2016), a GINI score of 27.2 in 2014 (World Bank Group, 2018a), and ranks 18th out of 162 countries with a score of 1.52 in 2017 (Knoema, 2018a). Like Denmark, these scores illustrate that Sweden is an appropriate partner for sustainable development. Sweden continues to strive towards achieving the SDGs by focusing on environmental sustainability, gender equality, and peaceful democratic development, while claiming that good governance, the protection of human rights, and gender equality are fundamental aspects of global sustainable development and are vital to accomplishing the entire SDG framework (Ministry of Foreign Affairs Sweden, 2015). Similarly to Denmark, Sweden provides aid through its development cooperation agency - Swedish International Development Cooperation Agency (SIDA) - assisting over 35 countries in Africa, Asia, Europe, and Latin America (Sida, 2018).

The beginning of this chapter will review the development cooperation strategies of Sweden, their previous involvement in Mali from 2004-2006, and how Sweden plans to facilitate sustainable water development in the new development paradigm. The following section will introduce the current Sweden-Mali partnership and review the results of the main initiative between Sweden and Mali - UNICEF Mali - according to the

indices of accessibility, sanitation, and sustainability. The remaining sections will discuss Sweden's financial contribution to the partnerships, the risks associated with the partnership, and how prioritizing implementation contributed to effective sustainable water development in this case.

Swedish Development Cooperation with Mali

Sweden was the first country to meet the UN's target of 0.7% of GNI being used for official development assistance in 1974, with the Swedish Government continuing their obligation to the UN by currently spending almost 1% of its GNI on development assistance (Government of Sweden, 2016). Sweden's obligation to development cooperation with Mali is no exception. Sweden has a long-standing partnership with Mali dating back to the 1990's. Sweden has provided bilateral assistance to Mali to help minimize the effects of climate change, inequality, and instability by primarily providing assistance with poverty reduction, the inclusion of women and the recognition of children's and women's rights, and inclusive sustainable growth (Government of Sweden, 2003). Since 1997, poverty reduction has been the primary goal of Swedish development cooperation with 2001 signalling the beginning of development assistance between Sweden and Mali (Government of Sweden, 2003).

Mali has been recognized as a priority country for Swedish development assistance since 2001, with the central aim of 2004-2006 Swedish development cooperation in Mali being "to help create opportunities for poor people to improve their living standards and conditions" (Government of Sweden, 2003, pp. 51). From 2004-2006, Mali did not receive direct bilateral support from Sweden for the environment and management of natural resources as water and sanitation management were not primary

aims of Swedish development cooperation (Government of Sweden, 2003). Although there was no direct bilateral support to the environment and water and sanitation sector, Sweden provided Mali with aid through regional collaboration programmes to promote the decentralization of natural resources management and monitoring of water and sanitation systems.

Swedish Development Cooperation with Mali from 2004-2006 focused on three main areas: sustainable economic growth, democratic promotion and social development, and the sustainable development of natural resources and related sectors (Government of Sweden, 2003). According to the *Government of Sweden, 2003*, Sweden excelled in the areas of “capacity development in government administration, institutional cooperation, the promotion of children’s rights and gender equality, and sustainable natural resources management” (pp. 30). Paying special attention to the sustainability of natural resources management, Sweden aimed to increase the security among poor communities, and recognize the importance of children and women to the water and sanitation sectors. The objective of the overall agreement between Sida and the Malian government was to “contribute to a supportive environment for less fortunate peoples to improve their quality of life” including significant donor funding (Government of Sweden, 2003, pp. 60).

More recently, Swedish development cooperation focuses on conflict mitigation, gender equality recognition, and climate change/environmental assistance (Government of Sweden, 2016). The overall aim of Swedish international development cooperation is to “create preconditions for better living conditions for people living in poverty and under oppression” (Government of Sweden, 2016, pp. 4) and is motivated by the low

achievement of the SDGs and the necessity to end widespread poverty (Ministry of Foreign Affairs Sweden, 2015). Swedish development cooperation recognizes the importance of reaching the targets of the SDG agenda and emphasizes creating policies to achieve the SDGs nationally, regionally, and globally (Government of Sweden, 2016). Generally, Sida prides itself on playing a more influential, coordinating role in development programming with LDCs, rather than only providing financial support (Ministry of Foreign Affairs Sweden, 2015). Finally, Sweden has also been a significant leader in natural resource development and management and continues to seek accomplishing the targets of SDG 6 and the entire SDG framework.

Sweden's motivations for assisting Mali from 2016-2020 is climate change and economic development vulnerability, conflict in the Northern part of the country, and the lack of recognition of gender equality and women's rights (Ministry of Foreign Affairs Sweden, 2015). Sweden plays a fundamental role in the water and sanitation sector in Mali with Swedish development cooperation aimed at "strengthening capacity among public institutions and other actors to promote environmental and climate sustainability... and increased access to sustainable public services. This will include strengthened and sustainable administration of natural resources, including water" (Ministry of Foreign Affairs Sweden, 2015, pp. 9). Along with this particular aim, Sida hopes to strengthen three other focus areas in its partnership with Mali: democracy and gender equality, greater resilience towards climate change and natural resource management, and respect for human rights (Ministry of Foreign Affairs Sweden, 2015). The Swedish development cooperation strategy for Mali during the 2016-2020 period will see Sweden provide Mali with SEK 1.2 billion (\$138 million USD), with SEK 1.18 billion (\$135.7 million USD)

being used for implementing initiatives by Sida (Ministry of Foreign Affairs Sweden, 2015). Unfortunately, Mali has performed poorly in several international indices requiring Sweden to catalyze and establish the current partnership.

