TAPPING INTO SUSTAINABLE WATER GOVERNANCE IN YANGON'S INFORMAL SETTLEMENTS

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The People's Process: Tapping into Sustainable Water Governance in Yangon's Informal Settlements

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Executive Summary

In an increasingly conflict-ridden world, ensuring sustainable access to essential services for vulnerable populations presents a considerable challenge. Existing best practices for sustainable development, including participatory processes and community-led, collaborative governance structures, often overlook applications in conflict settings. As such, there is a need to study and adapt these approaches in order to ensure that sustainable development efforts leave no one behind.

The following paper will address this research gap by investigating a case study of water governance in Yangon, Myanmar. In February 2021, the Myanmar military staged an unexpected takeover of the government which has led to frequent clashes between the de facto authorities and the resistance movement. Within this context, the UN-Habitat office in Myanmar is in the process of establishing water distribution systems. These systems will provide clean water to inhabitants of informal settlements as a part of the COVID-WASH project. This project is an emergency response project designed to reduce the spread of COVID-19. When implementing projects in communities, UN-Habitat uses a participatory methodology called the People's Process. The People's Process includes the creation of Community Development Committees (CDCs) which, in the COVID-WASH project, will manage the water distribution systems. However, it is unclear how the conflict setting impacts the People's Process and whether it is able to establish water governance systems that will be able to sustainably supply clean water to the informal settlement residents.

The research question is thus, **"Does the People's Process contribute to creating sustainable water governance structures in the current context of Yangon's informal settlements, and if so, in what ways?"** The following sub questions are used to answer the main research question: (1) What best practices exist for creating community-led sustainable water governance structures? (2) How does UN-Habitat operationalize the People's Process for water governance in Yangon's informal settlements? (3) In what ways does the People's Process compare to best practices for creating sustainable water governance and why? (4) In what ways does the conflict setting affect the ability of the Peoples' Process to create sustainable water governance and why?

Sub question one is answered through a literature review which investigates relevant fields such as participatory processes, governance of common pool resources, collaborative governance, and water governance. Literature on contextual factors relevant to the situation in Myanmar are also discussed. The results of the literature review are then used to create a theoretical framework for assessing UN-Habitat's water governance structures. The resulting framework is grounded in a realist review which investigates how and why systems work the way they do. The following sub questions are answered with data from interviews. Nine interviews were conducted with UN-Habitat staff, members of CDC from similar projects, and one representative from the NGO WaterAid. Transcripts of the interviews were coded for analysis.

To answer sub question two, an outline of the People's Process as used to implement the COVID-WASH project is presented and compared to other outlines of the People's Process. Sub question three is then answered by investigating where UN-Habitat's process aligns with the theoretical framework and where and why it does not. An actor analysis is another key result of this research. The discussion then expands on the results in order to answer the main research question, as well as sub question four.

Ultimately, the People's Process emerges as a powerful participatory model that fosters community ownership and engagement. The CDCs follow a well structured and functional governance framework. Given the 5-10 year lifecycle of the distribution systems, the governance structures appear to be somewhat sustainable within limitations. However due to a lack of clear cut parameters for sustainability, it is difficult to assess to what degree these structures are sustainable. Two points stand out from the research which may serve as areas for improvement. First, CDCs face difficulties in incentivizing community members to fill vacant positions. Second, financial constraints limit the CDCs' ability to undertake substantial improvements beyond routine O&M. It was additionally found that the conflict setting has a greater impact on UN-Habitat's processes than on the CDC's themselves. For the CDCs, the conflict setting primarily serves to exacerbate existing problems. As such, it may be more productive to search for ways to improve the resilience of the governance structures as a means of ensuring they are sustainable in the face of shocks to the system.

For UN-Habitat, recommendations therefore include considering how collaborative governance may be used to enhance the resilience of the systems by sharing the governance responsibilities of the CDCs among multiple actors. Additionally, greater reflection on what outcomes are sufficiently sustainable and how those can be empirically monitored and evaluated would allow for a better judgment on where improvements to the water governance structures are needed. Recommendations for future research include adding aspects of causality to the theoretical framework in order to identify which elements are directly linked to sustainability as an outcome. Additionally, further investigation into how community-led, multi-actor systems operate in a variety of conflict settings could be useful in refining the conclusions of this research.

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Acronym List

CAP	-	Community Action Plan
CDC	-	Community Development Committee/Council
CGR	-	Collaborative Governance Regime
CIA	-	Community Implementation Agreement
CSO	-	Civil Society Organization
GAD	-	General Administration Department
HQ	-	Head Quarters
LMICs	-	Low and Middle Income Countries
M&E	-	Monitoring and Evaluation
MCCA	-	Myanmar Climate Change Alliance
MES	-	Myanmar Engineering Society
NGO	-	Non Governmental Organization
O&M	-	Operation and Maintenance
OECD	-	Organization for Economic Co-operation and Development
SDG	-	Sustainable Development Goal
SWM	-	Solid Waste Management
TOR	-	Terms of Reference
UNCT	-	UN Country Team
UNDP	-	UN Development Programme
UNH	-	UN-Habitat
WA	-	WaterAid
WASH	-	Water Sanitation and Hygiene
WSS	-	Water Supply and Sanitation
YCDC	-	Yangon City Development Council
YRG	-	Yangon Regional Government

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Introduction

1.1 Sustainable Development in Conflict Settings

In 2022, state based conflicts resulted in the highest number of battle related deaths since 1984 (Obermeier & Rustad, 2023). In the same year, 20% of the world's population was exposed to political violence (ACLED, 2023). These numbers paint a worrying picture of an increase in global conflict. According to the OECD, fragile contexts, which are often characterized by conflict and violence, disproportionately impact vulnerable populations. 73% of people living in extreme poverty are also living in fragile contexts with that number expected to rise to 84% by 2030 (OECD, 2022). Conflict, amongst all its devastating impacts, has the ability to turn back sustainable development progress by decades (UNDP, 2019). Sustainable development practices must be able to adapt to conflict settings in order to prevent the most vulnerable from becoming more and more at risk.

One particularly vulnerable group of people are residents of informal settlements. As a result of their insecure tenure and lack of recognition from authorities, residents often face a constant threat of eviction which may grow stronger in conflict settings. Informal settlements are characterized globally by high population densities, household overcrowding, unsanitary conditions, and inadequate access to basic services (UN-Habitat, 2022b). These challenges are often addressed through slum upgrading initiatives, which rely heavily on models of participatory processes and community driven, collaborative governance structures. These models have evolved over time to ensure development projects are equitable and the results are sustainable (Johar, 2017; Parikh et al., 2020; Ostrom, 1990; Ansell & Gash, 2008).

A specific subset of upgrading work in informal settlements involves establishing access to clean water, which the UN General Assembly codified as a human right in 2010. Access to clean water is essential for people to live healthy lives as it safeguards against the spread of disease. Sustainable Development Goal (SDG) 6 sets the goal of extending clean water to all people by 2030 (UN, 2015a), of which sustainable management of water resources is a key part. Access to clean water is also an issue increasingly subject to the effects of climate change (UN Water, 2019). Ensuring that vulnerable populations in informal settlements can sustainably access clean water, regardless of circumstance, is thus an increasingly urgent and “wicked” problem (Rittel & Webber, 1973). There is, however, a significant literature gap regarding how community led water governance structures work in the context of both informal settlements and conflict settings, as well as whether or not these governance systems can be sustained over time.

1.2 Myanmar Case Study

In February of 2021 the military in Myanmar staged an unexpected takeover of the government. The takeover has faced resistance from the people which has frequently led to violent conflict. Attacks between People's Defense Forces and security forces are especially common in the informal settlements in Yangon (Thit, 2022). While the military forces claim to be the legitimate government of Myanmar, they are not recognized as such by the international community or by the citizens of Myanmar at large. Regardless, the de facto authorities have entrenched their power by reorganizing branches of government and appointing new members while disregarding the 2008 constitution (Noel, 2022).

An estimated 400,000 residents live in informal settlements in Yangon, Myanmar's largest city. In March of 2021, UN-Habitat began the project "*Building resilience against COVID-19 through WASH and waste management support in urban informal settlements*", henceforth referred to as the COVID-WASH project. This project, funded by the Japanese government, aims to secure and sustain access to water, sanitation, and hygiene (WASH) and solid waste management (SWM) services. This project was designed as an emergency support initiative to urgently ensure resident's right to clean water and sanitation was fulfilled. The first phases of the project focused on household distribution of information and resources to prevent the spread of COVID-19, provision of hand washing stations, and creating or improving SWM services. Another key sub deliverable of the project will be the construction of multiple water treatment and distribution systems within the informal settlements (UN-Habitat, 2021). Once constructed, these systems will be turned over to and managed by the community.

UN-Habitat, or the United Nations Human Settlement Program, has been operating in Myanmar since the early 1990's. UN-Habitat is mandated to implement SDG 11: "Make cities and human settlements inclusive, safe, resilient and sustainable" (UN, 2015b). On an organization wide level, UN-Habitat implements projects using the "People's Process". The People's Process is a UN-Habitat specific community engagement philosophy which establishes community level organizations, called Community Development Committees (CDCs), to implement and manage projects. UN-Habitat typically supplements their work in communities with advocacy and support for policy development. However, since the 2021 coup, UNCT (UN Country Team) engagement principles limit UN activities in Myanmar that may legitimize the de facto authorities, including any engagement with local authorities.

Meanwhile, climate change in Myanmar is also a rising area of concern with cross sectoral impacts (Kyed & Chambers, 2023). Climate change is a new area of focus for UN-Habitat Myanmar under the Myanmar Climate Change Alliance Phase 2 (MCCA2) program. Myanmar is thus currently facing the triple crisis of COVID recovery, conflict setting, and climate change. The COVID-WASH project must also contend with this triple crisis in the informal settlements. However there is limited literature regarding the People's Process in general and in particular how conflict settings impact its effectiveness.

1.3 Research Objective

This research aims to understand how the People's Process is used by UN-Habitat in Myanmar to implement the COVID-WASH project. It will also address to what extent the People's Process is able to create sustainable, community led water governance structures in a conflict setting. The topic will be approached through a multi-actor analysis of the strengths and limitations of the People's Process

through the application of existing theoretical models. This research will contribute to knowledge on how to effectively create sustainable water governance in the new political environment in Myanmar. The findings will also be more broadly used to draw conclusions on what limitations conflict settings present to sustainably supplying access to basic services in informal settlements. Additionally the findings will comment on how participatory process and community-led collaborative governance structures can succeed or fail to contribute to sustainability.

1.4 Research Questions and Approach

The following research question will be used to investigate the identified knowledge gap: **“Does the People’s Process contribute to creating sustainable water governance structures in the current context of Yangon’s informal settlements, and if so, in what ways?”**

In order to answer the main research question, the following sub questions will be used to guide the process:

1. What best practices exist for creating community-led sustainable water governance structures?
2. How does UN-Habitat operationalize the People's Process for water governance in Yangon's informal settlements?
3. In what ways does the People's Process compare to best practices for creating sustainable water governance and why?
4. In what ways does the conflict setting affect the ability of the Peoples' Process to create sustainable water governance and why?

This paper will begin in Section 2 by discussing key theories related to participatory processes, governance structures, water governance, and key literature related to the Myanmar context. From here, Section 3 will answer sub question 1 by presenting a theoretical framework that synthesizes the key theories discussed in Section 2. Section 4 will next present the research approach. Section 5 will outline the main results of the research in order to answer sub question 2 and 3. Section 6 will then further contextualize the results and answer the main research question as well as sub research question 4 along with a discussion of limitations and improvements to the theoretical framework. Section 7 will finally present a summary of the main conclusions while also discussing recommendations for both UN-Habitat and further research.

1.5 Disclaimer

The researcher, Madison Berry, affirms that they did not receive any compensation or financial support from UN-Habitat Myanmar in connection with this research. They do declare, however, that they were concurrently engaged as a Junior Expert by UN-Habitat Myanmar, operating under the terms of an International Individual Contractor Agreement.

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Literature Review

This section consists of a literature review which covers the key theories that are instrumental in answering the sub research question *"What best practices exist for creating community-led sustainable water governance structures?"* The literature in this section comes from several fields including literature on participatory processes, governance structures, and water governance. In order to better understand the context in which the problem is situated, literature on several contextual factors such as conflict settings, informal settlements, and climate change, with particular bias towards recent sources from Myanmar, have also been consulted. Finally, existing literature on the People's Process is also presented. The key theories from literature discussed in this section are used to formulate the theoretical framework as presented in Section 3.

2.1 Participatory Processes

Participatory processes are a cornerstone of contemporary urban development initiatives. As Arnstein (1969) puts it, "Participation of the governed in their government is, in theory, the cornerstone of democracy - a revered idea that is vigorously applauded by virtually everyone". Participatory processes are in particular favored in slum upgrading where, by ensuring that residents are involved in the process, the outcomes are assumed to better meet the resident's needs (Johar, 2017; Parikh et al., 2020) and overall increase the effectiveness of the interventions. Advantages of citizen participation in government level decision making often includes better policy and implementation of decisions (Irvin & Stansbury, 2004). Choguill (1996) further argues that participatory processes are not only meant to help communities help themselves, but to also serve as a means for communities to "influence decisions in the political arena about issues that affect them". Empowerment of the community is therefore a key outcome of participatory processes.

However, not all processes that claim to be participatory actually produce these outcomes. Arnstein's Ladder of Citizen Participation (1969) captures the different ways that citizen participation may manifest as tiered levels ranging from nonparticipation to degrees of citizen power with the highest level being citizen control (Figure 2.1.1). According to Arnstein, in order for a participatory process to empower citizens and give them the ability to impact the outcome of the process, the type of participation should fall in the upper rungs of the ladder.

Choguill (1996) aimed to apply Arnstein's ladder in low-income communities and countries and placed emphasis on the role the government fills. Choguill argues that self-management can emerge in communities in order to provide for their basic needs as a result of government neglect. The results of this self-management are highly dependent on external support in order to be successful. However,

even successful results from this kind of community self-management are not considered to be a successful form of participation because they are not able to influence the political decision making arena. Thus, this formulation of the ladder of participation excludes self-management as an objective, centering empowerment as the goal instead.

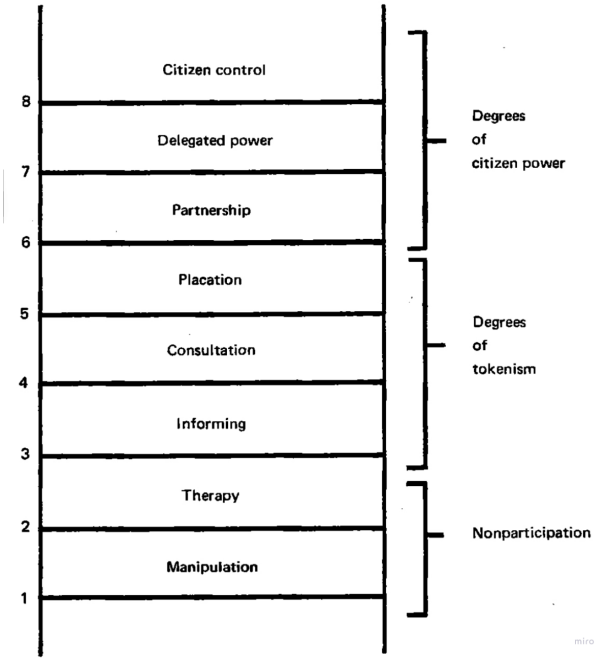

Figure 2.1.1: Ladder of citizen participation (Arnstein, 1969)

Arnstein's theory has also been criticized as being too simplistic. Irvin & Stansbury (2004) argue that the value of participation is not inherent. They provide an overview of the advantages and disadvantages of citizen participation, suggesting that a careful assessment of these factors should guide the decision of whether participation is necessary. With this in mind, Tritter and McCallum (2006) propose a mosaic as an alternative to Arnstein's ladder. A mosaic better captures the different motivations, uses, and effects of participation which are too complex to be represented only as a linear ladder. Ultimately, Tritter and McCallum (2006) argue that the participatory methods used should be appropriate for achieving the goals of the participation (Collins and Ison, 2006). Refetie and Millstein (2019) further critique participation as a means of empowerment by suggesting there is a 'glass ceiling' that limits what participatory planning can achieve. They discuss how the outcomes of participation can be hampered by politics, lack of funding, fatigued and disillusioned citizens, and land ownership issues.

Williams (2004) further questions the role participation plays in development. They analyze participation as part of a larger debate of political ideology, critiquing the widespread depoliticization of participation by likening it to a "softened neo-liberalism" which "acts to devolve development responsibility to the grass roots." They assert that the marginalized are rarely able to shift the focus of a project and are only empowered to take part in existing development. Development agencies then act only as facilitators without true concern for the outcome. Instead, they argue that participation should serve to hold state powers accountable while also more carefully considering how power dynamics impact participation. These critiques are addressed in David Harvey's "The Right to the City" (2008), which focuses on the right of citizens to actively participate in how urban spaces are designed. Harvey centralizes democratic urbanism as a key to achieving equality and providing

essential services to all citizens. Harvey sees the realization of the Right to the City as a product of collective struggle. Harvey also sees social movements and grassroots organizing as playing a crucial role in advocating for urban policies necessary for fulfilling the Right to the City. Frediani and Boano (2012) similarly analyze participation by investigating the ways in which participation in design processes manifests. They warn that participatory processes can be manipulated and co-opted to represent the interests of predetermined "beneficiaries" rather than the actual interest of the group. They also critique the ways in which power dynamics can impact the results of participation.

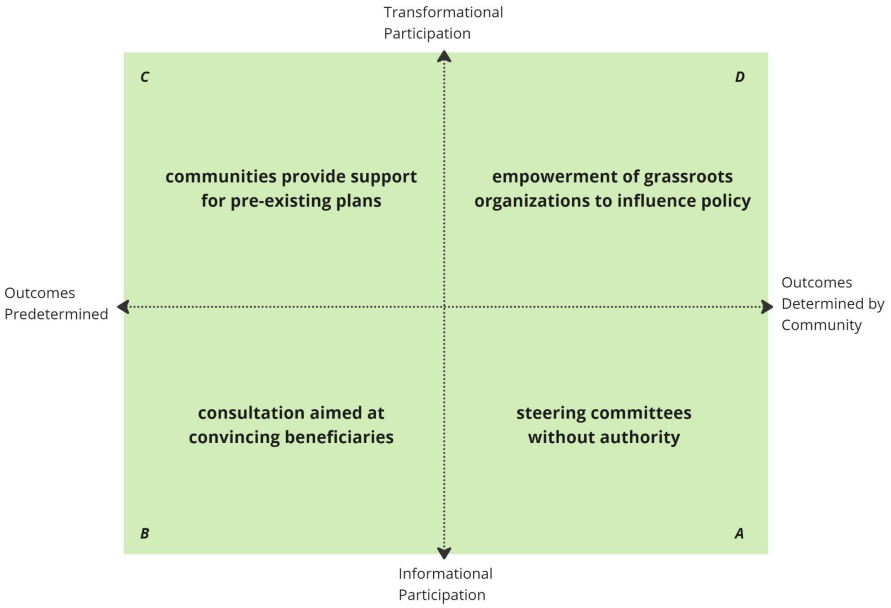

Figure 2.1.2: Reformulation of Frediani & Boano's (2012) diagram categorizing types of participation into four quadrants along two axis representing the outcomes and processes of participation

Ultimately, Frediani and Boano (2012) propose a division of participation into two axes which create four quadrants in which participatory projects may exist (Figure 2.1.2). The x and y axes represent the intention of the outcomes and processes of participation respectively. Quadrant A signifies steering committees that lack the authority to demand or influence decision-making processes. Quadrant B represents participation as consultation events aimed at convincing beneficiaries of a plan, but typically without granting participants substantial influence. Both A and B are "common in slum upgrading strategies in developing countries financed by international development agencies". Quadrants C and D represent more constructive approaches where participants have a direct impact on planning. In Quadrant C, community based organizations provide support for pre-existing plans, but efforts to uncover institutional powers or intra-community dynamics are still limited. Quadrant D represents projects that empower grassroots organizations to influence policy. In quadrants C and D, there is a greater emphasis on addressing the root causes of deprivation and enhancing community capacity to shape policy outcomes.

In "Designing Public Participation Processes" Bryson et al. (2013) proposes concrete guidelines for converting theory on participation processes into practice. These guidelines outlined in Figure 2.1.3 can be used by practitioners to evaluate and design participatory processes. Bryson emphasizes that the design of participatory processes should be iterative and that the guidelines should be supplemented by experience and theory.

Assess and design for context and purpose
1. Assess and fit the design to the context and the problem
2. Identify purposes and design to achieve them
Enlist resources and manage the participation
3. Analyze and appropriately involve stakeholders
4. Work with stakeholders to establish the legitimacy of the process
5. Foster effective leadership
6. Seek resources for and through participation
7. Create appropriate rules and structures to guide the process
8. Use inclusive processes to engage diversity productively
9. Manage power dynamics
10. Use technologies of various kinds to achieve participation purposes
Evaluate and redesign continuously
11. Develop and use evaluation measures
12. Design and redesign

Note: These are interrelated, iterative tasks, not a step-by-step template.

Figure 2.1.3: Guidelines for designing participatory processes (Bryson et al., 2013)

2.2 Governance Structures

2.2.1 Rules for Governance

In her book, “Governing the Commons”, Ostrom (1990) identifies eight design principles (Figure 2.2.1) and discusses additional factors that lead to the success of communal governance over shared resources. Governing the Commons functions as a rebuttal to Garrett Hardin’s “tragedy of the commons” which supposes that any shared resources will always be overused and thus deplete in value. Ostrom argues that the assumptions underlying the concept can be traced back to Thomas Hobbes' social contract theory, which contends that coercive government intervention is required to avert the tragedy of the commons. The proposed design principles not only challenge these notions but also offer a framework for understanding how communities can effectively manage common-pool resources and avoid the pitfalls of overuse and depletion. Ostrom’s work with commons, or common-pool resources, has been applied to a variety of disciplines over the years, including resource management and water governance structures specifically (Pahl-Wostl, 2009).

1. Define clear group boundaries.
2. Match rules governing use of common goods to local needs and conditions.
3. Ensure that those affected by the rules can participate in modifying the rules.
4. Make sure the rule-making rights of community members are respected by outside authorities.
5. Develop a system, carried out by community members, for monitoring members’ behavior.
6. Use graduated sanctions for rule violators.
7. Provide accessible, low-cost means for dispute resolution.
8. Build responsibility for governing the common resource in nested tiers from the lowest level up to the entire interconnected system.

Figure 2.2.1: Ostrom’s rules for governing the commons (Ostrom 1990)

Cox et al. (2010) empirically evaluated the relevance of Ostrom’s eight principles and levied several criticisms including a proposal to modify and expand several of the rules. Notably, they questioned the

scope of application along with the excessive rigidity of the rules. They assert that the rules should be understood as useful in predicting success rather than determining success. Cox et al. (2010) additionally discuss how there are no measures to account for instances where a rule exists in principle, but "in practice has been co-opted or undermined by locally powerful or external bureaucratic actors". The proposed modifications to the eight principles included splitting up and expanding rules one, two, and four (Figure 2.2.2) as it was found that the concepts introduced by Ostrom can have multiple applications that should be differentiated. For example, rule four, which originally focused only on monitoring the behavior of community members, was expanded to include monitoring the system itself as an additional rule. These additions by Cox et al. (2010) are useful in providing a more comprehensive and up to date version of Ostrom's rules.

Principle	Description
1A	User boundaries: Clear boundaries between legitimate users and nonusers must be clearly defined.
1B	Resource boundaries: Clear boundaries are present that define a resource system and separate it from the larger biophysical environment.
2A	Congruence with local conditions: Appropriation and provision rules are congruent with local social and environmental conditions.
2B	Appropriation and provision: The benefits obtained by users from a common-pool resource (CPR), as determined by appropriation rules, are proportional to the amount of inputs required in the form of labor, material, or money, as determined by provision rules.
3	Collective-choice arrangements: Most individuals affected by the operational rules can participate in modifying the operational rules.
4A	Monitoring users: Monitors who are accountable to the users monitor the appropriation and provision levels of the users.
4B	Monitoring the resource: Monitors who are accountable to the users monitor the condition of the resource.
5	Graduated sanctions: Appropriators who violate operational rules are likely to be assessed graduated sanctions (depending on the seriousness and the context of the offense) by other appropriators, by officials accountable to the appropriators, or by both.
6	Conflict-resolution mechanisms: Appropriators and their officials have rapid access to low-cost local arenas to resolve conflicts among appropriators or between appropriators and officials.
7	Minimal recognition of rights to organize: The rights of appropriators to devise their own institutions are not challenged by external governmental authorities.
8	Nested enterprises: Appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized in multiple layers of nested enterprises.

Figure 2.2.2: Revised rules for governing the commons (Cox et al. 2010)

2.2.2 Collaborative Governance

Collaborative governance is generally understood as an approach to governance of a system that involves multiple types of actors such as governments, organizations, and community members. The actors work together to carry out joint management and decision making. Collaborative governance often emphasizes cooperation, consensus-building, and recognition of diverse perspectives and links back to the ideals of democratic systems.

In their paper "Collaborative governance in theory and practice", Ansell and Gash (2008) highlight several key factors that influence the success of collaborative governance efforts. They emphasize that power and resource imbalances among stakeholders can create distrust and weak commitment to collaborative governance. Power differences are particularly problematic when some stakeholders lack the organizational infrastructure, skills, or expertise needed to effectively participate. Power differences can, however, be overcome through a commitment to empowering and representing weaker or disadvantaged stakeholders as well as incentivizing their active participation. Additionally, Ansell and Gash note that preexisting high levels of antagonism will require a high degree of interdependence, trust building, and facilitative leadership for collaboration to succeed. They note that facilitative leadership is crucial, with leaders needing skills to promote the active participation of all stakeholders. Institutional design, including clear ground rules for collaboration, and process transparency also play vital roles in creating effective collaborative governance.

In “An Integrative Framework for Collaborative Governance” Emerson et al. (2012) expands on Ansell and Gash’s definition of collaborative governance and does not limit collaborative governance to formal interactions between state and non-state institutions. This broader definition of collaborative governance is useful in the context of Myanmar where governance of systems may or may not include formal involvement of state backed institutions. Emerson et al. (2012) additionally proposes an integrated framework for collaborative governance (Figure 2.2.3). The framework depicts the *system context* which affects the *collaborative governance regime (CGR)* or the system in which public decision making happens. The *CGR* encompasses the *dynamics of collaboration* which are made up of three interactive components: *principled engagement*, *shared motivation*, and *capacity for joint action*. The interaction of these components produces *actions* which carry out the objectives of the CGR and lead to on the ground *impacts* and system wide *adaptations* which may in turn impact the *system context*. The proposed framework draws on similar frameworks but configures the elements to imply causal relationships between them.

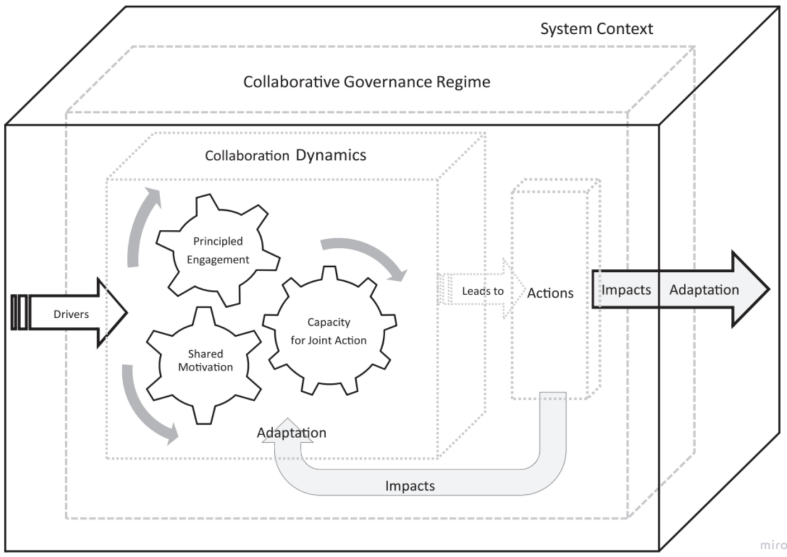

Figure 2.2.3: Integrated framework for collaborative governance (Emerson et al., 2012)

In “Collaborative Governance of Public Health in Low- and Middle-Income Countries”, Emerson (2018) further highlights that Low and Middle Income Countries (LMICs) were associated with a lower capacity for joint action in CGR. They recommend the adoption of longer term, systems oriented perspectives alongside a design oriented approach in order to adequately account for local circumstances. Effective leadership was also highlighted as crucial to overcoming limitations. Additionally, they note that in these contexts collaborative governance has sometimes been associated with neo-liberal policies which favor privatization and the reduction of government services.

2.2.3 Governance in Conflict

An additional challenge to establishing governance regimes in Myanmar is the ongoing conflict and unstable conditions for governance. Within governance literature, there are several points that authors raise as suggestions for mitigating conflict as a broad concept. Ostrom and Gardener (1993) note that in an antagonistic environment, collaboration can succeed when actors are made aware of their dependency on each other. Ansell and Gash (2008) further advise that antagonism cannot result in cooperation unless there is a high degree of interdependence between actors and steps are taken to remediate trust. Additionally, in instances of large power imbalances, there must be an explicit

commitment to the empowerment of weaker or disadvantaged actors. They further state that to maintain a collaborative environment clear ground rules and clear roles for actors must be established. Facilitative leadership is also identified as highly important. Concerning the issue of trust specifically, Henry & Dietz (2011) describe trust as "a behavior in which an individual puts herself at risk of an outcome dependent upon the actions of others", and contrast trust in actions with trust in information. Trust in the actions of others is described as crucial for sustainability, particularly in managing common resources, as it can influence an individual's participation. Several other sources also note how social cohesion and trust within communities can sometimes be increased as a byproduct of violent conflict (Gilligan et al., 2014; Bauer et al., 2016). This could be a result of noncooperative members leaving the community during violent conflict or the difficult circumstances causing people to naturally become more reliant on each other (Gilligan et al., 2014).

2.3 Water Governance

The importance of water governance, and the associated challenges, are well established fields of study. Water governance itself is considered somewhat of an umbrella term for a multitude of activities. These activities may include policy, planning, financing, management, and monitoring carried out in pursuit of "organized development and management of water resources and services" (Jiménez et al., 2020). The outcomes of water governance may vary, however, governance structures that allow for a system that can adapt and be sustainable are considered to be highly desired outcomes. Adaptivity in particular is valued as it allows for a governance system to be resilient against change. In terms of resilience in particular, "governance attributes such as polycentric and multilayered, coordination and collaboration, participation, deliberation, equity and inclusiveness, accountability and transparency, and adaptive capacity" are identified as key (Jiménez et al., 2020). Water governance is additionally considered to be more effective when it is shaped directly by the participation of affected parties. In general it is noted that principles for water governance should be taken as broad advice while the functioning of the governance system should be prioritized (Woodhouse & Muller, 2017).

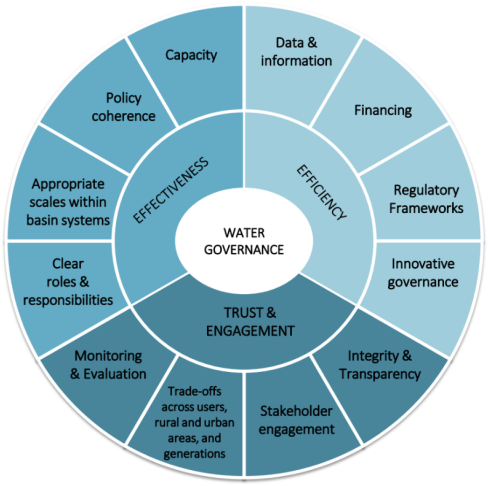

Figure 2.3.1: Overview of the 12 principles of water governance (OECD, 2015)

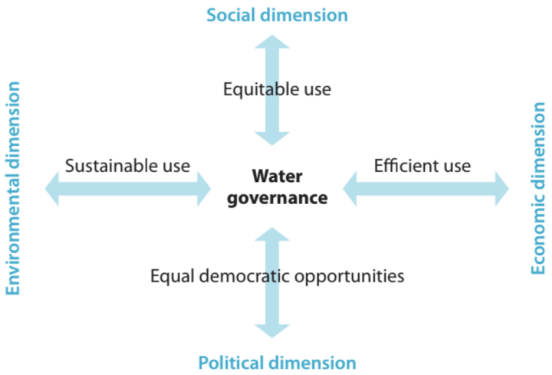

Figure 2.3.2: Four dimensions of water governance (UNDP, 2015)

The Organisation for Economic Co-operation and Development (OECD) recognizes water governance as a multifaceted, global challenge that includes issues such as inequality of access and affordability, water pollution, increasing water related disasters, lack of infrastructure, and capacity issues at the

sub-national level (OECD, 2016). The OECD has also identified 12 principles for water governance which were adopted in 2015 (Figure 2.3.1). These principles, designed to outline “good” water governance, fall under 3 broad categories: effectiveness, efficiency, and trust & engagement (OECD, 2015). In “User's Guide on Assessing Water Governance”, the UN Development Program (UNDP) (2015) additionally outlines four dimensions for assessing water governance (Figure 2.3.2), environmental, social, economic, and political. The UNDP distinguishes between water governance and water management, proposing that effective governance sets the stage for efficient management. They identify three key components of assessment involving stakeholders and institutions, governance principles which include transparency, accountability, and participation, and performance evaluation. They define governance functions as encompassing policy-making, law-making, regulation, capacity building, planning, allocation of resources, development and management of water resources, and the services.

For the purposes of this report, sustainability of water governance systems is defined as per the definition of sustainable development in the Brundtland Report. Sustainable water governance will thus govern systems in a way that they are able to “[meet] the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987). This definition of sustainability encompasses the need for a system to be sustainable along multiple dimensions.

2.4 Contextual Factors

The importance of understanding the context is highlighted by literature for many reasons. Within the participatory literature, there is a clear call to adapt approaches to fit local contexts, in order for them to be effective (Refetie & Millstein, 2019). In their collaborative governance framework, Emerson et al. (2012) also note how contextual factors function as a critical element that both shapes and is shaped by the governance regime. Water governance is also noted to be more effective when designed to take into account the specific local challenges (Woodhouse & Muller, 2017). More generally, Pawson et al. (2005), further underscores the impact that contextual factors can have on programs, emphasizing that identifying these factors is crucial for explaining the success or failure of an intervention. Adding to this, Adler et al.'s (2017) research on transdisciplinary knowledge transfer underscores that the context of a specific case study plays a key role in understanding what knowledge can be learned and subsequently applied. As such, it is important to understand the variety of intersecting issues that projects in Myanmar must currently contend with. Literature from several fields was selected to better understand this context including literature on conflict, climate change, and informal settlements.

Conflict: The publication “Joining Forces to Combat Protracted Crises: Humanitarian and Development Support for Water and Sanitation Providers in the Middle East and North Africa" from the World Bank (2021) discusses the multitude of ways in which water governance and service delivery is impacted in areas subject to fragility, conflict, and violence. It identifies several key problems that impact water supply and sanitation (WSS) providers including poorly managed water resources, competition from alternative providers, technical issues, rising energy costs for off-grid production, and financial strain due to increased service provider costs and reduced revenues. It additionally advocates for the strengthening of partnerships with humanitarian organizations to support WSS providers before and during conflict. These partnerships should aim to address both new and old problems as identified in Figure 2.4.1. The report also identifies a gap in literature addressing the delivery of WSS in fragile urban contexts.

Conflict and Climate: In "Making Adaptation Work: Addressing the compounding impacts of climate change, environmental degradation and conflict in the Near and Middle East" published by ICRC and the Norwegian Red Cross (2023), two main approaches to climate adaptation in conflict settings are outlined: state led and local, small scale adaptation. In contrast to state led adaptation efforts, local small-scale adaptation projects, particularly community based initiatives, tend to be more resilient. These projects often emphasize the need to change or diversify livelihoods to adapt effectively. However, they face significant limitations in accessing climate financing tailored to their specific needs.

In "Climate Change Action in Conflict-Affected Contexts: Insights from Myanmar After the Military Coup", Kyed & Chambers (2023) outline some of the challenges facing the region. These challenges include a rising frequency of natural disasters, including flooding, cyclones, droughts, and rising sea levels. They also discuss ways in which any perceived support for the government during crises becomes politicized. To effectively address these issues, recommendations include incorporating conflict analysis into programming, paying special attention to power dynamics, localizing initiatives, and moving away from top-down, centralized approaches.