Sweden: An Effective Partner for Sustainable Water Development in Mali

Mali has been characterized as being politically and socially unstable, having poor implementing institutions, and widespread corruption at the national, regional, and local level of governance. Although Mali has demonstrated potential in working towards becoming a middle-income country (economic growth rate of 5% in 2014 and 2015), the country is still one of the most unequal countries in the world with 45% of the population falling below the poverty line (Ministry of Foreign Affairs Sweden, 2015). Mali ranked 175th out of 188 countries on the HDI in 2015 (UNDP, 2016), a GINI score of 33.0 in 2009 (World Bank Group, 2018b), and ranks 140th out of 162 countries with a score of 2.60 on the GPI (Knoema, 2018b). Mali remains increasingly susceptible to the effects of climate change due to an increased potential of drought due to a lack of rainfall, proportionally impacting the management of natural resources. High population growth continues to strain natural resources as only 64% of the population had access to safe water and 22% had access to adequate sanitation as of 2015 (Ministry of Foreign Affairs Sweden, 2015). To accommodate the water and sanitation sub-sector, Sweden has helped Mali address the mismanagement of water and reach targets in the MDG framework.

Sweden has contributed a significant amount of support to the Malian water and sanitation sector through its development cooperation. Sweden helped Mali reach the MDG target for improved water accessibility with 67% of the Malian population gaining access to improved water sources in 2012 (UNICEF, 2015a). However, there is a large

discrepancy in accessibility to improved sanitation between rural and urban areas, with rural areas lacking sufficient sanitation accessibility. The main objective of the programme is to “support the Government of Mali to increase equitable access to basic social services, strengthen community resilience, support service delivery systems and promote policies and budgets that help disadvantaged groups of society while ensuring a better transition from humanitarian action to development” (UNICEF, 2015a, pp. 4). Sweden has partnered with several development partners, and especially with UNICEF, to provide a strategy for providing safe water, proper sanitation facilities, and the sustainable management of water through the UNICEF Mali initiative.

The UNICEF Mali Initiative

The UNICEF Mali initiative 2015-2019 will be evaluated and monitored by a partnership consisting of the EU, SIDA, United States Agency for International Development (USAID), the World Bank, and the World Food Programme (WFP). The initiative also includes several Malian Government entities: the National Department of Education (DNP), the National Department of Sanitation and Pollution and Nuisance Control (DNACPN), the National Water Resources Department (DNH), the Public Hygiene Division (DHSP), and the Water Sector. Efforts of the UNICEF Mali initiative will be supported by Sanitation and Water for All (SWA) and the Malian Sectoral Programme for Water and Sanitation (PROSEA) through educational programs for children and the implementation of emergency preparedness programs (UNICEF, 2015a). The Malian embassy has supported UNICEF involvement since 2005 and helped finance the UNICEF Mali program in Mali from 2013-2015. Furthermore, the UNICEF Mali initiative hopes to “increase the sustainable access to and use of safe drinking water,

basic sanitation and hygiene, including in emergency situations, especially those people living in rural and disadvantaged areas by 2019” (UNICEF, 2015a, pp. 13) and is affiliated with the overall United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA).

By participating in the UNICEF Mali initiative, Sida hopes to strengthen other focus areas such as child protection, equal access to basic education, health and nutrition, inclusivity, and social policy. However, Sweden will primarily support three components - (i) child protection, (ii) water, sanitation, and hygiene, and (iii) social policy and inclusion - to improve governance frameworks and community involvement, nutritional and educational awareness in rural communities, and the resilience of vulnerable communities (Openaid Sida, 2018a). Also, UNICEF is aware that the components of the UNICEF Mali initiative are under-financed and will require substantial partner support to realize the goals of the project. Overall, the UNICEF Mali intervention has a total budget of 2,796,870,000 SEK (\$342.1m USD) (Openaid Sida, 2018a) and high hopes towards achieving the four principle outputs of the UNICEF Mali (Table 5).

Table 5. List of outputs with baseline data and UNICEF targets (UNICEF, 2015a).

Outputs	Baseline	UNICEF Target
(1) By 2019, a more favourable environment is established for the provision of water sanitation and hygiene services, with a special focus on the sub-sector rural sanitation	67%	82%
(2) By 2019, at least 1 million additional people living in at least 1,500 rural communities, particularly, the most disadvantaged, will have gained access to safe water and have adopted good hygiene and sanitation	13%	5%

(3) By 2019, at least 1,100 institutions (school and health centres) meet recommended WASH standards in terms of equipment, promotion of hygiene, and local governance	7%	22%
(4) Communities affected by crisis or conflict have increased access to clean water, basic sanitation, and measures to promote the prevention of water and sanitation-related diseases	N/A	N/A

The first identified output of the initiative is “by 2019, a more favourable environment is established for the provision of water sanitation and hygiene services, with a special focus on the sub-sector rural sanitation” (UNICEF, 2015a, pp. 13). For this output, baseline data suggests that 67% of the rural population has access to water and sanitation services, while UNICEF hopes to increase this finding to 82% (UNICEF, 2015a). The second output of the initiative is “by 2019, at least 1 million additional people living in at least 1,500 rural communities, particularly, the most disadvantaged, will have gained access to safe water and have adopted good hygiene and sanitation” (UNICEF, 2015a, pp. 13). At the beginning of the initiative, 13% of the target population did not have access to safe water and had not adopted good hygiene and sanitation practices, with the UNICEF target being 5% (UNICEF, 2015a). The third output is “by 2019, at least 1,100 institutions (School and health centres) meet recommended WASH standards in terms of equipment, promotion of hygiene, and local governance” (UNICEF, 2015a, pp. 13). Of the 1,100 institutions, an initial reading indicated that only 7% of the targeted institutions met recommended WASH standards, while UNICEF hopes to reach the 22% threshold (UNICEF, 2015). Lastly, the fourth output of UNICEF Mali, which does not have a baseline reading or UNICEF target, is “communities affected by crisis or

conflict have increased access to clean water, basic sanitation, and measures to promote the prevention of water and sanitation-related diseases” (UNICEF, 2015a, pp. 13).

Similarly to the Denmark-Uganda partnership, I have focused on observing the results from 2015-2017 as they align with the introduction of the SDGs. Although the indicators of the Sweden-Mali partnership differ from those of the Denmark-Uganda partnership, the indicators and outputs of the UNICEF Mali are similar to the Denmark-Uganda partnership in that they tend to focus on issues relating to accessibility, sustainability, and water and sanitation. The indicators and results for the UNICEF Mali initiative are located in Tables 6, 7, 8, and 9.