Climate and Water: In the International IDEA Policy Paper "Myanmar's Environment and Climate Change Challenges", Hickey and Maria-Sube (2022) briefly outline how water related challenges intersect with climate change in Myanmar. They conclude that as urban populations grow there will be an increased demand for water. A scarcity of drinking water is therefore of particular importance. Issues such as saltwater intrusion may be key risk factors, especially in coastal areas. The polluted environment in Yangon also raises the risk of water contamination.

Informal Settlements: UN-Habitat's comprehensive "World Cities Report 2022" discusses the enduring presence of informal settlements and slums, particularly in low-income countries. Residents of informal settlements face a myriad of issues including insecure tenure, a lack of connections to municipal services, and extreme poverty. The report notes how extending infrastructure and basic services to these communities and using inclusive urban governance processes are critical for addressing poverty and inequality within cities.

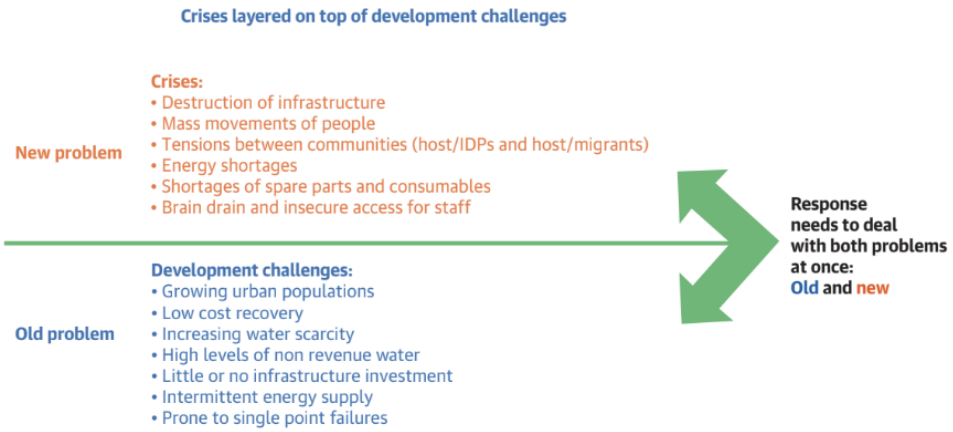

Figure 2.4.1: New and old development challenges in areas subject to conflict (World Bank, 2021)

2.5 People's Process

UN-Habitat uses the People's Process as an organization-wide framework for community engagement. The People's Process can be understood as a participatory process which aims to establish community led governance over resources or infrastructure. The process follows five main steps (Figure 2.5.1). The 2007 document from UN-Habitat "People's Process in Post-disaster and Post-conflict Recovery and Reconstruction" serves to outline the steps of the People's Process in its entirety. The document includes chapters on Social Mobilization, Damage Assessment, Community Action Planning, Community Contracts, Risk Mitigation and Awareness, and Monitoring Information System. As such, the document serves as a generalized guide on how to carry the People's Process including examples and key considerations for each step.

Figure 2.5.1: People's Process presented as 5 steps in official UN-Habitat literature (UN-Habitat, 2016)

The fundamental goal behind the People's Process is to move away from a "model of control by authorities to one of support to people" (UN-Habitat, 2016). In "The people's process: The viability of an international approach" Lankatilleke (2010), sometimes described as the father of the People's Process, explains that models of development that use the control paradigm are only able to help a limited number of people at high costs. In contrast, the People's Process uses a support paradigm that puts the people in control (Figure 2.5.2). The support paradigm is especially efficient at optimizing resources and minimizing costs as people are able to capitalize on the limited resources available to them. Lankatilleke argues that People's Process challenges the predominant notion in development that people need to be provided for. The People's Process thus overcomes the limitations of welfare which, in order to prevent abuse, engenders strict controls on who is afforded what resources.

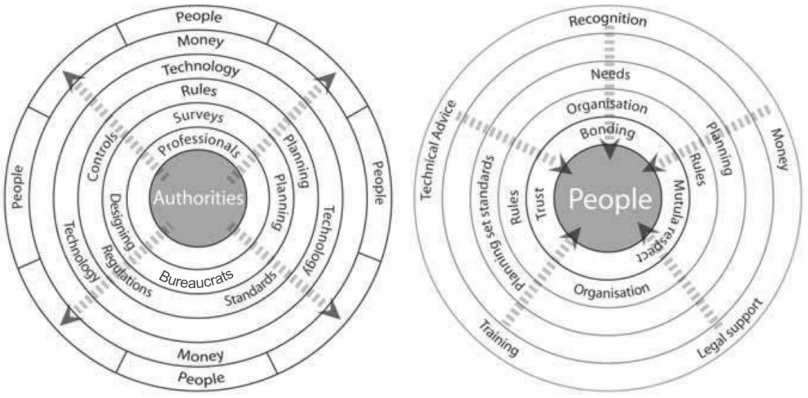

Figure 2.5.2: Control versus support paradigm (Lankatilleke, 2010)

In "Institutionalizing participatory slum upgrading: a case study of urban co-production from Afghanistan, 2002–2016", French et al. (2018) presents Afghanistan as a case study on the use of CDC for urban development over 15 years. The study breaks down the People's Process into five phases with 15 sub steps which it describes as the "typical CDC project cycle" (Figure 2.5.3). However,

it is noted every step is not always implemented, but the five main phases do usually describe how projects unfold. The study also proposes several critiques of participatory slum upgrading using the CDC model. Firstly, it highlights that CDCs cannot be an alternative to local level governance as community led approaches cannot address complex citywide challenges. They note that this kind of in situ upgrading is also not necessarily able to create sustainable governance systems. They also underscore how donor driven projects may not allow for meaningful community action planning given the short timelines and prioritization of civil works.

Phase 1: Raise community awareness			
Step 1: Contact community representatives.	Step 2: Hold small group meetings to discuss community assets, problems and their causes, and feasibility of a Community Development Council; generate demand for a large community meeting.		
Phase 2: Establish Community Development Councils (CDCs)			
Step 3: Hold large community meetings to present lists of issues, and the election of male and female CDC members, secretary, treasurer and chair.	Step 4: Establish Community Development Councils (CDCs).	Step 5: Prepare the CDC mission statement; get endorsement by community groups.	
Phase 3: Prepare a Community Action Plan (CAP)			
Step 6: Prepare a CAP by men and women.	Step 7: Get community endorsement of the CAP.	Step 8: Undertake neighbourhood self-initiated project(s).	
Phase 4: Prepare project design and submit project proposal			
Step 9: Design the neighbourhood project(s).	Step 10: Write up the neighborhood project proposal(s).	Step 11: Get neighbourhood endorsement of the project proposal(s).	Step 12: Prepare the community contract.
Phase 5: Implement, monitor and evaluate the project			
Step 13: Implement, monitor and report on project activities.	Step 14: Undertake the final project evaluation and social audit.	Step 15: Reflect on project learning experiences, review the CAP and prioritize future activities.	

Figure 2.5.3: People's Process in Afghanistan (French et al., 2018)

2.6 Conclusion

Literature from a wide range of fields was consulted in order to answer the sub research question, *"What best practices exist for creating community led sustainable water governance structures?"* These fields include participatory processes, governance structures, water governance, and contextual factors with a specific focus on recent sources from Myanmar. The review also incorporated insights from literature on People's Process.

The literature review presents a radical view of participatory processes that cast them as necessary to achieving sustainable project results, especially in urban settings and slum upgrading projects. Key ideals such as inherent value of citizen empowerment and democrats practices underlie many of the assumptions in the field. As such, participatory processes that do not strive to address power differences and give citizens political agency are often presented as less effective as creating sustainable change. However, there is also a line of evaluation that argues for a less linear view of successful participatory process. In this regard, the methods used in participatory processes need to only align with the reasons why participation is considered necessary.

Literature on the design of good governance structures can be broken up into theories that deal with the management of common pool resources and literature on collaborative governance. Effective governance of common pool resources was found to rely on a just and fair governance structure that the community is able to shape themselves. Additionally, the system must also be resilient against misuse where consequences are clear and both the system itself and those using it are monitored.

Similar to literature on participatory processes, collaborative governance literature emphasized the importance of considering power dynamics. Imbalances in power between actors, a failure to properly align goals and perspectives, and a lack of incentives for actors to participate in governance schemes all pose critical threats. However, transparency and explicit efforts to level the playing field and foster trust between actors can help foster better collaborative governance. Finally, while conflict can inhibit governance structures, they are not insurmountable if critical issues such as trust and power imbalances are carefully managed.

Water governance encompasses a wide variety of actions that are taken to oversee and manage water resources. Good water governance is supported by structures that are resilient and adaptive and include participatory aspects. The OECD and UNDP both provide frameworks for assessing water governance. Between the two frameworks, elements such as transparency, efficiency, and stakeholder engagement are commonly prioritized. Both frameworks also present criteria against which water governance structures can be assessed to determine the performance and quality of the governance.

Understanding contextual factors is clearly identified as critical for assessing the success of any program. As such, literature on specific contextual elements unique to Myanmar was discussed, including papers on the issues such as informal settlements, conflict, and climate change, as well as their intersections. Overall, these sources paint a stark picture of the current circumstances in Myanmar where each of these issues has many knock on effects that put the population at increasing levels of risk. These factors must be kept in mind as elements that will shape or have already shaped the COVID-WASH project.

Finally, the People's Process in official literature is presented as a generalized five step process that UN-Habitat projects are designed to follow. The process originated as an alternative to other concepts of development that places people at the center of their own development instead of authorities. A comparative study from Afghanistan breaks down the People's Process into an alternative series of five phases with 15 steps. This process is meant to outline the typical process that projects in Afghanistan follow. The study additionally acknowledges that there are several limitations to the People's Process that may impact its ability to create long term, systemic change.

Ultimately, best practices for creating community led, sustainable water governance structures can be summarized into a list of key factors that should be taken into account during the development and execution of projects. These list of factors are presented as a theoretical framework in the following section.

3

Theoretical Framework

This section introduces the theoretical framework that will be used to evaluate UN-Habitat's use of the People's Process to implement the COVID-WASH project. The framework is based on key theories introduced in the literature review in Section 2. The theories are synthesized into a single framework to allow for a unified analysis. The following sections discuss the conceptual design of the framework as well as how the individual factors were selected.

3.1 Framework Design

The theoretical framework is made up of five sub components: external factors, participatory processes, rules for governing the commons, collaborative governance, sustainable water governance. Aside from the external factors, these components represent the distinct schools of thought which describe aspects of the People's Process and community led water governance. These elements are organized within the framework and grounded through a realist perspective. A realist review aims to understand why complex programs succeed or fail by breaking the program down into mechanisms (M) and outcomes (O) which are in turn impacted by the greater context (C) (Figure 3.1.1) (Pawson et al., 2005). The choice of a realist perspective is outlined in more detail in Section 4.1 which addresses the research approach.

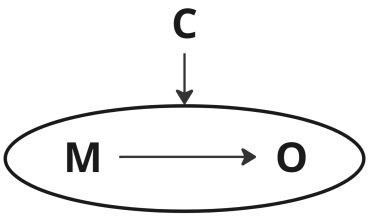

Figure 3.1.1: Realist framework

The framework is structured to consider the five components in a cohesive manner. It begins with the external factors (conflict setting, informal settlements, climate change) which establish the context. Participatory processes then serve as the mechanisms within this context, facilitating the creation of a governance structure as an outcome. This governance structure encompasses both the rules for governing the commons and the design of a collaborative governance regime. Subsequently, the governance structure serves as a mechanism itself which creates sustainable water governance as the ultimate outcome.

Within this framework, the central component includes both concepts of collaborative governance and the governance of the commons. These two concepts have been considered simultaneously because the implementation of the COVID-WASH project combines elements of both. The system is predominantly managed by CDCs, but CDCs rely on external organizations for support in their governance and management systems, hence the inclusion of concepts from collaborative governance literature.

The construction of the theoretical framework centers on the overarching objective of outlining the essential factors for fostering sustainable water governance. This framework serves as a diagnostic tool to assess the presence of these factors within UN-Habitat's People's Process and the governance structures it creates. It is important to note that this framework primarily offers a descriptive analysis, not an analytical one. It does not explore the reason why certain factors may or may not be present in UN-Habitat's system or what impact the presence or absence may have on the overall governance quality. There is thus unexplained causality between individual factors. Moreover, this framework does not consider hierarchy between elements, and although it has been adapted to encompass case-specific qualities, it is not meant to be prescriptive.

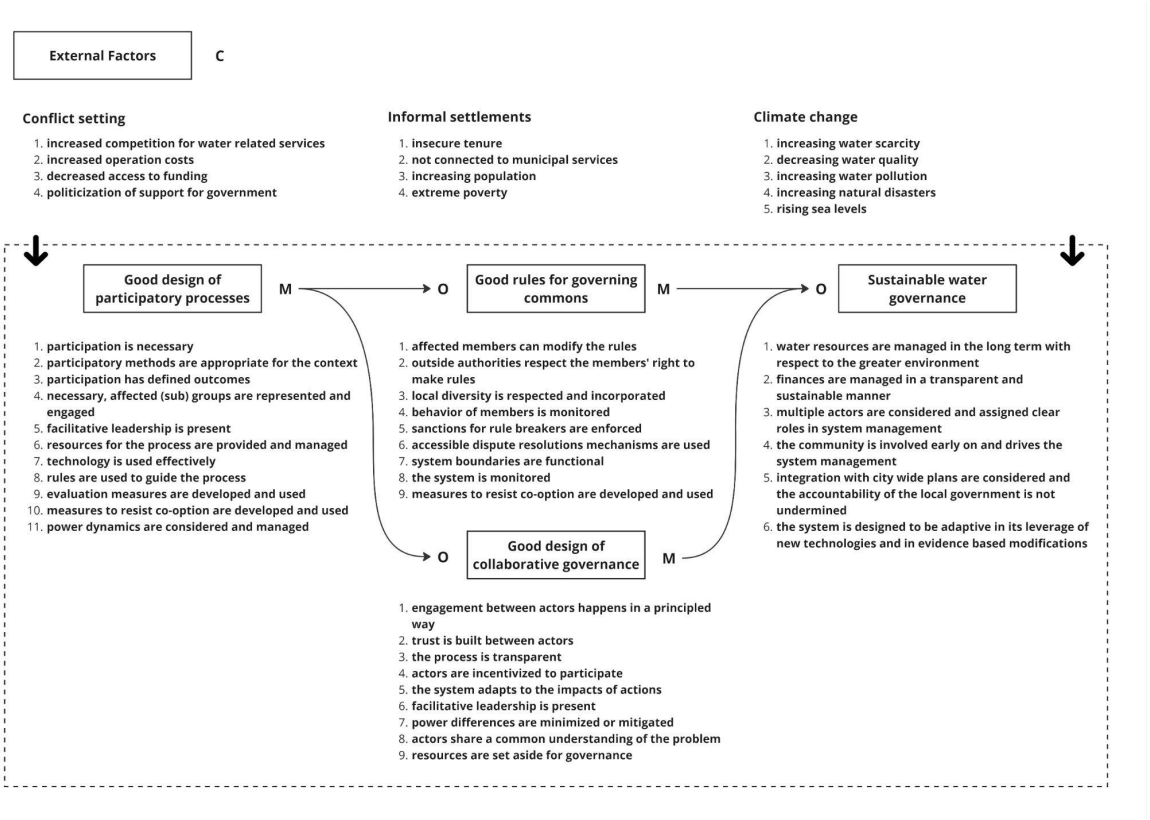

Figure 3.1.2: Theoretical framework; For larger print see Appendix H

3.2 Factor Selection

Factors were selected from the corresponding key theories and supporting literature presented in Section 2. The following subsections briefly outline which factors were selected and why. For each section, tables with each factor are presented alongside the associated literature is presented in Appendix A.

“Good Design of Participatory Process” focuses on examining how UN-Habitat engages communities in designing and establishing the water distribution systems and their associated governance structures. The selection of factors was mainly guided by the steps for designing a participatory process as proposed by Bryson et al’s (2013). Several elements were added or reformulated to highlight important critiques raised in literature on participation. Notably, the factors for assessing the necessity and appropriateness of participation were highlighted along with ways in which representation and power dynamics manifest and are considered.

"Good Rules for Governing the Commons" encompasses what should be considered when designing governance structures for common resources. The factors are primarily selected from Ostrom’s eight rules for governing common-pool resources but modified based on the analysis presented by Cox et al. (2010). Thus, system monitoring is split into two factors, one relating to monitoring of behavior and the other to monitoring the system. Additionally, one factor was added to represent the need for systems to be resilient against co-option. Other suggestions from Cox et al. are considered in the analysis of each factor, but were not adopted in the framework in order to reasonably limit the number of factors.

"Good Design of Collaborative Governance" encompasses the involvement of multiple actors including the community, government, private entities, and UN-Habitat in the governance of the water distribution systems. Factors for assessing the design of the collaborative governance regime are taken from a combination of the factors discussed by both Ansell & Gash (2008) and Emerson et al. (2012) as determinants for success.

"Sustainable Water Governance" encompasses the specific measures necessary to ensure governance structures for water distribution systems are able to continue operating in the medium and long term. Factors were primarily selected from the 12 principles for good water governance presented by OECD and supplemented by governance components identified by UNDP. Principles that were more focused on policy or large scale resource management were not included. Related principles were also combined when convenient.

The conflict setting, the informality of the settlements in peri-urban areas, and climate change were selected as contextual categories which may impact the governance structures established through the COVID-WASH project. Factors for each category were selected primarily from gray literature to reflect examples of what should be considered when implementing a project under the related circumstances. The factors were chosen based on potential relevance to the situation in Myanmar specifically, but are by no means exhaustive.

4

Methodology

This section introduces the research approach and types of data collected. The section also covers the methods used to analyze the data as well as how the data was validated.

4.1 Research Approach

The theoretical framework, as introduced in Section 3, is designed as the primary means of answering the main research question and assessing the sustainability of the governance scheme. The theoretical framework is structured around the principles and methodology of a realist review. A realist review aims to explain "What works for whom in what circumstances and in what respects?". Realist review is well-suited for this study due to its inherent strength in explaining complex programs within their real-world contexts. This is achieved through identification of the context (C), mechanisms (M), and outcomes (O) relevant to the process being studied (Pawson et al., 2005). A realist review is particularly useful for explaining why some processes work better in different contexts. Process tracing, which involves tracing the step-by-step processes that lead to a particular event or result, was further used to operationalize the realist review (Collier, 2011). Process tracing served to investigate the specific steps as they occurred in the People's Process.

4.2 Data Sources

The research utilized a combination of interviews and documents as primary data sources. The interviews encompassed various formats, including semi-structured interviews, email exchanges, and phone interviews with CDC members. Six one hour, semi-structured interviews were carried out online via Microsoft Teams involving UN-Habitat staff members and other relevant experts. One interview was conducted with two staff members concurrently. Transcripts of these interviews were created from recordings for further analysis. An additional interview was conducted via email exchange with a UN-Habitat staff member. Lastly, two phone interviews with CDC members were administered by a UN-Habitat staff member based in Myanmar. These CDC members were from older, but similar water distribution projects in the informal settlements as the CDCs for the COVID-WASH project had not yet been established at the time of writing. These interviews followed a set of pre prepared questions. These questions were translated into the Myanmar language and during the calls, responses to the questions were written down and subsequently used to create English summaries.

Questions for each interview were selected to create discussion of factors from the theoretical framework. To keep the interview within time, some factors within the framework were prioritized over others based on the role of the interviewee and the associated relevance of the factors. Questions for

each interview were prepared beforehand and kept similar between interviewees filling similar roles. Summaries of each interview, including the questions and responses, are included in Appendix G for reference. A systematic approach was employed when selecting interviewees for this study, drawing from professional networks and utilizing a snowballing technique. Individuals representing various management levels within UN-Habitat Myanmar were deliberately chosen. Among the interviewees, four individuals who are not current employees of UN-Habitat in Myanmar were also deliberately chosen to bring additional perspectives to the study.

Firstly, one interviewee currently works at UN-Habitat in Afghanistan and was selected to provide a comparative lens to understand how UN-Habitat operates in other conflict settings. Secondly, a program director with a long history working at UN-Habitat and direct involvement in the development of the People's Process in Sri Lanka during the 1970s and 1980s, was selected to understand their experience with the People's Process in diverse countries, including Afghanistan and Myanmar. Additionally, a former UN-Habitat employee who had previously led similar water projects in Myanmar was selected for comparison to processes before the conflict setting developed. Lastly, an interviewee from WaterAid, an NGO operating in Myanmar with a similar approach to providing clean water, added another perspective on how the context impacts water governance as well as an outside perspective on UN-Habitat's work.

Table 4.2.1: Summary of types of interviews, and interviewee roles

Interviewee Role	Interview Number	Type	UN-Habitat Employee (Past or Present)	Experience in Myanmar	Involved in COVID-WASH Project	Citation
Program Director	1	Semi-Structured Interview	Yes	Yes	No	i1
	4	Semi-Structured Interview	Yes	Yes	Yes	i4
Program Management	2a	Semi-Structured Interview	Yes	Yes	Yes	i2
	2b	Semi-Structured Interview	Yes	Yes	Yes	i2
	3	Semi-Structured Interview	Yes	Yes	No	i3
	7	Email Interview	Yes	Yes	Yes	i7
	9	Semi-Structured Interview	Yes	No	No	i9
CDC Member	5	UN-Habitat Interview Summary	No	Yes	No	i5
	6	UN-Habitat Interview Summary	No	Yes	No	i6
NGO Interview	8	Semi-Structured Interview	No	Yes	No	i8

Table 4.2.2 Summary of documents used as additional data sources

Title	**Type**	**Citation**
Water Governance in Informal Settlements Knowledge Exchange Report	Grey Literature	UN-Habitat, 2022a
Governance of Water Supply Systems in Peri Urban Yangon	Internal Report	WaterAid, 2023
Community Action Plan for Solid Waste Management	Project Documentation	UN-Habitat, 2023

4.3 Data Analysis

The data analysis approach employed systematic coding to analyze both the interview transcripts and documents. This analysis encompassed two distinct approaches to coding: structural and open coding (Saldaña, 2009). The initial coding phase employed structural coding. The theoretical framework (Section 3) was used to create specific codes to refer to each factor in the framework. Codes were then applied when the factor was explicitly or implicitly discussed. The second phase used open coding to delve deeper into other themes present in the data. Open coding was also used to uncover contextual elements that were not initially described within the theoretical framework. The open coding resulted in the identification of 5 main themes with 127 subcodes spread across 2 levels. A summary of the codes is found below in Table 4.3.1.

Table 4.3.1: Theme and tier 1 codes results from open coding analysis with full results printed in Appendix D; government here refers informally to the de facto authorities

Theme	**Tier 1 Code**
actor roles and perceptions	NGOs *(Non-Governmental Organizations)* and CSOs *(Civil Society Organizations)*
	role of equipment suppliers
	role of government
	role of UNH *(UN-Habitat)*
	donor
	MES *(Myanmar Engineering Society)*
	UNH HQ *(Headquarters)*
	role of CDC *(Community Development Committees)*
process and design elements	CDC structure
	collaboration
	purpose of the People's Process
	process step
	community selection criteria
	ideals
	diversity
	UNH approach
	M&E *(Monitoring and Evaluation)*
	wateraid approach
sustainability	definition of sustainability
	sustainable technology
	inability to measure results

	limits to sustainability
challenges	O&M *(Operation and Maintenance)* challenges
	challenges due to government
context	COVID
	electricity and fuel costs
	impacts of conflict
	impacts of climate change
	impacts of informality

4.4 Data Validation

Partial data validation occurred in the form of an online survey sent to the four interviewees who are current employees of UN-Habitat Myanmar. The survey included 12 statements and asked the respondents to mark statements as “Accurate” or “Not Accurate” and provide a brief clarification if the statement was not accurate or partially accurate. The feedback from this survey was used to clarify some points of seeming contradiction from the interviews and more accurately portray the specific steps UN-Habitat is following for the COVID-WASH project. A table of the original statements and the revisions made to the statements based on the feedback is provided in Appendix E.

5

Results

This section aims to cover the results of the data analysis. Included in this section is a comprehensive presentation of the various facets of UN-Habitat's use of the People's Process to implement the COVID-WASH project. The People's Process is first described in subsection 5.1 in order to answer the sub research question *"How does UN-Habitat operationalize the People's Process for water governance in Yangon's informal settlements?"*. Next in subsection 5.2 UN-Habitat's approach is compared with the factors outlined in the theoretical framework in order to answer the sub research question *"In what ways does the People's Process compare to best practices for creating sustainable water governance and why?"*. This section also presents the results of an actor analysis and additional points on the topic of sustainability.

5.1 Operationalization of the People's Process

Interviewees commonly described the People's Process as a methodology (i2, i4, i7) for a participatory process (i4, i9) which aims to center the community in the design, implementation, and management of the systems developed with the support of UN-Habitat (i1, i3, i4, i9). It was originally inspired by the million houses program in Sri Lanka during the 1970's and 1980's (i1) and aims to mainstream community driven development. The People's Process is therefore both a methodology and a development philosophy.

The exact steps of the People's Process will naturally differ between individual projects and countries due to the diverse range of project types and contextual factors within UN-Habitat's operational scope. As such, a key result of this research is the step by step description of how UN-Habitat Myanmar is using the People's Process to implement the COVID-WASH project. This result is presented in Figure 5.1 as a diagram showing the relative order of events that have, or will occur from the start of the project to the end and after. The right side of the diagram displays a simplified series of seven steps which indicate the major phases of the project. The arrows on the left side of the diagram additionally indicate the phases (Participatory Process, Collaborative Governance, Water Governance) of the project in alignment with the theoretical framework. The diagram does not aim to depict precise timings, but rather captures the sequence of events. Given that a significant number of key steps in the COVID-WASH project have not been completed, additional input from other interviews was used to fill in the gap and extrapolate what steps will happen. It is thus important to note that the steps may not be completed in exactly the order described. The steps that were not yet completed at the time of interviews are shown in gray.

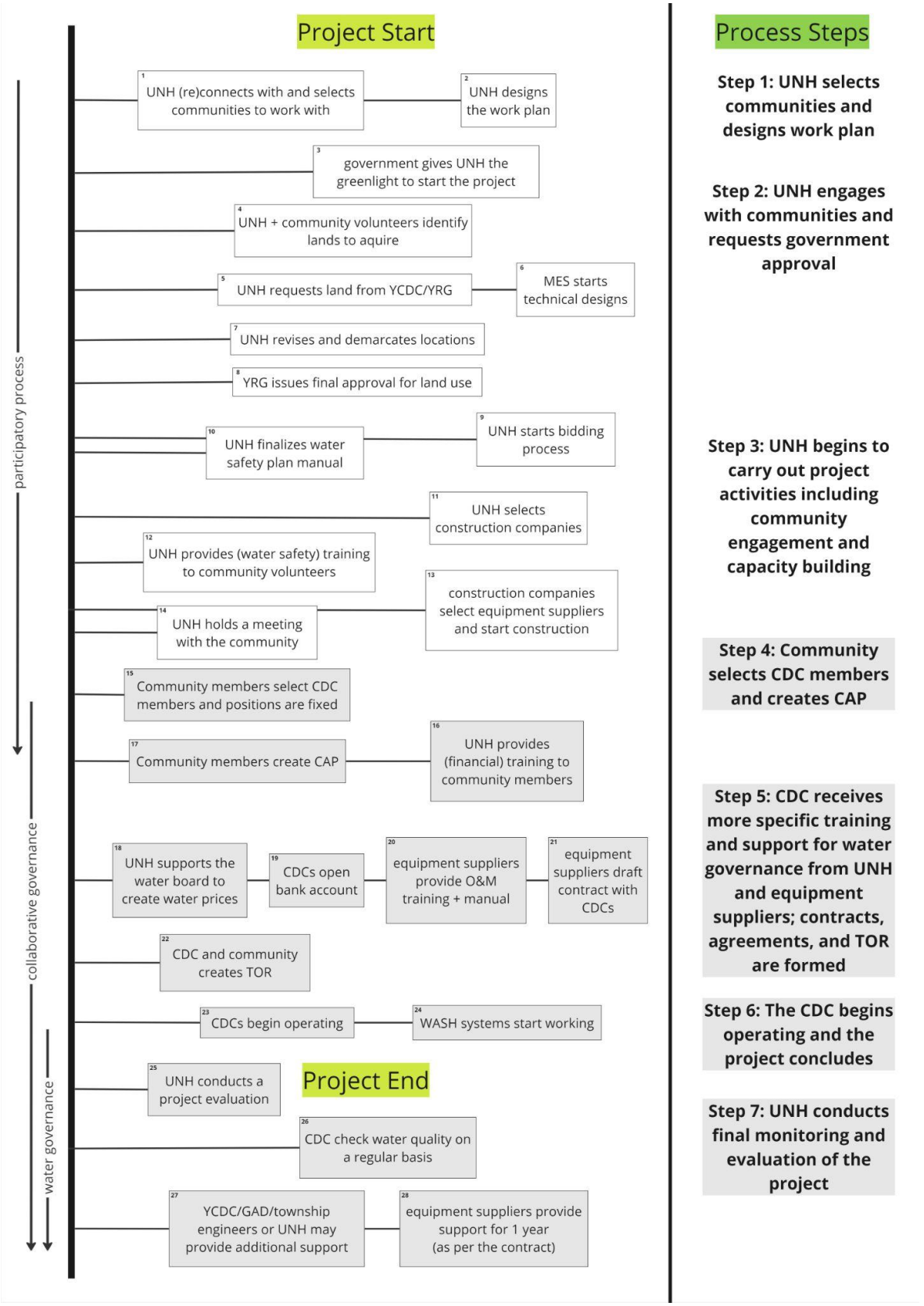

Figure 5.1.1: Outline of People's Process as used to implement the COVID-WASH project visualized as steps in order in the center of the diagram; The right side offers a simplified series and the left side depicting the phases of the project in alignment with the theoretical framework; Steps not completed at the time of interviews are depicted in gray

Another important point to highlight regards the variation between the different descriptions of the People's Process. The People's Process from official literature (UN-Habitat, 2016) and the study on the People's Process in Afghanistan (French et al., 2018) both differed from how the People's Process is implemented in the COVID-WASH project. Figure 5.1.2 represents a comparison between the three descriptions of the People's Process. The steps outlined for the COVID-WASH project differ in that there is more emphasis placed on interactions between UN-Habitat, the CDCs, and the local authorities. This was an intentional choice made when formulating the steps in order to highlight how actors collaborate. This formulation also offers more insight into who is taking what actions and when. The process for the COVID-WASH project also includes a more explicitly stated component of capacity building. However, more notably, the COVID-WASH project is the only formulation where selecting communities and design of work plans is the first step. The inclusion of this step in and of itself is already a significant departure from the People's Process as described in official literature and the French et al. (2018) study.

UN-Habitat operates on a project modality. Donors fund projects which UN-Habitat then carries out. This typically necessitates that the scope of work is decided before the project begins. The COVID-WASH project is a prime example of the project modality. The project, funded by the Government of Japan, was designed as a response to the COVID-19 pandemic. The goal was to reduce cases and mitigate against future disease outbreaks by providing access to WASH and SWM services in informal settlements. The scope of the work was based around a rapid survey of 1,680 residents of Yangon, primarily those living in informal settlements. Thus, it is clear that the scope of work was determined long before the "beginning" of the People's Process. The project modality is not limited just to recent projects undertaken by the office in Myanmar either. Most interviewees clearly indicated that the typical process when a project begins is the selection of communities based on how their needs fit the scope of the project (i2; i3; i4; i7; i9), among other selection criteria.

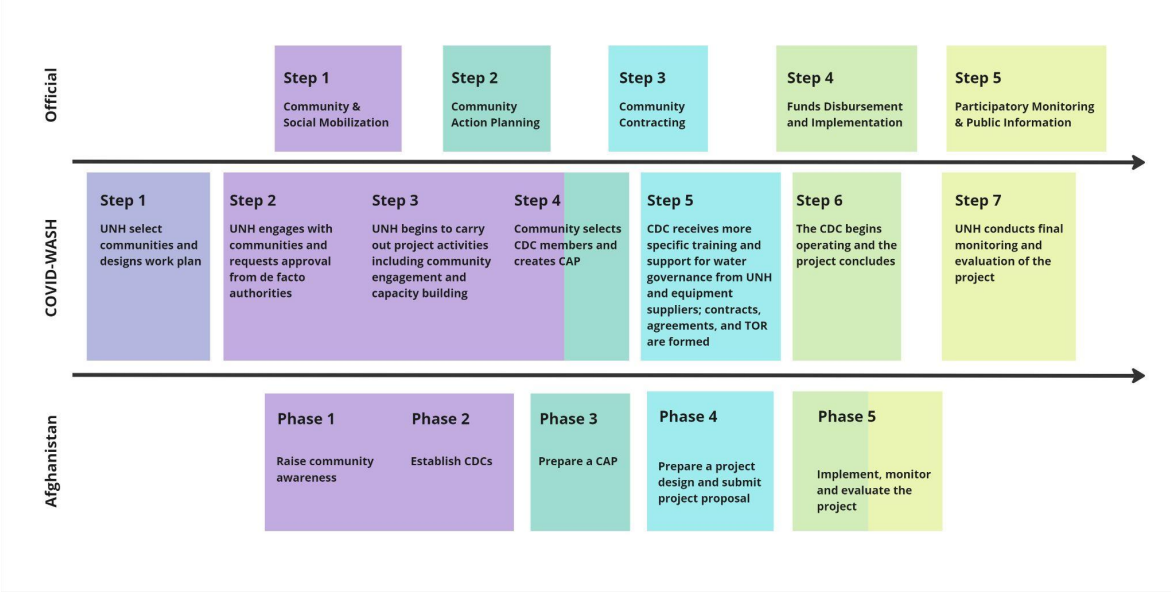

Figure 5.1.2: Comparison of the official (UN-Habitat, 2016), COVID-WASH, and Afghan (French et at., 2018) descriptions of the People's Process; colors indicate steps in comparison to the official description of the People's Process

The COVID-WASH project is differentiated from other UN-Habitat projects in that it is designed as an emergency response project. That means that there was greater emphasis on pre-selected solutions in order to respond rapidly to the COVID crisis. Other than the project modality, this may be a contributing factor to why there are significant differences between the various descriptions of the

People's Process. The shift to emergency response type projects is also an indication of how conflict shapes the design and implementation of projects.

5.2 Alignment with Theoretical Framework

The goal of the theoretical framework is to offer an idealized series of best practices that encompass the multiple facets of the People's Process and the resulting water governance structures. This section outlines the ways in which UN-Habitat's approach aligns with the criteria in the theoretical framework, if at all. Alignment considers whether or not each factor from the theoretical framework is integrated or considered in some way as a part of UN-Habitat's approach. While the focus of this research is on the COVID-WASH case study, since the project is not yet complete, inferences were made based on descriptions of how future steps will be carried out, in addition to the processes and outcomes described in similar past projects. Thus, while all processes and steps are referred to in the past tense, Figure 5.1.1 should be used as a reference to understand which parts of the process have or have not yet been carried out at the time of writing.