Table 6. List of WASH indicators for 2015, 2016, and 2017 (UNICEF, 2015c; UNICEF, 2016b; UNICEF, 2017)

WASH Indicators		
2015	2016	2017
# of affected population provided with access to safe water (construction/rehabilitation)	# of water points constructed/rehabilitated	# of water points constructed/rehabilitated
# of Severe Acute Malnutrition (SAM) children receiving a WASH kit and hygiene promotion session	# of SAM children receiving WASH kit and hygiene promotion session	# of unaffected population provided with temporary access to safe water (water trucking, aquatabs, and chlorine)
# of health centres with minimum WASH package	# of WASH emergency household kits distributed	# of people having access to permanent drinking water sources (constructed/rehabilitated)
	# of health centres with minimum WASH package	# of households that received WASH emergency kits

	# of affected population provided with temporary access to safe water (water trucking, aquatabs, and chlorine)	
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From 2015 to 2017, the indicators used for reporting in the UNICEF Mali initiative differ. In 2015, the main indicators used for reporting were:

- (1) “# of affected population provided with access to safe water (construction/rehabilitation)”;
- (2) “# of SAM children receiving a WASH kit and hygiene promotion session”; and
- (3) “# of health centres with minimum WASH package” (UNICEF, 2015c, pp. 5).

In 2016, the indicators used for reporting were:

- (1) “# of water points constructed/rehabilitated”;
- (2) “# of SAM children receiving WASH kit and hygiene promotion session”;
- (3) “# of WASH emergency household kits distributed”;
- (4) “# of health centres with minimum WASH package”; and
- (5) “# of affected population provided with temporary access to safe water (water trucking, aquatabs, and chlorine)” (UNICEF, 2016b, pp. 5).

Lastly, for 2017, the indicators used were:

- (1) “# of water points constructed/rehabilitated”;
 - (2) “# of unaffected population provided with temporary access to safe water (water trucking, aquatabs, and chlorine)”;
 - (3) “# of people having access to permanent drinking water sources (constructed/rehabilitated)”;
- and
- (4) “# of households that received WASH emergency kits”; and (UNICEF, 2017, pp. 6).

The indicators of the UNICEF Mali initiative vary from year to year due to changes in financial contributions from development partners. Furthermore, Tables 6, 7, and 8 display the results of UNICEF Mali for 2015, 2016, and 2017 respectively.

Accessibility and the Distribution of Safe Water and Sanitation in Mali in 2015

Table 7. Results for UNICEF WASH Mali as of September 2015 (UNICEF, 2015c).

Indicators	# of people affected	UNICEF and International Professionals (IPs)		Sector Response	
		2015 Target	Total Results	2015 Target	Total Results
# of affected population provided with access to safe water (construction/rehabilitation)	649,800	32,000	50,400	441,600	123,200
# of SAM children receiving a WASH kit and hygiene promotion session		40,000	9,860	136,000	11,996
# of health centres with minimum WASH package		100	48	280	193

Although Mali has made outstanding progress in safe water accessibility - 27% in 1990 to 77% in 2012, surpassing the MDG target of 65% - 33% of the rural population still lack access to safe water (UNICEF, 2015b). The indicator for accessibility to safe water is defined as “# of affected population provided with access to safe water through the construction of new water sources or the rehabilitation of existing sources” (UNICEF, 2015c). For the accessibility indicator, UNICEF and IPs set a target of improving access to safe water for 32,000 people (UNICEF, 2015c). UNICEF and IPs significantly

surpassed the 32,000 person target by providing 50,400 people with improved access to safe water (UNICEF, 2015c). Overall, the sector provided 123,200 people with access to safe water, failing to reach the sector determined target 441,600 people (UNICEF, 2015c).

Mali missed the access to improved sanitation MDG target of 59%, with only 25% of the population having access to an improved sanitation facility as of 2015 (UNICEF, 2015b). For 2015, the sanitation-related indicators were: (1) “# of SAM children receiving a WASH kit and hygiene promotion session”; and (2) # of health centres with a minimum WASH package” (UNICEF, 2015c). For indicator (1), UNICEF and IPs set a target of assisting 40,000 children, but only assisted 9,860 SAM children (UNICEF, 2015c). Overall, the sector set a target of providing 136,000 SAM children with a WASH kit and hygiene promotion session, and only provided 11,996 SAM children with the described benefits (UNICEF, 2015c). Pertaining to indicator (2), UNICEF and IPs hoped to distribute a minimum WASH package to 100 health centres (UNICEF, 2015c). However, UNICEF and IPs only distributed a WASH package to 48 health centres (UNICEF, 2015c). Overall, the sector set a target of distributing a minimum WASH package to 280 health centres, and only assisted 193 (UNICEF, 2015c).

To assist with sanitation, UNICEF helped coordinate a National Strategic Plan for the Promotion of Hygiene Education in Schools (NSPPHES), which was implemented in 664 schools (UNICEF, 2015b). Ultimately, UNICEF helped construct/rehabilitate over 210 water points, distributed 24,000 emergency household WASH kits to displaced persons, provided additional WASH supplies to 219 health centres and 648 schools (UNICEF, 2015b). Other development partners, including the EU and NGOs, assisted

UNICEF by developing training programs for teachers and curriculum surrounding the sustainability of WASH practices and products, and carrying out CLTS campaigns (UNICEF, 2015b). Overall, in 2015 the UNICEF Mali initiative helped reduce the rate of rural areas practicing open defecation from 20% in 2010, to 15% in 2015, and helped 1,700 villages reach ODF status through CLTS campaigns (UNICEF, 2015b). There existed several challenges to the UNICEF Mali initiative in 2015 such as an increase in population displacement from natural disasters, the lack of human resources, and the poor prioritizing and budgeting of financial resources.

Accessibility and the Distribution of Safe Water and Sanitation in Mali in 2016

Table 8. Results for UNICEF WASH Mali as of December 2016 (UNICEF, 2016b).