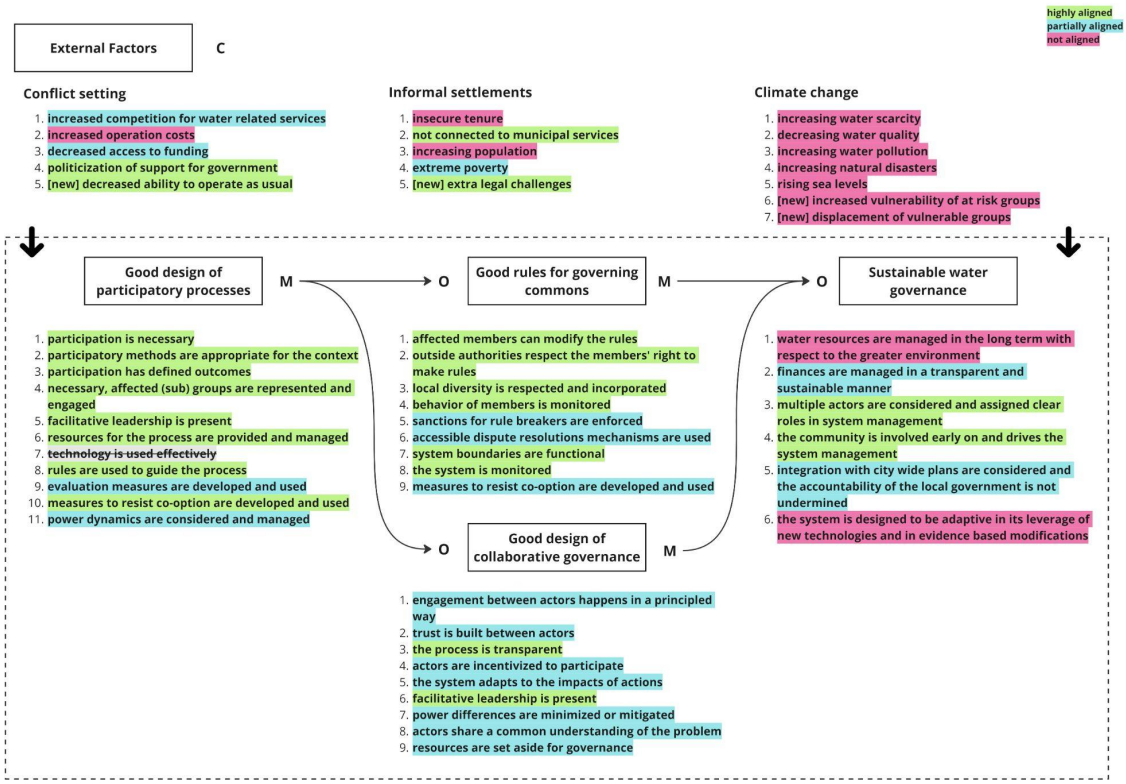

Figure 5.2.1: Alignment of theoretical framework with colors indicating level of alignment ranging from highly aligned (green) to partially aligned (blue) to not aligned (pink)

Alignment here is used as a loose term with no strictly associated criteria. In order to determine alignment, each factor was individually assessed according to both the structural and open codes as well as the feedback from the validation survey. According to each category of the theoretical framework, a brief summary and evaluation of how UN-Habitat's approach aligns with the factors is presented throughout the following subsection. For a more detailed presentation of what data aligned with each factor, see Appendix B where this data is presented in tables. The results are additionally visualized in Figure 5.2.1 according to whether UN-Habitat's process is highly aligned (green), partially

aligned (blue), or not aligned (pink) with each factor. The factor "technology is used effectively" (gray) is additionally struck out as irrelevant based on the results. While the colors do not capture the nuances of why, or to what extent, certain factors are considered over others, it offers an easy visualization of the overall alignment with the theoretical framework.

5.2.1 Good Design of Participatory Processes

For the purposes of this analysis, the participatory part of UN-Habitat's process includes all the activities undertaken in order to create a governance structure. As shown in the process diagram (Figure 5.1.1), the participatory process starts when UN-Habitat selects communities to work with and ends when the CDCs are established and the community has developed a Community Action Plan (CAP). After this stage the community as a whole is no longer primarily involved in the project as CDC then functions as their representative.

As a whole, the process aligns closely with the framework. Since the People's Process itself was characterized as a participatory process (i4, i9), it is logical that this part of the framework is closely aligned. Notably, UN-Habitat provides the staff and resources needed to facilitate the process (i1, i2, i3, i4, i7) with the goal of achieving clear outcomes of establishing CDCs and CAPs (UN-Habitat, 2022a; i1; i2; i3; i7; i9). A standard process is followed in every UN-Habitat project, but is adapted based on the needs of the project and the community (i1; i2). Community mobilizers also make efforts to ensure that as much of the community as possible is involved even if there are no explicit requirements for inclusion within the process (i1; i3).

Areas that were less aligned included the use of evaluation measures and consideration of power dynamics. Precise measures for evaluating the process and outcomes of the community participation were not discussed. However, UN-Habitat does conduct monitoring and evaluation throughout the project which includes assessment of factors which may indirectly evaluate the effectiveness of the participation (i2; i3; i4; i9). There was not much discussion of efforts made to mitigate the negative effects of power differences except for those between men and women (i3; i9). Power dynamics are, however, considered and may be leveraged to lend legitimacy to the process (i2; i3). It could be useful for UN-Habitat to consider both of these elements more, but considering the other measures that UN-Habitat employs in this phase of the project, may not produce much of a difference in results. Lastly, the factor, "technology is used effectively", has been excluded from the analysis as the factor does not appear productive to analyze given the context of the informal settlements.

5.2.2 Good Rules for Governing the Commons

The rules, guidelines, and institutions in practice by CDCs were assessed within the context of rules for governing the commons. There was relative alignment between the framework and UN-Habitat's process with some areas being more strongly aligned with the others. A key part of UN-Habitat's work is establishing the CDCs via offering a pre-designed governance structure (i1; i2; Appendix E) alongside necessary trainings to enact that governance structure (i1; i2; i3; i4; UN-Habitat, 2022). As such, the basic rules and processes are standard across CDCs (i1; i9). However, the input from the community and the CDC members helps ensure these rules serve the local needs (i2; i3; i7). Under the current circumstances, CDCs are not officially registered with the de facto authorities (i2; Appendix E), however they are conceived of as a semi-formal part of local governance (i4; i9) and recognized under the umbrella of the Yangon City Development Committee (YCDC) (Appendix E). The processes CDCs follow are therefore designed with formal checks and balances to minimize mismanagement and opportunities for corruption among the members (i1; i2; i3; i5; i9). Processes for monitoring the distribution system itself are outlined in Water Safety Manuals which UN-Habitat provides to CDCs (i1;

i2; UN-Habitat, 2022) but the only explicitly discussed metric that the CDC monitors is water quality (i2; UN-Habitat, 2022). Community members also indirectly monitor the facility and the CDC's activities (i5). System monitoring is furthermore a part of the monitoring the UN-Habitat does while still involved in the project (i2; i3) and in the future on an ad hoc basis (Appendix E).

Areas with less alignment include how the CDCs address disputes and rule breakers as well as resistance to co-option. In interviews, instances of disputes or failure to follow rules or co-option were typically brushed off with the general assertion that communities rarely faced any of these issues (Appendix E; i1; i3; i5; i7). This was backed up by the two interviews with CDC members (i5, i6). This suggests that the rules and process in place are effective at preventing or discouraging any forms of disagreements or abuse. However, the lack of explicit measures to deal with disagreements or abuse means that the system may not be equipped to deal with issues should they arise.

5.2.3 Good Design of Collaborative Governance

In the context of this system, and with reference to the Emerson et al. (2012) definition, collaborative governance refers to interactions between UN-Habitat, CDCs and the community, the local de facto authorities, and technical experts to provide clean drinking water to communities involved in the COVID-WASH project. Actor roles are addressed in detail in the actor analysis in Section 5.3. As shown in the process diagram (Figure 5.1.1), collaborative governance begins at the end of the participatory process when the CDCs are formed and continues after the project ends.

It is clear that collaboration between multiple actors in pursuit of a single goal occurs and how that collaboration occurs is relatively structured, but interactions between actors are not truly perceived as collaborative governance by UN-Habitat. Instead, the perception is more one of community-led governance with infrequent support from other actors as necessary. This perception is especially notable when considering principled engagement. Principled engagement is defined by Emerson et al. (2012) as "generated and sustained by the interactive processes of discovery, definition, deliberation, and determination." There are three key interactions that could be defined as principled engagement between actors:

- capacity building in the form of training occurs between UN-Habitat and CDCs, and the equipment suppliers and CDCs (UN-Habitat, 2022a; i1; i2; i3; i7; i9)
- CDCs reach out to equipment suppliers who are under contract for support during the first year of operation (i2; i5; i6; WaterAid, 2023; UN-Habitat, 2022)
- CDCs reach out to UN-Habitat or the local de facto authorities for additional support when needed (i2; i3; WaterAid, 2023)

These interactions fit very weakly under the definition provided by Emerson. For these interactions to occur, there must be some "discovery, definition, deliberation, and determination", but the outcomes of these activities are instead the focus. In this way, the interactions between the actors are not considered important as the only perceived outcome is community-led water governance. This is indicative of the community-led governance perspective over the collaborative governance perspective, despite the clear involvement of other actors.

As a result of this understanding of the system, there is also no true effort to align the perception of all the actors other than signing contracts. Notably, the de facto authorities are unlikely to share the same perception of the problem as the existence of communities themselves are not recognized by the authorities and therefore not considered in need of basic services. Furthermore, the de facto authorities may even perceive the communities and their empowerment as a threat. Eviction is typically used as a means to threaten communities and dissolve their collective power. Thus, as a result of the conflict setting, it is clear that not all actors' perspectives can be aligned.

Other elements also had weaker alignment with the theoretical framework. By design CDCs are positioned as the facilitative leader after the project ends (i1; i2; i6) while UN-Habitat facilitates interactions during the project (i2; i4; i7). Transparency between the CDC and the community is a key concern of the governance scheme, especially in regards to financial management (i3; i6; i7). Furthermore, elements such as building trust, incentivizing participation, and setting aside resources are considered within the structure of the CDC (i1; i3; i4; i5; i6; Appendix E). However, these elements are all weakly aligned with the framework because governance of the system is perceived to fall only on the CDCs rather than all the actors combined. A similar problem occurs with the ability of the system to adapt over time. CDCs do take suggestions for improvement from the community (i5, i6), but the adaptation is again primarily the burden of the CDC.

Mitigation or minimization of power differences stands out as one area particularly lacking alignment. There was no discussion of how power differences between the actors may have an impact on the governance of the system, despite the fact that CDCs will always be in the least powerful position among all the actors.

5.2.4 Sustainable Water Governance

Water governance encompasses all the actions taken to manage, maintain, operate, and administer the water distribution systems, beginning the moment they become operational and are managed by the CDCs. Overall, there is much less alignment between UN-Habitat's process and the theoretical framework. Factors in alignment include both the assignment of clear roles to actors and early community involvement and management. Actor roles, discussed in Section 5.3, are clearly defined and understood by each actor via contracts (i2; i5; i6; WaterAid, 2023; UN-Habitat, 2022). The People's Process also necessitates that the community is involved in the project from the beginning.

There are many efforts to ensure that finances are managed transparently and sustainably including training, record keeping, and accountability to other members (i1; i2; i3; i4; i6; i7; i9). However, there are still issues of sustainability. Positions for CDC members may be voluntary and paid members are only paid minimally in order to keep costs low (Appendix E). The minimal levels of compensation may contribute to why it is difficult for CDCs to attract new members and fill gaps when necessary. The interviewed CDC members also reported that while they are able to cover the cost of operations, there was not enough money to upgrade the system to provide competitively clean water (i6). The financial sustainability is also challenged by the high cost of electricity and repairs over time (i6; WaterAid, 2023). Additionally, there is no intention to eventually integrate the water distribution systems with the municipal systems. The UN-Habitat systems are only designed to run for 5-10 years and once the settlements are regularized, they may serve as back up systems (Appendix E). However, there is a perception that the municipal services will not reach the residents of the informal settlements in neither the short nor long term (i8). At the same time, the accountability of the government is not undermined as the underlying intention behind CDCs is that they play a semi-formal part in local government (i4; i9) and that the local authorities will oversee and support the CDCs (Appendix E). Currently, the local authorities have limited capacity to fill this role (i4; i8).

Two factors had functionally no alignment with UN-Habitat's process: the ability to adapt the system with new technology based on evidence, and the long term management of water resources with respect to the environment. As reported by a CDC member, current systems do not have enough money to use new technology (i6). Environmental concerns are addressed in the design phase and through additional measures such as rainwater catchment. However, there is no long term resource management plan (Appendix E). Furthermore, there is no clear collection of data that would allow for

evidence based modifications or adaptation to the state of natural resources. Even over the 10 year lifespan of the distribution plants, the state of natural resources is bound to change,

5.2.5 Context

Contextual elements are intended to highlight factors that are outside of the system but nevertheless impact the system. When assessing how the contextual factors align with UN-Habitat's process, the evaluation took into account whether the factor was explicitly addressed as influencing the system or if measures, whether explicit or implicit, were taken to accommodate the factor. Additional factors that were mentioned in interviews were also added to the framework.

The factors identified in the literature related to conflict settings were brought up in interviews. However, factors like increased competition among water sellers and increased operational expenses were primarily attributed to governance issues and informality rather than conflict per se (WaterAid 2023). On the other hand, reduced and restricted access to funding for programs was explicitly linked to the conflict (i4). Contingencies for these factors were not considered in the design of the COVID-WASH project, except that the project naturally takes into account the existing water market and financial restrictions. However, politicization of support for the de facto authorities as well as decreased ability to operate as usual are by necessity integrated into UN-Habitat's approach and the design of the project for emergency response. The UNCT engagement principles, which currently discourage UN-Habitat from working directly with the de facto authorities, led to changes in the scope of the project which originally included additional components of support for some government offices (i2). It was also noted that UN-Habitat is making an ongoing shift towards working more with non-state actors (i4).

With regards to factors specific to the informal settlements, extra legal challenges, such as acquiring formal land rights for the water distribution plants (i3; WaterAid 2023), is work that UN-Habitat takes on as a part of project (i2). Additionally, the project is conceived as an answer to the issue of a lack of water being provided by the municipality. However, issues such as increasing population and insecure tenure were mentioned without a clear indication of how they are mitigated in the absence of UN-Habitat's typical policy approach (i4). Extreme poverty is partially considered within the COVID-WASH project as the goal is to provide more affordable water. However, from a management perspective, CDC members cited extreme poverty as one of the reasons why it is difficult to recruit community members to fill empty positions (i5; i6).

While environmental concerns are factored into the design phase by consultants and engineers (Appendix E), the COVID-WASH project itself does not integrate climate change concerns into its design and operation. The impacts of natural disasters were briefly touched on (i4), as well as the potential for vulnerable groups to be displaced or placed in greater risk (i9), but not designed around. This does not mean that climate change issues are never considered. Rather, the project modality limits the funding and scope of individual projects. UN-Habitat is simultaneously working on the Myanmar Climate Change Alliance (MCCA) project which aims to mainstream climate action within Myanmar. Climate action may be carried out with the same communities under the MCCA instead. It is then logical that there is less alignment for these issues within the scope of the COVID-WASH project.

5.3 Actor Analysis

This section presents an actor analysis as a tool for understanding the roles, power dynamics, and collaboration gaps within the water governance established by UN-Habitat. An alternative model used

by WaterAid is additionally discussed. The actor analysis will aid in dissecting the network of organizations involved, providing clarity on their functions and influence. This examination also offers a clear view of how the water governance structures will operate in practice.

5.3.1 UN-Habitat Model

Although the governance of the water distribution systems is not perceived or implemented as a collaborative governance scheme, as briefly discussed in 5.2.4, the involvement of multiple actors throughout the project merits an analysis of their individual roles and actions.

From a broad list of all possible actors, as presented in Appendix F, a power-interest analysis (Figure F.1 and Table F.2) was used to narrow down the most relevant actors. Four actors have been identified in Table 5.3.1 as key 'players' in the system. These four actors include UN-Habitat Myanmar, CDCs, the YCDC, and equipment suppliers. However, to align the analysis with how actors were discussed in interviews, analogous roles have also been assigned to the four key players. The analogous role of the YCDC is the de facto authorities or the local de facto authorities within which the YCDC is included. The analogous role of the equipment suppliers is technical experts which better describes the role they fill in the governance system. UN-Habitat and the CDCs play a straightforward role in the project and therefore have no analogous roles.

Table 5.3.1: Actor descriptions in UN-Habitat's model

Actor	Analogous Role	Description
UN-Habitat Myanmar	-	UN-Habitat Myanmar is the initiator of the project. They are an office of UN-Habitat located in Myanmar tasked with carrying out UN-Habitat projects.
CDCs (Community Development Committees)	-	Community Development Committees are small community groups organized via UN-Habitat's People's Process. CDCs consist of volunteer community members who manage and oversee community projects.
YCDC (Yangon City Development Committee)	(Local) De Facto Authorities	Yangon City Development Committee is a semi-independent body organized under the de facto authorities that administers the city and is primarily responsible for city infrastructure.
Equipment Suppliers	Technical Experts	Equipment suppliers are companies responsible for providing water treatment equipment for the water distribution plants. They are also responsible for providing operation and maintenance support as per contracts signed with CDCs.

A full analysis of actor perceptions is not possible given the limited data set comprising primarily of UN-Habitat staff. However, each actor was described as having a unique, and relatively defined role in the governance system. These roles are presented in Table 5.3.2.

Notably, UN-Habitat perceives their role as limited to facilitating and guiding the participatory processes (i1; i2; i7) while providing technical support, capacity building, and financing (i2; i4; i9). UN-Habitat's role was also described as filling the role of a government (i4; i9) in that UN-Habitat is working to provide deprived communities access to what would otherwise be a municipal service (i1; i2; i4). However, UN-Habitat only aims to temporarily fill in gaps that the de facto authorities are unable to fill. After the project is over, the CDC is designed to fill a semi-formal role under the local authorities (i1; i3) by managing whatever systems are under their purview (i2; i4; i9; WaterAid, 2023; UN-Habitat, 2022). In the COVID-WASH project, CDCs only manage the water distribution systems (i2), but in other projects their role can be more flexible and extended to other activities outside of just water governance (i1; i3; WaterAid 2023). Where the CDC is unable to fully manage the system, a one year contract with the equipment supplier is supposed to help fill in the gaps (i2; i5; WaterAid 2023;

UN-Habitat 2022). The local de facto authorities may also support the CDC with technical or financial support, although that is not expected in the current circumstances (i2; i8; i9; Appendix E; WaterAid, 2023). Typically, UN-Habitat would supplement their work in the communities with policy work at various government levels (i1; i4).

The de facto authorities themselves play an interesting role as semi-governmental authorities. Functionally, they operate as a government by administering the city of Yangon. However the reorganization of local governmental bodies under the military, and replacement of top officials has led bodies such as the YCDC to no longer have the mandate from the people to govern. Without the mandate from the people the de facto authorities rule by force instead, creating a dynamic where those in power are directly in conflict with the people they are meant to serve. Nevertheless, these authorities still hold power and resources that make them necessary to carry out the COVID-WASH project. They are thus important actors to consider and analyze within the system.

It is also worth noting that in response to the political situation, UN-Habitat has shifted focus towards working more with non-state actors such as NGOs and CSOs (Civil Society Organizations). While NGOs and CSOs are not currently involved in the water distribution aspects of the COVID-WASH project, they are potential future partners as UN-Habitat continues to adapt their process (i4).