Indicators	Overall Needs	UNICEF and IPs		Sector/Cluster	
		2016 Target	Total Results	2016 Target	Total Results
# of water points constructed/rehabilitated	792	138	197	792	307
# of SAM children receiving WASH kit and hygiene promotion session	134,947	18,323	3,901	134,947	20,041
# of WASH emergency household kits distributed	24,380	15,000	5,985	24,380	21,985
# of health centres with minimum WASH package	249	60	57	249	449

# of affected population provided with temporary access to safe water (water trucking, aquatabs, chlorine)	372,454	200,000	153,116	372,454	251,868
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In 2016, the UNICEF Mali initiative introduced a new indicator into reporting: “# of water points constructed or rehabilitated” (UNICEF, 2016b). UNICEF and IPs set a target for constructing/rehabilitating 138 water points and surpassed that target by completing 197 projects (UNICEF, 2016b). Overall, the sector was unable to meet the target of constructing/rehabilitating 792 water points and only constructed/rehabilitated 307 water points (UNICEF, 2016b). Like in the previous year, “# of affected population provided with temporary access to safe water (water trucking, aquatabs, chlorine)” (UNICEF, 2016, pp. 5) was used for reporting advancements in water accessibility. UNICEF and IPs set a target of serving 200,000 individuals, but only assisted 153,116 individuals (UNICEF, 2016b). Overall, the sector failed to reach the target of providing 372,454 people with temporary access to safe water, only providing 251,868 people with temporary access to safe water (UNICEF, 2016b).

For sanitation, the UNICEF Mali initiative used two indicators in 2016: (1) “# of health centres with a minimum WASH package” and (2) “# of SAM children receiving a WASH kit and hygiene promotion session” (UNICEF, 2016b). For the first sanitation indicator, UNICEF and IPs hoped to target 60 health centres (UNICEF, 2016b). By the end of the reporting year, UNICEF and IPs had reached 57 health centres, while the sector surpassed its target of 249 health centres and provided 449 health centres with a minimum WASH package (UNICEF, 2016b). For the second sanitation indicator,

UNICEF and IPs set a target of assisting 18,323 while the overall sector established a target of 134,947 (UNICEF, 2016b). Overall, UNICEF and IPs provided 3,901 SAM children with a WASH kit and hygiene promotion session, while the entire sector served 20,041 (UNICEF, 2016b).

Lastly, UNICEF Mali introduced another new indicator into reporting: “# of WASH emergency household kits distributed” (UNICEF, 2016b). The sector set a target of distributing 24,380 WASH emergency household kits with UNICEF and IPs establishing a target of distributing 15,000 (UNICEF, 2016b). UNICEF and IPs did not meet their desired target and only distributed 5,985 kits, while the overall sector distributed 21,985 (UNICEF, 2016b). Although the results measured by the five indicators were somewhat uninspiring, UNICEF and other development partners helped facilitate other important achievements.

UNICEF and participating NGOs supported the emergency distribution of household water treatment products to serve 193,868 individuals in Northern Mali while gathering 25 tons of WASH products to be used for emergency preparedness in Mali (UNICEF, 2016a). Along with the Government of Mali, UNICEF repaired 193 water points, assisted the government with the development of a new National Water Plan aimed to increase the sustainability of current and future water facilities, and ushered in a Water and Sanitation for Health Facility Improvement Tool (WASHFIT) to help improve WASH standards and monitor WASH action strategies in health centres (UNICEF, 2016a). Additionally, UNICEF supported the first component of the Trackfin Initiative in Mali under the Government Water and Sanitation Programme which aimed to promote the National Wash programme (PROSEA II) and various SDG targets, encourage follow-

up monitoring meetings with communities and institutions, and enhance funding measures for the sector (UNICEF, 2016a). Lastly, UNICEF continued to assist development partners with CLTS campaigns (339 villages becoming ODF) and latrine construction in 245 schools benefitting 40,000 students (UNICEF, 2016a). However, several challenges impacted the initiative in 2016 including the deterioration of Malian security, low allocation of finances for WASH components - partnership performance was hindered by the inability of partners to submit appropriate financial documents by deadlines, resulting in a 40% funding gap for the overall UNICEF Mali initiative (UNICEF, 2016b) - and the weak capacity of WASH technical services provided by the government.

Accessibility and the Distribution of Safe Water and Sanitation in Mali in 2017

Table 9. Results for UNICEF WASH Mali as of December 2017 (UNICEF, 2017).

Indicators	Overall Needs	UNICEF and IPs		Sector Response	
		2017 Target	Total Results	2017 Target	Total Results
# of water points constructed/rehabilitated	1,239	360	197	1,239	437
# of affected population provided with temporary access to safe water (water trucking, aquatabs, chlorine)	294,327	54,400	25,944	294,327	101,134
# of people having access to permanent drinking water sources (constructed/rehabilitated)	495,600	185,600	91,200	495,600	354,433

# of households that received WASH emergency kits	9,730	6,520	4,324	9,730	8,992
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In 2017, the UNICEF Mali initiative used four indicators for reporting, focusing only on accessibility and the emergency distribution of safe water. The first indicator used for the 2017 reporting year, “# of water points constructed/rehabilitated,” determined an overall sector target of constructing/rehabilitating 1,239 water points (UNICEF, 2017). UNICEF and IPs set a target of 360 but only constructed/rehabilitated 197 water points, whereas the results for the sector totalled 437 (UNICEF, 2017). For the second indicator, “# of affected population provided with temporary access to safe water,” the sector aimed to assist 294,327 people, with UNICEF and IPs setting a target of assisting 54,500 individuals (UNICEF, 2017). UNICEF and IPs served only 25,944 people while the entire sector served 101,134 people (UNICEF, 2017). Another indicator used in 2017, “# of people having access to permanent drinking water sources (constructed/rehabilitated),” aimed to provide 495,600 individuals with access to a permanent source of drinking water (UNICEF, 2017). UNICEF and IPs set a target of helping 185,600 people; however, only served 91,200, whereas the overall sector reached 354,433 people (UNICEF, 2017). The fourth indicator used, “# of households who received WASH emergency kits”, established a sector target of 9,730, while UNICEF and IPs set a target of 6,520 (UNICEF, 2017). UNICEF and IPs helped distribute 4,324 kits while the sector distributed 8,992 (UNICEF, 2017). Furthermore, the sector provided an additional 455,567 people with access to safe water in Northern Mali (UNICEF, 2017).