Table 5.3.2: Actor roles in UN-Habitat's model

Actor	**Roles**
UN-Habitat Myanmar	● Guidance and facilitation (i1; i2; i7) ● Provide financing (i1) ● Support for issues within mandate (i1; i2; i4) ● Technical support (i2) ● Temporarily fill government role (i4; i9) ● Capacity building (i4; i9)
CDCs	● Management (i2; i4; i9; WaterAid, 2023; UN-Habitat, 2022) ● Semi-formal governance (i1; i4; i9) ● Implements activities (i7; i9; WaterAid 2023) ● Flexible role in community development (i1; i3; WaterAid 2023) ● Only manages water in COVID-WASH (i2)
(Local) De Facto Authorities	● Technical support for CDCs (i2 WaterAid, 2023; ● Formalize land rights (i2; UN-Habitat, 2022) ● Should represent the people (i4) ● Should provide long term monitoring (i4; i8; i9) ● Should provide services (i4; i8) ● Should provide financing (i9)
Equipment Suppliers	● Provide O&M training (i2) ● Provide O&M manual (i2) ● Equipment installation (i2; i5) ● Provide maintenance during 1 year warranty (i2; i5; WaterAid 2023; UN-Habitat 2022) ● Provide technical support after warranty (i2; WaterAid 2023; UN-Habitat 2022)

Figure 5.3.1 presents a visualization of how the actors interact within the governance structure as a whole. The diagram aims to capture how resources are shared between actors as well as the different actions each actor takes. The diagram also shows which actors and actions align with which parts of the theoretical framework. The participatory process part of the theoretical framework is excluded as it is considered the precursor to this diagram. The arrows between actors represent a resource diagram which could be considered a representation of the collaborative governance system. It is notable that most of the interactions happen directly between the CDCs and the individual actors. Additionally, the CDCs are the recipient of most resources, only exchanging money with the technical experts, which highlights their role as a highly dependent actor.

UN-Habitat and their associated action are represented as dashed lines, which captures their temporary role in the system. The resources that they exchange with the CDCs and the technical experts happens only during the project. After the project is over, they are no longer directly involved in either the collaborative governance system or the water governance system. The technical experts are not considered a temporary part of the diagram even though the contract between the CDCs and the equipment suppliers lasts one year. After the first year, there will still be some kind of technical experts involved as CDCs still need support for repairs and replacements.

Reflecting on this diagram, it is clear that the resources provided by the collaborative governance structure are the elements that may fail. If the CDC does not have enough money after the first year, they may not be able to receive reliable maintenance. If the local authorities are not in support of the community, quality control and additional support for O&M will not be available. The resources provided by UN-Habitat are also temporary. Capacity building is only provided at the beginning of the project and as well as consistent monitoring and evaluation of the operation as a whole. Other than maintenance support, none of these resources are necessary for the continued operation of the water distribution systems. However, they do represent resources that could be used to improve the governance as a whole and ensure greater sustainability.

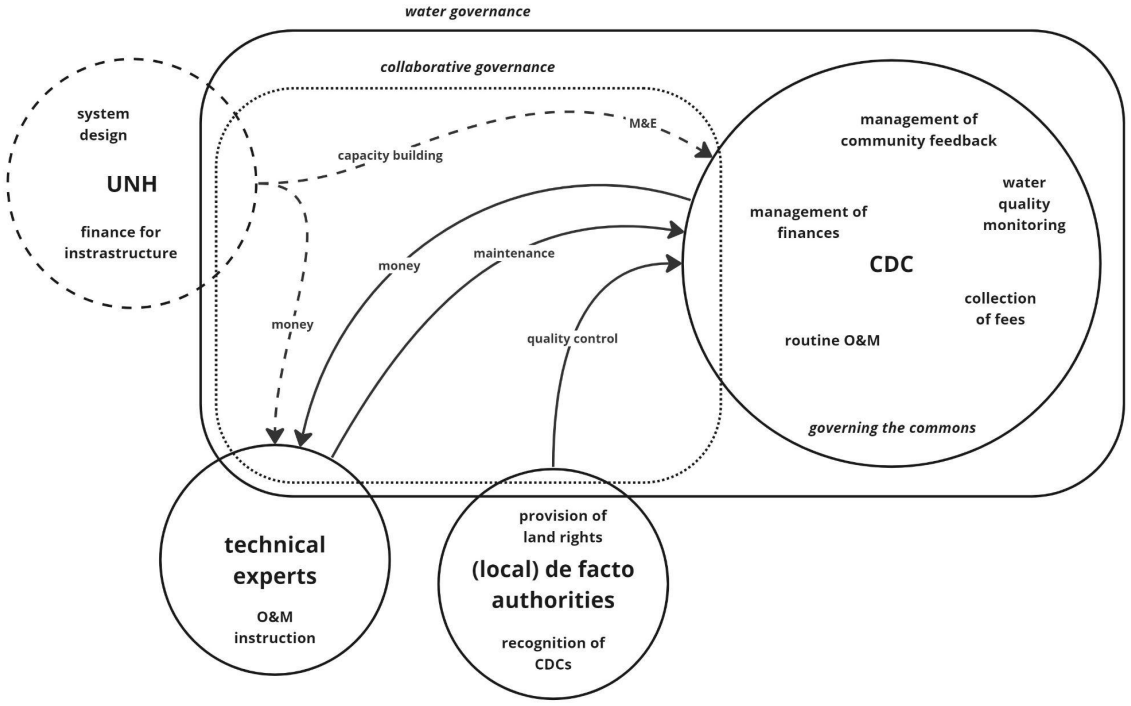

Figure 5.3.1: Visualization of actor roles in UN-Habitat Myanmar's model; Individual actions associated with each actor are within their respective circles while resources shared between actors are depicted by directional arrows; UN-Habitat's temporary role in the project is depicted with dashed lines; A connection to the theoretical framework is also made by outlining what actions and resources contribute to both collaborative governance and water governance

5.3.1 WaterAid Model

One interview was conducted with a member of WaterAid Myanmar. This interviewee shared that the organization has been piloting a different governance structure which could be considered more collaborative in nature. Learning from both the Knowledge Sharing session led by UN-Habitat in September 2022 and their own comparative assessment, WaterAid has shifted their approach to that

of a self described, for-profit social enterprise model. In their new model, the community acts as a board that oversees and governs the actions of a private corporation which manages the water distribution systems. The private corporation handles all aspects of managing the plant and selling the water. The corporation is run for profit, but the community board has the rights to help set the cost of the water and is generally responsible for ensuring the corporation runs the system in a way that meets the needs of the community first. The corporation handles the salaries of their employees while the community board is a volunteer position. WaterAid is described as playing an analogous role as UN-Habitat, except, perhaps with more continuous monitoring of the systems. The benefits attributed to this structure were an increase in technical capacity, such as cleaner facilities and yields closer to the max capacity. It was also stated that the particular management company that WaterAid is currently working with was elsewhere selling water at a cheaper price than the WaterAid funded systems.

WaterAid was attracted to this new model because, in their opinion, the community members can be easily overburdened by the management of the water distribution systems due to their lack of specialized technical capacity. This was identified by WaterAid as the underlying reason for an overall decline in both the quantity and quality of water generated by their, and UN-Habitat's, distribution systems. From the actor analysis of UN-Habitat's model (Figure 5.3.1), it is possible to observe that the CDCs are functionally the only actor involved in the day to day water governance. This is an inherent aspect of the self management model, but there may be reasonable limits to what CDCs can accomplish in the absence of regularized support.

The key difference between UN-Habitat's model and WaterAid's model is thus the reimagining of the role of the technical experts. The management company fills the role of the technical experts and is more integrated into the governance structure. The management company takes over several of the tasks that the CDCs are responsible for in UN-Habitat's model. This removes part of the perceived burden of operation and maintenance of the plant from the community members and places it instead in the hands of the management company. However, it is important to note that this model is new and needs more time to develop in order to understand whether it is able to result in higher quality, more sustainable water governance. As such, the WaterAid model should be understood primarily as inspiration about how responsibilities can be reorganized or redistributed in pursuit of higher quality, more sustainable governance.

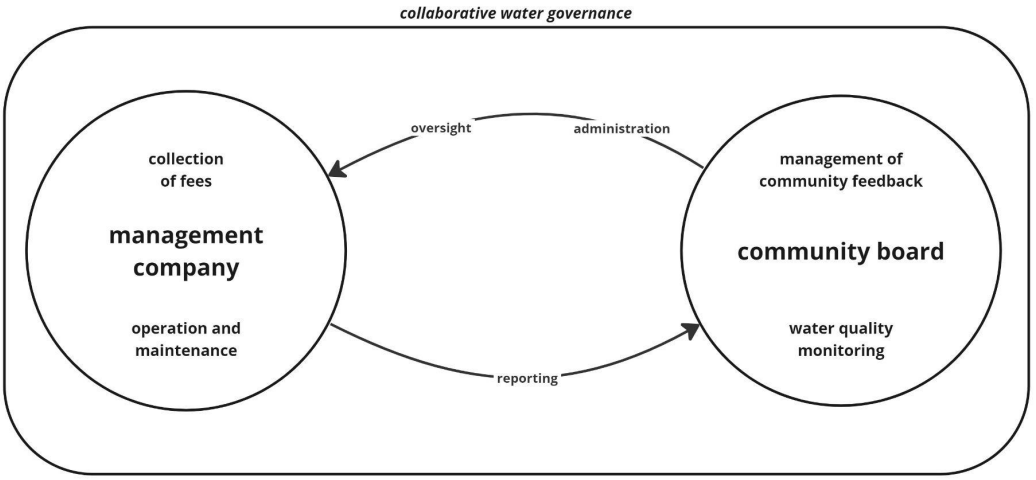

Figure 5.3.1: Simplified visualization of actor roles in WaterAid Myanmar's model; WaterAid and de facto authorities omitted from visualization for emphasis on split responsibility between community board and the management company

5.4 Points on Sustainability

Sustainability of the systems was defined by interviewees as the ability of the system to continue functioning at a high quality over a significant amount of time (i3, i4, i8, i9). This closely aligns with the definition presented earlier from the Brundtland report. However, sustainability as an outcome is not measured or tracked in the short or long term by UN-Habitat. There is no operational definition for what functioning at a high quality means. Additionally, UN-Habitat only checks up on past projects on an ad hoc basis (Appendix E). Overall, this means that the sustainability of the distribution centers cannot be consistently measured or reported on.

As highlighted in the water governance section, there are also issues of financial sustainability. Overall, it does not appear that there have been any in depth studies into the range of financial needs of the water distribution systems and their governance systems. The water governance knowledge sharing session in September 2022 (UN-Habitat, 2022a) outlines some back of the napkin calculations for what price water is required based on expenses, but in general the budgets are left up to the CDCs to figure out on their own. As outlined in the section 5.2.4, Sustainable Water Governance, the CDCs working on past projects are unable to afford upgrades to the distribution systems that would make their water quality competitive. In general, concern is placed more on financial transparency leaving effective and sustainable budgeting relatively underdiscussed.

To put sustainability in perspective, it is important to note that the water distribution systems are only designed to last 5 to 10 years. The hope is that the communities will eventually be able to access municipal systems (Appendix E). The vision of sustainability is bound to this timeline. Integration with municipal services is achievable as two older UN-Habitat systems overseen by CDCs ceased operating after 5-6 years when the authorities provided piped municipal water which was cheaper and more accessible (i2; UN-Habitat, 2022). However, the pace at which the municipal services will continue to expand is less guaranteed now more than ever. It is possible that these communities will be disconnected for longer than 10 years.

6

Discussion

This section discusses the results presented in Section 5 and aims to answer the main research question *"Does the People's Process contribute to creating sustainable water governance structures in the current context of Yangon's informal settlements, and if so, in what ways?"* The section will also answer the sub research question *"In what ways does the conflict setting affect the ability of the Peoples' Process to create sustainable water governance and why?" in section 6.2.1*. The discussion will also critically reflect on the theoretical framework and the limitations of this research in sections 6.4 and 6.5. Finally, a brief academic reflection will be presented in section 6.6.

6.1 Effectiveness of the People's Process

The People's Process itself is designed as a participatory process driven by the philosophy that greater community participation leads to more sustainable development. It is clear from the theoretical framework that the People's Process has many strengths and weaknesses. Overall, the People's Process is most effective as a participatory process and as a means of establishing community-led governance of common-pool resources. The People's Process is able to foster a strong sense of ownership and self determinism through the CDCs. Capacity building offered by UN-Habitat is also critical for creating a well structured and functional governance framework. The tangible results of these strengths can be seen clearly in the relative lack of governance issues in past projects that are continuing today.

Weaknesses within People's Process primarily appear in the areas of collaborative governance and water governance. This is logical because the People's Process is not designed specifically to create these governance structures. External factors, such as climate change and some impacts of the conflict setting are also weakly considered within the design of the governance structure for the COVID-WASH project. Tangibly, the result of these weaknesses is that the quality of management of the plants is difficult to maintain. This may specifically manifest as the inability to incentivise community members to join the CDC when a member leaves, to maintain a clean and optimally functioning facility, or to afford anything beyond regular maintenance and repairs. The COVID-WASH project should consider means of supplementing these areas of weaknesses.

Another clear area of weakness is the consideration of power dynamics. There are no strong provisions for mitigating power differences or for resisting co-option by more powerful members in the future other than UN-Habitat oversight. However, within the scope of this project, it is not immediately clear what the tangible impacts of unaddressed power dynamics may be. Literature, however, has much to say on participation and power dynamics, which inherently relates back to

participation as a form of empowerment. One particular criticism can be considered in light of Frediani and Boano's (2012) visualization of participation.

The People's Process, as used to implement the COVID-WASH, fits within this diagram (Figure 6.1.1) as participation with predetermined outcomes and transformational processes. This means that the community was able to be involved in transforming the results of the project, but ultimately the final product was determined by UN-Habitat ahead of time. This is in contrast to how the People's Process is described in official literature where the outcomes of the project are defined by the community through Community Action Planning. Relevant literature discusses the limitations of participatory processes which do not fully empower communities to control decisions made about what happens in their communities. Some literature goes as far to argue that participation that does not empower residents in a political sense can never create any long term, or sustainable change (Williams, 2004; Refetie and Millstein, 2019). The core of the critique is that if communities are not able to challenge or subvert the existing power dynamics, any changes that a project engenders will only be surface level and thus not affect the root of the issue. In the current context of Myanmar, however, politicization can create deadly outcomes. Creating long term change is also outside the goals of the COVID-WASH project as an emergency response. It is also worth questioning whether or not empowerment and political change is even necessary for sustainable water governance.

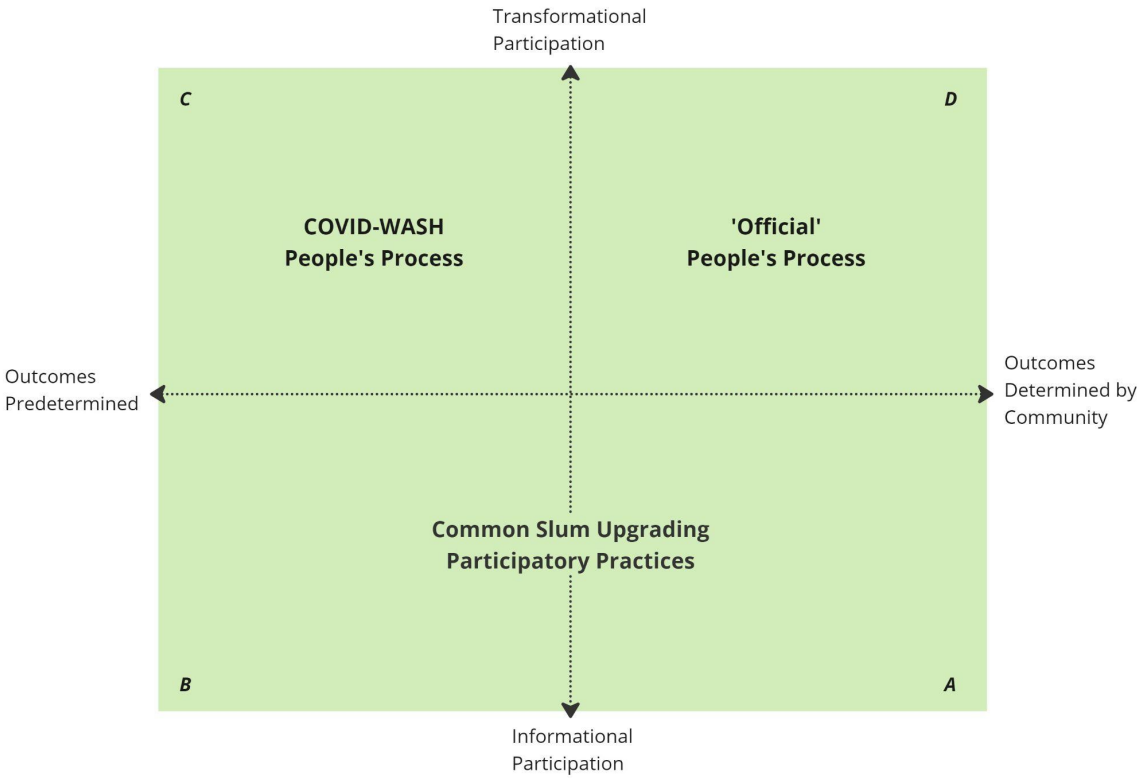

Figure 6.1.1: Positioning of the People's Process as used in the COVID-WASH project vs the 'official' People's Process compared on the reimagined diagram from Frediani and Boano (2012); common slum upgrading practices as also displayed according to Frediani and Boano's positioning

6.2 Assessing Sustainability

A definitive assessment of the sustainability of the water governance systems is challenging due to the lack of clear metrics for sustainability and the complexity of the theoretical framework. The theoretical framework is comprehensive, but doesn't offer a straightforward answer. However the available evidence does suggest that the level of sustainability could be satisfactory. The theoretical framework highlights the many strengths of UN-Habitat's approach. The remaining question is thus to what extent is the governance structure able to create sustainable water governance. The direct reports from CDC members already involved in water governance suggest that that the governance is sufficient enough to keep the systems operating for a good portion of their designed lifecycle. Nevertheless, the quality of operation remains unclear, indicating there is room for improvement.

Considering these factors, it may be more productive to examine the resilience of the governance systems as a contributing factor to sustainability. The water governance structures must be resilient in the face of the triple crisis posed by the COVID recovery, ongoing conflict, and climate change to effectively deliver clean water sustainably to the communities. Financial resilience, in particular, emerges as a crucial but relatively under-investigated aspect. Additionally, other weaknesses identified by the theoretical framework, such as the absence of a critical analysis of power dynamics within the community and among various actors and the lack of established mechanisms for addressing disagreements and conflicts within the community, could become more significant threats to sustainability in the context of the triple crisis.

6.2.1 Impact of Conflict

Several notable effects of conflict emerge when addressing the sub research question *"In what ways does the conflict setting affect the ability of the Peoples' Process to create sustainable water governance and why?"* First, the impact of conflict appears to be greater on UN-Habitat's operations rather than on the CDCs and the governance structures themselves. The conflict disrupts UN-Habitat's typical approach to ensuring sustainability by eliminating the possibility of top-down policy work which happens in parallel to community projects. Long term change via policy is viewed as one of the ways in which UN-Habitat ensures sustainability. However, this situation has led to UN-Habitat collaborating more with non-state actors. The conflict situation also leads UN-Habitat to focus more on emergency interventions, which naturally prioritizes short-term solutions over long-term sustainability. A potential way to mitigate this approach for this could be committing to other projects with the same communities to ensure they are not left behind once the emergency intervention ends.

For CDCs and the governance systems, the impact of conflict is most felt mostly as secondary effects. For instance, in economic terms, the conflict and its geopolitical ramifications have driven up the cost of operations, particularly in terms of electricity. The conflict additionally exacerbates the insecurity of the existence of the informal settlements, although it's worth noting that they were already unrecognized by the government. This is reflected in literature from the World Bank (2021) (Figure 2.4.1) that emphasizes how conflict settings exacerbate existing problems by layering new problems on top of them. Effective responses must thus address both these new problems as well as the old problem. This underscores the urgency of enhancing the resilience of the governance systems, regardless of the specific impacts of the conflict. In this context, strengthening the governance structures becomes not only a matter of sustainability but also a vital response to the triple crisis faced by the communities in informal settlements.

6.3 Room for Greater Collaboration

Increasing collaboration between multiple actors presents a promising avenue for enhancing the resilience of the governance system. As previously noted, these systems are often perceived as community-led, with less emphasis on collaborative aspects. However, existing literature underscores the importance of collaboration in water governance in fostering resilience (Jiménez et al., 2020; Woodhouse & Muller, 2017). Since many of the governance responsibilities lie only with the CDCs, once UN-Habitat leaves the project, the CDCs become more vulnerable. Other collaborative elements within the system are relatively weak, resulting in a limited support network for the CDCs. This situation is partly a consequence of the project modality. This kind of project structure is somewhat inevitable given UN-Habitat cannot take over what are typically the responsibilities of a government indefinitely. However the ability of the CDCs to rely on support from local authorities and equipment suppliers remains uncertain. After the initial year, CDCs are left to secure their own support at their own cost, leaving them vulnerable to both internal and external disruptions.

Greater collaboration could manifest in various forms, each with its own considerations. For instance, the WaterAid model, which distributes technical responsibilities among multiple actors, offers an alternative to sole community management. However, the effectiveness of this model remains untested. Other options include extended contracts with equipment suppliers, increased involvement from the Myanmar Engineering Society (beyond the design phase), or engagement with specialized NGOs who can provide long-term support to water systems. Additionally, linking CDCs to each other for support could help fill knowledge gaps in case of sudden member turnover. However, it's essential to recognize that collaborative governance demands significant resources for coordination, especially given that the conflict setting will introduce challenges not present in other collaborative structures. The value of increased collaboration should hinge on whether the added resilience is necessary, given the ability of the current governance system's ability to meet the necessary standards. These factors should be balanced before moving forward.

6.4 Reflection on the Theoretical Framework

The theoretical framework as a tool of analysis was limited in several regards. Its basis in literature makes it more appropriate for measuring “good” processes rather than sustainability itself. It is therefore not useful in making a judgment on how sustainable a community-led water governance structure will be. Instead it offers more of an exploratory approach for which process factors may contribute to weaker or less resilient governance. However, another weakness of the framework is its inability to establish causality. Although it identifies mechanisms and outcomes at a broad level, it remains unclear how the failure to implement individual factors affects the larger system. For instance, does the lack of consideration of power dynamics in the collaborative governance section have any impact on any of the criteria for sustainable water governance? Or does it instead have an impact on other criteria within collaborative governance? To improve the causality, it is recommended to review more literature and case studies to expand on why factors are considered necessary for sustainable water governance.

More work also needs to be done to bridge the different fields of research, including participatory processes, commons governance, collaborative governance, and water governance, which each have different focuses. Some elements from the different fields overlap, such as the consideration of power dynamics. Combining some of these factors and developing a clearer line of causality between the inputs and outputs of each field would also help reduce the number of factors in the framework.

As is, with 52 factors, the framework is somewhat bloated, which overcomplicates the analysis and makes it difficult to draw concise conclusions.

The inclusion of the external factors as is was also not productive to analyzing their impact on the system. Including them as factors in a similar manner to the rest of the framework was too prescriptive, already assuming which impacts were critical. The goal of including context in the analysis was to understand how the particular context shapes the governance structures, including as a tool to understand why some factors may or may not be realized within the governance structure. Table 6.5.1 is one potential reformulation of how the external factors can be analyzed. Instead of presenting them as part of the framework, they could be presented in a table format such that their impact, if any, is presented alongside the subsections of the framework. It would also allow for the inclusion of other external factors outside of those identified in the beginning of the research.

Table 6.5.1: Suggested reformulation of the contextual elements that would allow for a more direct analysis of how they impact each subsection of the theoretical framework rather than prescribing contextual factors

	Conflict Setting	Informal Settlements	Climate Change
Participatory Processes			
Governance Structures			
Water Governance			

6.5 Research Limitations

It is also worth considering the limitations of this research and what recommendations could be leveraged in future research. While a realist review offers a comprehensive approach to data analysis, one key limitation lies in its inherently open-ended nature. There is no one prescribed way to identify important theories in a realist review. This makes verification and validation of the results more difficult. The results are also more likely to reflect the limits of the expertise and implicit biases of the researcher. Additionally, while the interviews predominantly featured UN-Habitat employees, future research should include a more diverse range of interviewees, including community members, local authorities, and NGOs, to gain a more comprehensive perspective and to understand the unique challenges each actor faces in a conflict setting. Extending research to include other case studies in the region would also provide a broader context for examining how development agencies and NGOs engage with community members to establish sustainable water governance. There was also insufficient time to fully investigate the alternative water governance model in use by WaterAid to better understand what unique benefits and limitations the model presents. Due to time constraints, interviews were also limited to one hour sessions, which left insufficient time to thoroughly explore all topics of interest. Notably, there was not enough time to discuss all the factors identified in the theoretical framework. This means that the data is insufficient to prove whether or not each factor is truly considered within UN-Habitat's process or not.

6.6 Academic Reflection

One of the most significant challenges of this research revolved around the synthesis of information from a diverse array of fields and sources. Focusing on a few specific aspects may have allowed for more specific criticisms and recommendations. However, part of the aim of this research was to take a broad perspective in order to understand the larger systems at play. The nature of this master's program also encourages tackling "wicked" problems and global challenges in all their complexity.

Without this broad perspective, the added value of theory from collaborative governance literature, for instance, may have been overlooked. However, going forward, it could be useful to zoom in on more specific aspects of water governance in conflict settings, such as financial sustainability. There are many loose ends of this research which could be pursued in order to gain additional insight. It's also possible that future research could benefit from an extended timeline. The extra time could have been used to delve further into how other UN-Habitat offices deal with conflict. The interview with the staff member from Afghanistan offered a lot of valuable perspective, but was too brief to offer a comparative assessment of the impact of conflict in that specific context.

7

Conclusion

This research provides a comprehensive examination of UN-Habitat's People's Process in order to answer the main research question *"Does the People's Process contribute to creating sustainable water governance structures in the current context of Yangon's informal settlements, and if so, in what ways?"* The analysis was guided by a theoretical framework that sought to synthesize best practices in participatory processes, the creation of governance structures, and sustainable water governance, while situating them within the context of Myanmar as a conflict setting. Through analysis of interviews, the People's Process, as used in UN-Habitat's COVID-WASH project, was outlined and compared to the theoretical framework in order to draw conclusions about its ability to create sustainable water governance.

A main finding of this research is that the People's Process is able to effectively establish a robust participatory approach through fostering community engagement and a sense of ownership from the project's inception. Through capacity building and community empowerment, the CDC structures established by the People's Process prove capable of governing the water distribution plants. However, CDCs face difficulties in incentivizing community members to fill vacant positions and due to the maintenance demands of the water distribution facilities, may not be able to provide as high of quality services. Financial constraints further limit the CDCs' ability to undertake substantial improvements beyond routine O&M. The conflict setting ultimately compounds these pre-existing sustainability challenges rather than introducing wholly new challenges. UN-Habitat's typical approach, which involves policy and capacity building efforts with the government, is usually seen as the answer to creating sustainable community development. However, these approaches are no longer possible in the conflict setting. Furthermore, because UN-Habitat country offices operate on a project modality, the support network for CDCs is weak once UN-Habitat disengages from the project. Increased collaboration between different actors may be one way to improve the sustainability of the governance systems.

Overall, these findings present an interesting conclusion that community-led governance structures do have the potential to be sustainable, even in conflict settings. The sustainability of the systems can be attributed to governance structures rooted in well designed participatory processes where the community is given the opportunity to shape the outcomes, even if the intervention is predetermined. However, while these systems may be sustainable in the sense that they are able to continue operating throughout the system's life cycle, the quality of the water governance may still vary. Thus, in conflict settings, there is an increased need for governance structures to be resilient against new problems layered on top of old ones. One potential way of increasing resilience can come from spreading governance responsibilities, such as infrastructure management, among multiple actors through a collaborative governance structure. However, this solution requires further research to assess its viability. Additionally, there should be a greater reflection about the nature of sustainability

as an outcome with more thought given to what sustainability means and how it can be empirically monitored and evaluated. Without this information it is difficult to make judgment calls about whether a system is sustainable and where improvements are needed.

Considering these findings, recommendations for UN-Habitat include the development of key metrics for sustainability that can be used to understand if additional measures are needed to increase the quality of the water governance. Additionally, UN-Habitat should explore opportunities for collaboration between different actors in order to provide more support to the CDCs. This would increase the resilience of CDCs against potential shocks from the triple crisis. Potential partners could be organizations like the Myanmar Engineering Society, other CDCs involved in water governance, NGOs that specialize in management of water systems, or even private sector actors. Finally, UN-Habitat should also ensure that communities involved in emergency intervention projects with limited scope are not left behind after the project ends. The Community Action Planning step in the People's Process is one mechanism for ensuring continuity in development. Commitments to carry out future projects in the same communities when possible is another means of ensuring sustainable development outcomes.

Recommendations for future research into sustainable development in conflict settings include further development of the theoretical framework. More research to establish the causality between the individual factors in the framework would be useful in identifying which factors are actually critical for sustainable outcomes. Future iterations of the framework should consider only including these factors in order to simplify the analysis and provide clearer insight. Additionally, more research should be done into how conflict settings in other countries and regions impact the sustainability of water governance structures in order to validate the findings of this research. Particular attention should be paid to community-led governance systems that involve multiple actors. Additional value could also be gained from conducting interviews with more actors from different perspectives, especially local authorities, given their high level of power and influence in the problem setting.

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Appendix A: Theoretical Framework Citations

Table A.1: Citations for good design of participatory processes

#	Factor	Citations
1	participation is necessary	(Irvin & Stansbury 2004)
2	participatory methods are appropriate for the context	(Bryson et al., 2013; Tritter & McCallum, 2006; Collins and Ison, 2006)
3	participation has defined outcomes	(Bryson et al., 2013)
4	necessary, affected (sub) groups are represented and engaged	(Bryson et al., 2013; Tritter & McCallum, 2006)
5	facilitative leadership is present	(Bryson et al., 2013)
6	resources for the process are provided and managed	(Bryson et al., 2013)
7	technology is used effectively	(Bryson et al., 2013)
8	rules are used to guide the process	(Bryson et al., 2013)
9	evaluation measures are developed and used	(Bryson et al., 2013)
10	measures to resist co-option are developed and used	(Frediani & Boano, 2012)
11	power dynamics are considered and managed	(Bryson et al., 2013; Williams 2004; Frediani & Boano, 2012)

Table A.2: Citations for good rules for governing the commons

#	Factor	Citations
1	affected members can modify the rules	(Ostrom, 1990; Cox et al., 2010)
2	outside authorities respect the members' right to make rules	(Ostrom, 1990; Cox et al., 2010)
3	local diversity is respected and incorporated	(Ostrom, 1990; Cox et al., 2010)
4	behavior of members is monitored	(Cox et al., 2010)
5	sanctions for rule breakers are enforced	(Ostrom, 1990; Cox et al., 2010)
6	accessible dispute resolutions mechanisms are used	(Ostrom, 1990; Cox et al., 2010)
7	system boundaries are functional	(Ostrom, 1990; Cox et al., 2010)
8	the system is monitored	(Cox et al., 2010)
9	measures to resist co-option are developed and used	(Cox et al., 2010)

Table A.3: Citations for good design of collaborative governance

#	Factor	Citations
1	engagement between actors happens in a principled way	(Emerson et al., 2012)
2	trust is built between actors	(Ansell & Gash, 2008; Henry & Dietz, 2011)
3	the process is transparent	(Ansell & Gash, 2008)

4	actors are incentivized to participate	(Ansell & Gash, 2008; Emerson et al., 2012)
5	the system adapts to the impacts of actions	(Emerson et al., 2012)
6	facilitative leadership is present	(Ansell & Gash, 2008; Emerson et al., 2012)
7	power differences are minimized or mitigated	(Ansell & Gash, 2008)
8	actors share a common understanding of the problem	(Ansell & Gash, 2008; Emerson et al., 2012)
9	resources are set aside for governance	(Emerson et al., 2012)

Table A.4: Factors for sustainable water governance

#	**Factor**	**Citations**
1	water resources are managed in the long term with respect to the greater environment	(OECD, 2015; UNDP, 2015)
2	finances are managed in a transparent and sustainable manner	(OECD, 2015)
3	multiple actors are considered and assigned clear roles in system management	(OECD, 2015; UNDP, 2015)
4	the community is involved early on and drives the system management	(OECD, 2015)
5	integration with city wide plans are considered and the accountability of the local government is not undermined	(OECD, 2015)
6	the system is designed to be adaptive in its leverage of new technologies and in evidence based modifications	(OECD, 2015)

Table A.5: Contextual factors

Category	**#**	**Factor**	**Citations**
Conflict Setting	1	increased competition for water related services	(WorldBank et al., 2021)
	2	increased operation costs	(WorldBank et al., 2021)
	3	decreased access to funding	(ICRC & Norwegian Red Cross, 2023)
	4	politicization of support for government	(Kyed & Chambers, 2023)
Informal Settlements	1	insecure tenure	(UN-Habitat, 2022b)
	2	not connected to municipal services	(UN-Habitat, 2022b)
	3	increasing population	(Hickey & Maria-Sube, 2022; UN-Habitat, 2022b)
	4	extreme poverty	(UN-Habitat, 2022b)
Climate Change	1	increasing water scarcity	(WorldBank et al., 2021; Hickey & Maria-Sube, 2022)
	2	decreasing water quality	(Hickey & Maria-Sube, 2022)
	3	increasing water pollution	(Hickey & Maria-Sube, 2022)
	4	increasing natural disasters	(Kyed & Chambers, 2023)
	5	rising sea levels	(Kyed & Chambers, 2023)

Appendix B: Theoretical Framework Alignment

Table B.1: Alignment for good design of participatory processes

#	Factor	Remarks	Structural Coding	Open Coding
1	participation is necessary	• Participation is a core part of the People's Process (i4; i9) and is part of the driving philosophy of UN-Habitat (i1; i2; i3; i4; i9) • Considered necessary for sustainability (i3)	1	ideals pp as democratic process pp as participatory process pp as right to the city
2	participatory methods are appropriate for the context	• UNH considers culture and sensitivities specific to each community (i1; i2) • Best practices are adapted to the particular contexts (i1)	4	
3	participation has defined outcomes	• The establishment of CDCs, guidelines for the CDCs, capacity building for community members, a Community Action Plan, a community contract (UN-Habitat, 2022a; i1; i2; i3; i7; i9)	20	capacity building community action plan community contract
4	necessary, affected (sub) groups are represented and engaged	• Goal is to include other marginalized groups, but there are no requirements to include these groups (i1; i3) • The number of community members who attend the meeting may vary highly, but generally a large number are reported to attend (i5; i6)	12	
5	facilitative leadership is present	• UNH community mobilizers facilitate the participatory process (i1, i2, i3, i4, i7) • Community volunteers may also support this process (i2) • The 100 household leaders may also be involved (i3)	18	UNH guides process
6	resources for the process are provided and managed	• Paid UNH staff manage the process (i2) • Community volunteers are sometimes reimbursed (i2) • Trainings are included in the budget (i3)	2	role of UNH
7	technology is used effectively	• No indication that any special technology is used in the process	0	
8	rules are used to guide the process	• The People's Process itself can be seen as a broad guideline • There are guidelines for specific workshops, training, community action planning, etc… (i1) • Much of the knowledge is institutional with guidance from experienced UNH staff (i2)	3	
9	evaluation measures are developed and used	• No specific measures exist to evaluate the participatory process itself • The entire project is evaluated by UN-Habitat and community members from beginning to end (i2; i3; i4; i9) • Some specific metrics may indirectly indicate the success of the participatory process such as the inclusion of women (i3)	0	external M&E monitoring social factors
10	measures to resist co-option are developed and used	• No specific measures to resist co-option exist • The entire project is evaluated by UN-Habitat and community members from beginning to end (i2; i3; i4; i9)	0	external M&E

11	power dynamics are considered and managed	● Existing community leaders (ex 100 household leaders) are involved along with the local authorities (i2; i3) ● Power dynamics between men and women is mitigated by encouraging women to participate (i3; i9)	3	working with government inclusion of women