In 2017, it was determined that there were still 1.2 million people in need of WASH services. UNICEF assisted in distributing over 4,300 WASH products to 25,800 households, constructing/rehabilitating 140 boreholes with hand pumps, and built 24 solar pumping systems (UNICEF, 2017). Additionally, there was no funding allocated for WASH in nutrition or sanitation. Similarly to previous years, the UNICEF Mali initiative was notably impacted by the deterioration of Malian security, poor budget allocation to WASH components, and weak institutional capacity.

Conclusion: Foregrounding Implementation in the Sweden-Mali Partnership

Throughout the course of the UNICEF Mali initiative, the Mali Donor Coordination Group was able to secure involvement from several key partners including the Agence Francaise de Developpement (AFD), Denmark, Education Concerns for Hunger Organization (ECHO), EU, the German Development Agency (GIZ), the German Development Bank (KfW), and the Netherlands, while the Malian Government agreed to provide the WASH sector with 5% of the national budget: 0.2% of the overall Gross Domestic Product (GDP) (UNICEF, 2015b). With regard to donor funding, Sweden provided the UNICEF Mali initiative with \$10.32m USD with \$65.4m USD allocated in additional resources to the programme (UNICEF, 2015b; Openaid Sida, 2018a; Openaid Sida, 2018b; Openaid Sida, 2018c). Sweden was the largest provider of development assistance to the water and sanitation sectors in Mali and the greatest contributor of any country to the UNICEF Mali initiative (Openaid Sida, 2018c). Furthermore, due to the substantial financial contribution from Sweden, the mismanagement of funds is a significant risk of the Sweden-Mali partnership.

Due to high political corruption, the mismanagement of financial resources is a major risk associated with the Sweden-Mali partnership. Additionally, the worsening of Malian security also constitutes a risk as conflict may interrupt sustainable water development projects, influence whether or not people want to work for the UNICEF Mali initiative, and impact the institutional capacity of the Malian Government. Sweden's contribution to the project helped the UNICEF Mali initiative focus on the implementation of strategies to assist the Malian Government with proper water management and sustainable water development.

UNICEF and Sweden prioritized implementation – reinforcing the implementation of developmental frameworks, projects, and regulations (Biermann, 2007) - rather than participation. This was exemplified through the lack of involvement from CBOs, CSOs, and other organizations whose primary aims are to represent marginalized populations, and the implementation of numerous strategies and projects by the leading agency: CSOs and NGOs, as part of UNICEF Mali, only focused on interventions and implementing the strategies developed by UNICEF and other leading partners (UNICEF, 2016a; UNICEF, 2015b). Although the approaches taken by Sweden and Denmark were different - Denmark prioritized participation while Sweden prioritized implementation - both countries assisted their respective partners in achieving sustainable water development. These two case studies show that different approaches in partnership methodology can contribute to the same goal: sustainable water development. Although both partnerships resulted in the same outcome (successful sustainable development) was one partnership more successful than the other? In the concluding chapter, I will outline the most important tools used by Denmark in their partnership with Uganda, and Sweden

in their partnership with Mali, discuss what strategies and tools should be sought after by partnerships in order to advance the objectives of SDG 6, and how UN involvement could be improved.

Chapter 5: The Centrality of Prioritizing Participation

Nordic countries have participated in sustainable water development by engaging in partnerships with sub-Saharan African countries, as exemplified in the Denmark/Uganda and Sweden/Mali partnerships. These partnerships have proven successful for Uganda and Mali in their ability to properly manage water and see results in their environment and natural resource sectors. They have also helped to accelerate the accomplishment of several SDG 6 objectives for both LDCs. While each partnership draws on three main aspects of water management (accessibility and availability, clean water and sanitation, and sustainable management), they demonstrate that there are two different approaches that can lead to improved water governance and sustainable water development: prioritizing participation and prioritizing implementation. Here, I will discuss how by prioritizing participation, the Denmark-Uganda partnership was more successful, and arguably more sustainable, than the Sweden-Mali partnership in contributing to sustainable water development.

This concluding section synthesizes the two earlier case studies and identifies the different mechanisms observed in both. It further elaborates on how these mechanisms assisted both Uganda and Mali in successfully achieving sustainable water development. Partnership mechanisms are also discussed to determine whether there is, in fact, a specific Nordic approach to sustainable water development. The section following identifies a number of mechanisms that should be considered for future partnerships that wish to help LDCs achieve sustainable water development. Finally, the last section addresses the UN's involvement in both cases, the result of this involvement, and what could be improved upon to increase potential in realizing the objectives of SDG 6 and the

The Differing Nordic Approaches to Sustainable Water Development

As illustrated in the case study chapters, Denmark and Sweden have contributed to successful sustainable water development in Uganda and Mali respectively. Denmark, as one of the leading development partners in the JWESSP, has helped Uganda make progress towards sustainable water development. At the beginning of the JWESSP (2013/14), water accessibility and availability for rural communities in Uganda was 64% (Government of Uganda, 2015). By 2016/17, this number had risen to 70%, representing a 6% increase in access to safe water in rural Uganda (Government of Uganda, 2017). The same result was not found among Ugandans living in urban areas of the country. Urban accessibility to safe water decreased by 2% from the start of the JWESSP (2013/14) to 2016/17. The difference between rural and urban accessibility can be attributed to rural accessibility receiving greater support. Shifting to the functionality component of the JWESSP, rural functionality was stagnant at 85% but urban functionality went from 89% at the beginning of JWESSP to 92% (Government of Uganda, 2017). In the functionality component, the greatest change was noted in the WfP functionality. Originally, the WfP was measured at 74% in 2013/14 and by 2016/17 the component finished at 85%, representing a total increase of 11% (Government of Uganda, 2017).

The water quality component of the JWESSP saw slight improvements over the 5-year period. In 2013/14, 53% of protected rural water sources were free from contamination and by 2016/17, 59% of protected rural water sources were free from

contamination, representing a 6% increase since the beginning of the JWESSP (Government of Uganda, 2017). For large town water sources, 100% were free from contamination in 2013/14 and 99.6% of sources were free from contamination in 2016/17, showing a slight decrease of 0.4% (Government of Uganda, 2017). The colour parameter of urban sources revealed only a 1% increase since the beginning of the JWESSP. In 2013/14, 90% of sources met national colour standards and by 2016/17, it had increased to 91% (Government of Uganda, 2017). The wastewater BOD component had a 41% compliance rate with national standards in 2013/14 and by the end of the JWESSP, 44% of sources met national standards, representing a 3% increase during this timeframe (Government of Uganda, 2017). A significant decrease was noted however for TSS in wastewater: 73% of sources met national standards at the beginning of the JWESSP but by the end of the initiative, the compliance rate was only 53%, resulting in a 20% decrease overall (Government of Uganda, 2017).

Although the sanitation component of the JWESSP did not receive Danish primary involvement, improvements were noticeable in the sanitation sector of Uganda. In rural households, 75% of households had access to appropriate sanitation in 2013/14 and this number rose to 80% in 2016/17 representing a 5% increase overall (Government of Uganda, 2017). Additionally, 84% of urban households had access to adequate sanitation in 2013/14 and by the end of the JWESSP, the number had risen to 86%, constituting a 2% increase (Government of Uganda, 2017). The final indicator, hand-washing, saw 33% of rural households had access to hand-washing facilities in 2013/14 and by 2016/17, this number had risen to 37%, representing a 4% increase (Government of Uganda, 2017). Schools, on the other hand, saw a 3% decrease over the course of the

JWESSP falling from 38% at the beginning of the JWESSP, to 35% by the end of the initiative (Government of Uganda, 2017). Over the course of the JWESSP, only four parameters recorded a decrease since the beginning of the initiative, which was largely due to an increase in sampling as the JWESSP continued.

While the Denmark-Uganda partnership and the JWESSP measured increases for the majority of indicators in great part due to prioritizing participation, the Sweden-Mali partnership was markedly different. Unlike the Denmark-Uganda partnership, the Sweden-Mali partnership, with UNICEF as the leading agency, was only able to meet one target as part of the UNICEF Mali initiative by prioritizing implementation. Although the UNICEF Mali initiative was only able to meet one target, the partnership was still successful as it increased Mali's standing in the water and sanitation sector and further contributed to sustainable water development. In 2015, the UNICEF Mali initiative used three indicators to measure their success. The first indicator measured the number of the affected population provided with access to safe water (constructed/rehabilitated) (UNICEF, 2015c). The result was 123,200 people (target=441,600 people) were provided with access to safe water with UNICEF's contribution being 41% of the total results (UNICEF, 2015c). The second indicator included the number of SAM children receiving a WASH kit and hygiene promotion session (UNICEF, 2015c). The sector was able to provide 11,996 SAM children (target=136,000) with WASH knowledge and materials, with 82% of the results attributed to UNICEF involvement (UNICEF, 2015c). The final indicator measured the number of health centres with a minimum WASH package (UNICEF, 2015c). The results indicated that the sector provided a minimum WASH package to 193 health centres

(target=280) and UNICEF's contribution accounted for 25% of the total results (UNICEF, 2015c).

Unlike the JWESSP, the UNICEF Mali initiative continued to evolve in important ways, such as developing new indicators for reporting. These included the number of water points constructed/rehabilitated and the number of WASH emergency household kits distributed (UNICEF, 2016b). Similar to 2015, the number of SAM children receiving a WASH kit and a hygiene promotion session, the number of health centres with a minimum WASH package, and the number of affected population provided with temporary access to safe water comprised the remaining 3 indicators (UNICEF, 2016b). In 2016, the number of SAM children receiving a WASH kit and hygiene promotion session were 20,041 (target=134,947) with UNICEF contributing 19% towards the total results (UNICEF, 2016b). The number of health centres with a minimum WASH package in 2016, saw the sector achieve its target of equipping 249 health centres with a minimum WASH package by assisting 449 health centres (UNICEF, 2016b). The contribution from UNICEF to these results was 13%. The number of affected population provided with temporary access to safe water was 251,868 people (target=372,454), with 61% of the total results attributed to UNICEF (UNICEF, 2016b). The number of water points constructed/rehabilitated by the sector was 307 (target=792) with UNICEF's contribution to the overall results being 64% (UNICEF, 2016b). The final indicator included the number of WASH emergency household kits distributed in which the sector distributed a total of 21,985 household WASH kits (target=24,380) and UNICEF's contribution to the total results was 27% (UNICEF, 2016b).

In 2017, the UNICEF Mali initiative decreased the number of indicators from five to four. The first indicator - “# of water points constructed/rehabilitated” - the sector built/repared only 437 water points (target=1,239) with UNICEF’s contribution to the reporting being 45% (UNICEF, 2017). For the second indicator - “# of affected population provided with temporary access to safe water” - the sector reached 101,134 people (target=294,327) with UNICEF accounting for 26% of the total results (UNICEF, 2017). For the third indicator - “# of people having access to permanent drinking water” - the sector was able to provide access to 354,433 people (target=495,600) with permanent access to safe water with UNICEF involvement accounting for 26% of the overall results (UNICEF, 2017). Lastly, for the fourth indicator - “# of households that received WASH emergency kits” - the sector provided 8,992 households (target=9,730) with WASH emergency kits, with UNICEF involvement amounting to 48% of the total results (UNICEF, 2017). Overall, UNICEF’s involvement accounted for approximately 39% of the total results over the entire initiative.

The above results indicate that both Denmark and Sweden helped Uganda and Mali reach reputable standing in several key areas in the water and sanitation sector thus, attributing to overall sustainable water development. Interestingly, although the partnerships differed drastically, both partnerships contributed to increasing the potential of Uganda and Mali to achieve the objectives outlined in SDG 6. In the following section, the different mechanisms used by Denmark and Sweden will be discussed to explain how each partnership contributed to sustainable water development.

Successful Nordic Mechanisms used for Sustainable Water Development

Denmark and Sweden are leading countries in sustainable development. Not only are they best prepared to foster sustainable development initiatives (Kroll, 2015), but they have exhibited the leadership necessary to engage with LDCs and create partnerships for successful water management. Denmark's partnership with Uganda, through the JWESSP, has contributed to sustainable water development. There are three main mechanisms that have contributed to this successful partnership:

1. Prioritized participation;
2. Consistent indicators; and
3. Commitment to collaboration.

The primary partnership mechanism of the Denmark-Uganda partnership was that Denmark effectively prioritized participation. This was the most important mechanism of the Denmark-Uganda partnership as the engagement of CBOs, CSOs, NGOs, and other organizations representing marginalized peoples, helped ensure greater accountability from development partners and facilitated a grassroots approach to decision-making, problem-solving, and policy formulation. To successfully prioritize participation, a partnership must include lead partners from (1) the global North and South, (2) state and non-state actors, and (3) marginalized/vulnerable populations (Biermann, 2007). The Denmark-Uganda partnership meets all three of these requirements. Firstly, the Denmark-Uganda partnership is a partnership between a developed country (global North) and an LDC (global South). Uganda was the only country involved from the global South. This is not surprising given that many LDCs do not have the capacity to engage in partnerships with other LDCs, or partnerships in general. The Denmark-Uganda partnership fulfilled the second component of prioritizing participation as NGOs (non

state actors) and other international organizations, such as the UN, as well as government departments (state) played an influential role in the implementation of several projects in the JWESSP. Lastly, the involvement of CBOs and CSOs effectively represented marginalized populations in Uganda and advocated for their involvement in all aspects of water management including decision-making, policy development, and problem-solving.

The second partnership mechanism that was important to the overall effectiveness of the partnership was that the JWESSP used consistent indicators. Using consistent indicators allows a partnership to maintain measurable targets and monitor consistent objectives without changing the implementation strategies of the initiative. The third key mechanism observed in the Denmark-Uganda partnership was the commitment to collaboration. This was evident through the Denmark-Uganda partnership but also among all of the other leading partners. The JWESSP was committed to involving all relevant actors instead of focusing on the implementation of projects. In addition, the Denmark-Uganda partnership followed several proponents of the Bali Guiding Principles without them being mentioned in the JWESSP framework. These principles include: (1) helping achieve the objectives of national development frameworks, and (2) linking global development goals/outcomes (UNDESA, 2003). The Denmark-Uganda partnership also focused on accomplishing the objectives of the NDP II, which had an SDG alignment rate of nearly 70% (DANIDA, 2017c), illustrating the partnership's commitment to following global development models in order to advance sustainable water development in Uganda.

The JWESSP has helped Uganda meet several targets outlined in the NDP II, principally in: rural access to sanitation (80% access in 2016/17 through JWESSSP and

surpassing the 2016/17 target of 47% listed in the NDP II) (Government of Uganda, 2015); urban access to sanitation (86% access in 2016/17 through the JWESSP surpassing the 2016/17 NDP II target of 45%) (Government of Uganda, 2015); and household hand-washing (37% in 2016/17 through the JWESSP and surpassing the 2016/17 target of 32% outlined in the NDP II) (Government of Uganda, 2015). Only one of the main indicators receiving significant support from Denmark, accessibility to safe water, was unable to meet the targets outlined in the NDP II under the JWESSP. Overall, the three partnership mechanisms; prioritizing participation, consistent indicators, and commitment to collaboration, as well as the unintentional inclusion of the Bali Guiding Principles into the partnership, resulted in effective sustainable water development in Uganda.

Like the Denmark-Uganda partnership, the Sweden-Mali partnership also contributed to effective sustainable water development. However, the Sweden-Mali partnership revealed different partnership mechanisms than those noted in the Denmark-Uganda partnership. The mechanisms of the Sweden-Mali partnership included:

1. Prioritized implementation;
2. Earmarked funding; and
3. Varying indicators

The most significant difference between the Denmark-Uganda partnership and the Sweden-Mali partnership is that Denmark focused on prioritizing participation and Sweden focused on the prioritization of implementation. Instead of addressing the participation of all relevant groups, the UNICEF Mali initiative used UNICEF as a leading agency to implement projects to meet the objectives of the initiative. There was

little involvement from CBOs and CSOs according to UNICEF Mali humanitarian reports, and there was little contribution from NGOs in the implementation process. Nonetheless, UNICEF was able to assist communities in becoming ODF, to help SAM children, health centres, and households receive WASH kits, and provide access to permanent safe water sources. This success is most likely attributed to a lack of competing interests between partners and the fact that UNICEF was clearly the leading partner in the initiative. UNICEF's role was more influential than that of the implementation agency, it also provided policy dialogue, funding strategies, and was able to address sustainable water development in a region prone to conflict. Furthermore, other development partners were influential as part of the UNICEF Mali initiative, but they only provided funding to UNICEF. While UNICEF was the lead agency for the initiative, its involvement only contributed to 39% of the total results, indicating that the sector could most likely fulfill aspects of sustainable development without assistance from UNICEF.

Another key mechanism identified in the Sweden-Mali partnership was that the relationship between development partners and UNICEF was strictly financial. Sweden, the largest financial contributor to the project, and other development partners provided earmarked funding to UNICEF for the UNICEF Mali initiative. For this reason, development partners had a hands-off approach to sustainable water development. This resulted in UNICEF having control over how financial resources were spent, government dialogue, and indicator development, with the latter representing another significant mechanism in the Sweden-Mali partnership.

The last mechanism illustrated in the Sweden-Mali partnership through the UNICEF Mali initiative was the use of varying indicators. Unlike the Denmark-Uganda partnership, the Sweden-Mali partnership under UNICEF Mali used varying indicators for reporting. Varying indicators can be helpful as it allows partners to measure different outputs and address more issues rather than focusing on a select few. However, using varying indicators can also result in the project only getting baseline measurements rather than seeing substantial progress across a specific indicator. Although the types of indicators varied from year-to-year, some indicators were consistently used throughout the entire UNICEF Mali initiative.

In these ways, the two partnerships displayed very different partnership mechanisms. The Denmark-Uganda partnership aimed to address the participation gap, used consistent indicators, and was visibly committed to collaboration. For the Sweden-Mali partnership, the mechanisms included addressing the implementation gap, the financial relationship between partners, and the use of varying indicators. Ultimately, both partnerships were able to contribute to overall effective sustainable water development in Mali. However, the Sweden-Mali partnership was unable to follow some of the Bali Guiding Principles and link the development efforts of UNICEF Mali to national development plans, while the use of varying indicators gave rise to arguably intangible results; varying indicators produced inconclusive evidence as the majority of indicators only gave a baseline standing for the initiative components. Therefore, I argue that the Sweden-Mali partnership was less successful than the Denmark-Uganda partnership because it prioritized implementation rather than the participation and did not closely follow the Bali Guiding Principles. The Denmark-Uganda partnership showcased

how partnerships can solve greater challenges than the mismanagement of water. The partnership displayed how important it is to address the economical, environmental, and social dimensions of sustainable development. This included the participation of marginalized peoples, policy dialogue to counteract the impacts of climate change and water insecurity, and how the proper management of water can spur economic development and assist Uganda in becoming a middle-income country by 2040.

Although the two partnerships are vastly different in their approach, they both contributed to sustainable water development and left Uganda and Mali in a better standing than they were before involvement. The differences between the two partnerships not only indicate that there are several ways partnerships can facilitate meaningful sustainable water development: these differences also reveal that there is no specific Nordic approach to sustainable water development. Considering that Nordic countries have similar attributes - heavily regulated, highly taxed, a population comfortable with government regulation, socialist leanings, and aspirations for accomplishing the SDG framework - it could be expected that there would be a similar approach to building partnerships aimed at sustainable water development. Even though a specific Nordic approach was hypothesized, Denmark and Sweden used different processes to deliver the same outputs in sustainable water development.

As these Nordic countries historically followed a social democratic model, a specific Nordic approach would likely aim to prioritize participation: a social democratic model emphasizes the importance of participatory democracy and a grassroots approach to decision-making. Thus while there was no specific Nordic approach, is it appropriate to assume there is a specific approach developed countries should take in achieving

sustainable water development in LDCs? The approaches/mechanisms of different Nordic countries could indeed be used to structure how future partnerships aimed at sustainable water development should be created. The next section will discuss what mechanisms should be followed for future partnerships aimed at sustainable water development and how creating a framework for partnerships might be counter-intuitive and problematic.

A Framework for Future Sustainable Development Partnerships

Prioritizing implementation or participation are fundamental decisions that must be made by partnerships when hoping to contribute to sustainable water development. Both approaches resulted in sustainable water development; however, the Denmark-Uganda partnership was able to meet the targets of the JWESSP and the NDP II more effectively than was the Sweden-Mali partnership and the targets of the UNICEF Mali initiative. Although there may be no specific Nordic approach to sustainable water development, using Denmark and Sweden as case studies, partnerships should focus on prioritizing participation. Importantly, prioritizing participation does not mean ignoring the implementation and reinforcement of internationally agreed upon frameworks and projects. Instead, implementation should be viewed as a second priority compared to garnering the support of all relevant parties that would benefit from sustainable water development. This would give the direct beneficiaries of the initiative the opportunity to initiate meaningful change in their communities, countries, and regions to better the current generation and future generations and increase the potential of creating sustainable results. Not only should developed countries focus on addressing the

participation gap in LDCs within sustainable water development partnerships, but all partnerships aimed at sustainable development should follow this bottom-up approach.

Perhaps not surprisingly, this particular approach is aligned with concepts that have already been discussed at the Stockholm Conference, in the Dublin Principles and the Bali Guiding Principles, as part of the emerging development paradigm in the MDGs and SDGs, and concepts relating to water governance such as IWRM and soft path approaches to water management. Considering the importance of these documents to the creation of sustainable development partnerships, it is imperative that the UN continues to assist developed countries in fostering partnerships with LDCs.

The UN has expressed the importance of partnerships for sustainable development and has facilitated the creation of numerous partnerships. However, in terms of UN involvement in sustainable development partnerships, the Sweden-Mali case highlights many challenges. Understandably, the security situation in Mali is much more severe than that of Uganda, and due to the threat of conflict, the UNICEF Mali initiative was unable to reach desired milestones. Additionally, the UN and sub-organizations affiliated with the UN are generally used when countries are unwilling to take action. This sentiment resonates in the Sweden-Mali case as UNICEF Mali was ill-equipped to deal with the shortcomings of development partners, including Sweden and the Malian government. Unfortunately, and not surprisingly, UNICEF struggled with gaining additional financial resources from development partners, human resources, and time constraints in realizing their desired objectives. Although the Sweden-Mali partnership was impacted by the ongoing deteriorating security situation in Mali, this partnership identifies conflict as an influencer when deciding what to prioritize: participation or implementation.

Despite these struggles, UNICEF implemented several key projects such as monitoring newly constructed/rehabilitated water sources and WASH facilities, and follow-up approaches to communities impacted by conflict, natural disasters, and population displacement, while maintaining a steady reputation as a trusting and respectful partner. However, if the UN wants to realistically meet the objectives of its comprehensive SDG framework, then it needs to focus on building sustainable development partnerships that will create sustainable results. This requires the UN to play a more influential role in not only prioritizing implementation, but also spending an appropriate amount of time/resources on the prioritization of participation, specifically the involvement of CBOs, CSOs, and NGOs. However, creating a framework for partnerships aimed at sustainable development, especially sustainable water development, might be challenging due to the unique circumstances pertaining to different partnerships.

The two partnerships - Denmark with Uganda and Sweden with Mali - demonstrated that sustainable water development was achieved by using very different approaches. This is a key feature of innovative and integrative solutions. Like this example, no two partnerships are the same and therefore, one partnership may be able to excel by focusing on one important attribute – the prioritization of participation - and one may be able to accomplish sustainable water development by prioritizing implementation. The value of using partnerships as a pluralistic approach to sustainable development is that every problem will be unique, resulting in unique decision-making and problem-solving. Instead of developing a framework to build successful partnerships, I advocate for a partnership to focus on ensuring the participation of groups on the ground - CBOs, CSOs, other marginalized populations - as this approach has illustrated

the potential of not only achieving sustainable development in general, but generating sustainable results in water management. With the emerging development paradigm set to continue for decades, finding integrative and innovative solutions for sustainable development remains a priority for the international community. However, empowering local communities and individuals should be a requirement when developing innovative solutions aimed at sustainable development and guaranteeing a better way of life for future generations.

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