Table B.2: Alignment for good rules for governing commons

#	Factor	Remarks	Structural Coding	Open Coding
1	affected members can modify the rules	● CDCs follow some official written rules and have their own TOR to carry out tasks within the community (Appendix E) ● A standard governance scheme is applied to all CDCs (i1; i9) but community members are able to add to and tailor the scheme (i2; i3; i7) ● CDC members however say they do not follow written rules but act according to work decided on in meetings (i5; i6) ● CDCs will not sign community contracts with UNH because UNH is only providing technical support and guidance (Appendix E; i3), but CIA (community implementation agreements) have been signed and linked to water safety plans and the management of the water distribution systems (Appendix E)	10	community contracts CDC rules
2	outside authorities respect the members' right to make rules	● CDCs are currently unable to be officially registered with the de facto authorities (i2; Appendix E) but are typically legally registered (i1; i4; i9; UN-Habitat 2022) and are currently recognized under the umbrella of the YCDC (Appendix E) ● CDC members often do have experience working with the local authorities (i2)	6	working with the government
3	local diversity is respected and incorporated	● Representation of different groups within the community (religious, gender, age, disabled, etc…) is encouraged but not enforced or required in CDCs (Appendix E) ● CDCs are reported to be about half women and half men (UN-Habitat 2022) and one CDC consists of 5 women and 2 men (i6)	8	
4	behavior of members is monitored	● *[Includes any process that is meant to explicitly prevent corruption, not just regular records keeping]* ● Processes meant to discourage and prevent corruption, usually regarding finances, are part of the governance structure of the CDCs (i1; i2; i3; i5; i9) ● UNH also monitors the activities of the CDC members throughout the duration of the project (i2; i3; i4; i9) and on a ad hoc basis after the end of the project (Appendix E) ● The community also keeps an eye on the CDC members (i5)	10	external M&E internal M&E
5	sanctions for rule breakers are enforced	● Some instances of rule breakers discussed in relation to financial management (i3) ● Sanctions for rule breakers not discussed while dispute resolution was (i3)	2	
6	accessible dispute resolutions mechanisms are used	● No formal or codified dispute resolution mechanism ● If issues such as mismanagement, corruption, or conflict within communities arise the community usually is able to handle it themselves without involving higher or outside forces (Appendix E; i1; i3; i5; i7) ● CDCs may or may not be seen or act as the primary source of dispute resolution within the community (i9)	9	
7	system boundaries are functional	● Mandate of CDC varies from project to project but is typically restricted to community development activities (i1; i3; i9) ● Some documentation including community contracts and community action plans help outline the boundaries of the system CDCs are managing (i1; i3; i9) ● For the COVID-WASH project, CDCs will only manage the	3	community action plan community contracts flexible role of CDC

		water supply systems (i2)		
8	the system is monitored	● *[Only includes monitoring the water system itself, not finances]* ● The CDC has O&M manuals called Water Safety Plans which include regular monitoring of the system (i1; i2; UN-Habitat, 2022) ● The water quality is monitored by the CDC at regular intervals (i2; UN-Habitat, 2022) ● The system is monitored by UNH at the end of the project according to external evaluation criteria such as OECD guidelines (i2; i3) and on an ad hoc basis after the end of the project (Appendix E)	13	external M&E internal M&E water safety plan
9	measures to resist co-option are developed and used	● No specific measures were discussed to resist co-option ● Culture of trust, transparency, and accountability is fostered in order to ensure the CDCs are successful (i3) ● A sense of ownership plays a big role in ensuring communities are able to overcome competing interests (i1; i2)	3	ownership

Table B.3: Alignment for good design of collaborative governance

#	Factor	Remarks	Structural Coding	Open Coding
1	engagement between actors happens in a principled way	● UNH offers training to CDC members on specific topics to build their capacity for water governance (i1; i2; i3; i4; UN-Habitat, 2022) ● Equipment supplies also offer O&M training to CDCs (i2) ● CDCs are able to reach out to the local authorities or UNH for additional support after the end of the project (i2; i3; WaterAid, 2023) ● CDCs sign a contract with the equipment suppliers to receive maintenance support for one year with the option of extending it for longer (i2; i5; i6; WaterAid, 2023; UN-Habitat, 2022)	11	capacity building role of equipment supplies role of government role of UNH
2	trust is built between actors	● Community cohesion, a cooperative spirit, and a shared responsibility are all promoted as part of the People's Process to build trust within communities (i1; i3) ● Community members are also able to observe the work that CDC members do in order to foster a sense of trust (i5) ● The political turmoil has made it harder to build trust within communities (UN-Habitat, 2022a)	9	
3	the process is transparent	● *[Only considers information that is announced to the community, not regular records keeping]* ● Decisions made by the CDC are put on notice boards for the community to see (i3; i6) ● Records are kept in books which are viewable by the community (i7)	5	
4	actors are incentivized to participate	● UNH incentivizes community members to participate by emphasizing their common challenges (i1) ● Some CDC board members are minimally paid (i5; Appendix E)	4	
5	the system adapts to the impacts of actions	● CDCs take suggestions from the community (i6)	5	
6	facilitative leadership is present	● CDCs acts as facilitative leadership and consist of a chairperson, (vice chairperson), secretary, treasurer and committee members (i1; i2; i6)	9	
7	power differences are minimized or mitigated	● No clear means were discussed to minimize of mitigate issues of power differences when governing the water distribution systems ● UN-Habitat tries to work with community members who	2	

		already have already engaged with the local de facto authorities to some extent (i2)		
8	actors share a common understanding of the problem	● Discussion of attempts to align actors perceptions did not occur ● Actor perceptions are discussed further in section XXX.XXX	0	
9	resources are set aside for governance	● CDC members may be minimally paid from the sales revenue. Compensation is determined by the community based on their tasks (i5; Appendix E)	5	

Table B.4: Alignment for sustainable water governance

#	Factor	Remarks	Structural Coding	Open Coding
1	water resources are managed in the long term with respect to the greater environment	● Environmental concerns are not integrated into the regular O&M plans for the water distribution plants (Appendix E) ● Larger environmental concerns (such as the water sources and sustainable usage) are considered by consultants and engineers during the design phase as much as possible (Appendix E)	1	
2	finances are managed in a transparent and sustainable manner	● *[Applies to anything that mentions financial management]* ● Sustainable financial management was identified to be critical for the sustainability of the system as a whole (i1; i3; i4; i8; i9) ● CDCs have their own bank accounts (i2; Appendix E) ● UNH provides training on bookkeeping and financial management (i1; i2; i3; i4; i7; i9) ● Financial records and kept in books and some are also posted publicly for the community to see (i6; i7) ● Measures are in place to ensure that CDC members never have too much cash on hand (i2; i7) ● Surplus is used for maintenance and repairs or spent in a charitable manner within the community (i5; i6) ● There are issues of sustainability because of the high cost of repairs and the need for a fuel powered generator (i6; WaterAid, 2023) ● UNH monitors the financial situation of the CDCs until the end of the project (i2; i3; i4; i9)	43	external M&E limitations to sustainability
3	multiple actors are considered and assigned clear roles in system management	● The roles of the most critical actors are clearly defined ● See section 5.3 for a presentation of the actor roles	15	role of CDC role of equipment supplies role of government role of UNH
4	the community is involved early on and drives the system management	● As per the People's Process, the community is involved from the beginning of the project (i2; i3; i5; i6) ● The final system is completely community managed with limited external support (i2; i4; i5; i6; i9; WaterAid, 2023; UN-Habitat, 2022)	11	CDC as management
5	integration with city wide plans are considered and the accountability of the local government is not undermined	● There is no intention to eventually integrate the water distribution plants into larger municipal infrastructure (Appendix E) ● Two previous water supply systems were shut down after 5-6 years when the authorities provided piped municipal water which was cheaper and more accessible (i2; UN-Habitat, 2022) ● The distribution system may operate as backup or supplementary systems (Appendix E)	4	
6	the system is designed to be adaptive in its leverage of new technologies and in evidence	● New technologies and adaptive water governance schemes were not discussed in interviews ● The water distribution plants are designed to be managed for at least 5 years with a 10 year lifespan. Use of local technology is prioritized while future technologies are considered as much as possible within those constraints	1	

	based modifications	(Appendix E) ● One CDC member mentioned that there is not enough money to upgrade the equipment and improve the quality of water (i6)		

Table B.5: Alignment for external factors

#	Category	Factor	Remarks	Structural Coding	Open Coding
1	Conflict Setting	increased competition for water related services	● There is fierce competition between unregistered, small scale sellers offering 20L water at cheap prices (WaterAid, 2023)	1	
2		increased operation costs	● Prices for electricity and fuel needed to power the plants have increased (WaterAid, 2023)	3	electricity and fuel costs
3		decreased access to funding	● Funding may be limited due to Myanmar falling outside of most funding eligibility (i4)	6	
4		politicization of support for government	● Only activities that are not perceived as support for the de facto authorities can be carried out (i9)	2	
5		[new] decreased ability to operate as usual	● CDCs are not able to be registered legally but are recognized under the umbrella of the YCDC (i2; Appendix E) ● Project could not be implemented in the usual way through community contracts so international companies had to be brought in (i2) ● The state cannot be involved in the project (i2; i4; i9)	na	cannot legal register CDCs conflict inhibits functioning of pp conflict creates alternative modalities of work
1	Informal Settlements	insecure tenure	● The de facto authorities may not recognize the settlements where people are living, leading to insecure tenure (i4) and may be threatened with eviction (i9)	3	
2		not connected to municipal services	● The informal settlements in Yangon may not be connected to municipal drinking water for several decades (i8)	1	
3		increasing population		0	
4		extreme poverty	● Many of the people in the communities are very poor (i5; i6)	4	
5		[new] extra legal challenges	● Land rights are difficult to obtain (i3; WaterAid 2023) ● CDCs may have difficulties registering with the de facto authorities (i4)	na	difficult to obtain land rights informality creates issues
1	Climate Change	increasing water scarcity		0	
2		decreasing water quality		0	
3		increasing water pollution		0	
4		increasing natural disasters	● Extreme weather and intense cyclones are a threat Myanmar faces (i4)	2	
5		rising sea levels		0	

6		[new] increased vulnerability of at risk groups	• Needs of vulnerable groups are exacerbated by secondary impacts of climate change (i4; i9)	na	climate change increases vulnerability
7		[new] displacement of vulnerable groups	• People displaced because of climate change become more vulnerable (i9)	na	displacement of vulnerable groups

Appendix C: Structural Codes

Table C.1: Structural codes and occurrence

Category	Description	Code	Occurrences
Context: Conflict Setting	increased competition for water related services	CCS1 increased competition	1
	increased operation costs	CCS2 increased costs	3
	decreased access to funding	CCS3 decreased funding	6
	politicization of support for government	CCS4 politicization	2
Context: Informal Settlement	insecure tenure	CIS1 insecure tenure	3
	not connected to municipal services	CIS2 municipal services	1
	increasing population	CIS3 increasing population	0
	extreme poverty	CIS4 poverty	4
Context: Climate Change	increasing water scarcity	CCC1 water scarcity	0
	decreasing water quality	CCC2 water quality	0
	increasing water pollution	CCC3 water pollution	0
	increasing natural disasters	CCC4 natural disasters	2
	rising sea levels	CCC5 sea levels	0
Participatory Process	participation is necessary	PP1 necessity	1
	participatory methods are appropriate for the context	PP2 context appropriate	4
	participation has defined outcomes	PP3 defined outcome	20
	necessary, affected (sub) groups are represented and engaged	PP4 group representation	12
	facilitative leadership is present	PP5 facilitative leadership	18
	resources for the process are provided and managed	PP6 management resources	1
	technology is used effectively	PP7 technology used	0
	rules are used to guide the process	PP8 process rules	3
	evaluation measures are developed and used	PP9 evaluation measures	0
	measures to resist co-option are developed and used	PP10 cooption resistance	0
	power dynamics are considered and managed	PP11 power dynamics	3
Governing the Commons	affected members can modify the rules	GC1 rule modification	10
	outside authorities respect the members' right to make rules	GC2 outside authorities	6
	local diversity is respected and incorporated	GC3 group representation	8
	behavior of members is monitored	GC4 behavior monitoring	10
	sanctions for rule breakers are enforced	GC5 rule breakers	2
	accessible dispute resolutions mechanisms are used	GC6 dispute resolution	9

	system boundaries are functional	GC7 system boundaries	3
	the system is monitored	GC8 system monitoring	13
	measures to resist co-option are developed and used	GC9 cooption resistance	3
Collaborative Governance	engagement between actors happens in a principled way	CG1 principled engagement	11
	trust is built between actors	CG2 trust building	9
	the process is transparent	CG3 process transparency	5
	actors are incentivized to participate	CG4 participation incentives	4
	the system adapts to the impacts of actions	CG5 system adaptativity	5
	facilitative leadership is present	CG6 facilitative leadership	9
	power differences are minimized or mitigated	CG7 power differences	2
	actors share a common understanding of the problem	CG8 problem understanding	0
	resources are set aside for governance	CG9 governance resources	5
Water Governance	water resources are managed in the long term with respect to the greater environment	WG1 resource management	1
	finances are managed in a transparent and sustainable manner	WG2 financial management	43
	multiple actors are considered and assigned clear roles in system management	WG3 actor roles	15
	the community is involved early on and drives the system management	WG4 community involvement	11
	integration with city wide plans are considered and the accountability of the local government is not undermined	WG5 city wide integration	4
	the system is designed to be adaptive in its leverage of new technologies and in evidence based modifications	WG6 system adaptativity	1

Appendix D: Open Codes

Table D.1: Open codes

Theme	Tier 1 Code	Tier 2 Code
actor roles and perceptions	NGOs and CSOs	
	role of equipment suppliers	
	role of government	
	role of UNH	role of UNH
		UNH guides process
	donor	
	MES	
	UNH Q	
	role of CDC	CDC as alternative to government
		CDC as area based programming
		CDC as connection to government
		CDC as CSO
		CDC as formal governance
		CDC as funding mechanism
		CDC as informal governance
		CDC as management
		CDC as mutual aid
		CDC as organization
		CDC as project selection
		CDC as state building
		CDC as water seller
		CDC for building cc resilience
		CDC implements activities
		CDC implements pp
		CDC only for water supply
		CDC provides labor
		flexible role of CDC
process and design elements	CDC structure	CDC rules
		CDC decision making
	collaboration	strategic collaboration
		collaboration for climate action
		working with government
		working with other UN agencies
	purpose of the People's Process	pp as methodology
		pp as participatory process
		pp as bottom up

		pp as capacity building
		pp as community self management
		pp a democratic process
		pp as greater opportunities
		pp as means for education
		pp as mutual aid
		pp as right to the city
	process step	capacity building
		CDC before action plan
		community chooses CDC members
		community contract
		community action plan
		community implementation agreement
		community mobilization
		continued collaboration
		un endorsement of CDC members
		knowledge transfer
		permission from government
		project end
		water safety plan
	community selection criteria	selected through previous work
		needs based selection
		different selection methods
	ideals	elevating community needs
		empowerment
		ownership
		recognition
		representation
		respecting human rights
		right to the city
		social strengthening
	diversity	diversity within communities
		inclusion of women
	UNH approach	project based approach
		adapted approach
		use of data
		integration of climate resilience
		proactive climate mitigation
		criticism of UNH
		need for parallel processes
		additional project with community
		external M&E
M&E		

		internal M&E
		long term maintenance
		maintenance of public good
		monitoring of social factors
	wateraid approach	external company for management
		improved output
		social business model
sustainability	definition of sustainability	environmental sustainability
		inclusion as sustainability
		sustainability across dimensions
		sustainability as engagement
		sustainability as continued operation
		sustainability from community involvement
		sustainability as adaptation
	sustainable technology	
	inability to measure results	M&E limitations
		time needed to understand results
	limits to sustainability	
challenges	O&M challenges	confusion about paid roles
		difficulty managing system
		difficulty replacing members
		poor governance
	challenges due to government	inferior water quality
		lack of government
		effects of engagement principles
		geopolitics
		inability to be transformative
		government as obstacle
		cannot legally register CDCs
		difficulty creating bank accounts
		land rights
context	COVID	
	electricity and fuel costs	
	impacts of conflict	conflict creates alternative modalities of work
		conflict inhibits functioning of pp
		pp suitable for conflict setting
		priority of needs
		change to humanitarian aid
		conflict leads to shortcuts
		conflict inhibits discussion of climate change
		conflict kills CDC members
		conflict increased project costs

	impacts of climate change	climate change increases vulnerability
		displacement due to climate change
	impacts of informality	informality creates issues
		difficult to obtain land rights
		politicization of informal settlements
		informality increases need for representation
		informal settlements experience rapid demographic change

Appendix E: Data Validation

Table E.1: Original and updated statements for data validation

Original Statement	Updated Statement
1: UN-Habitat, with the support of community volunteers and CDC members, conducts monitoring and evaluation throughout the project, culminating in a final assessment to evaluate the success of the project against the desired outcomes. After this, UN-Habitat is no longer involved in any monitoring and evaluation with the community or project.	1: UN-Habitat, with the support of community volunteers and CDC members, conducts monitoring and evaluation throughout the project, culminating in a final assessment to evaluate the success of the project against the desired outcomes. After this, UN-Habitat may engage in monitoring and evaluation with the community or project on a case-by-case basis, usually without funding on a voluntary basis.
2: CDCs are currently unable to be officially registered with the de facto authorities, but have been able to open bank accounts.	2: CDCs are currently not officially registered with the de facto authorities. Nevertheless they are currently recognized under the umbrella of the YCDC. CDCs have also been able to open bank accounts.
3: CDCs do not follow any official written rules, however UNH does provide training on best practices and guidelines for operation. CDCs are also bound by community contracts under which they are required to carry out specific activities.	3: CDCs follow some official written rules including a TOR which outlines rules, responsibilities, and roles. UNH additionally provides training on best practices and guidelines for operation.
4: If issues such as mismanagement, corruption, or conflict within communities arise the community usually is able to handle it themselves without involving higher or outside forces.	4: If issues such as mismanagement, corruption, or conflict within communities arise the community usually is able to handle it themselves without involving higher or outside forces.
5: CDC members are volunteers and are not paid unless they are responsible for managing the water distribution system.	5: Some CDC members are volunteers and are not paid. Some CDC members are paid daily wages. Compensation is determined by the community based on their tasks.
6: The government would ideally be responsible for financing and supporting the ongoing O&M of the water distribution plants, however, that is not expected in the current circumstances	6: The government would ideally be responsible for financing and supporting the ongoing O&M of the water distribution plants, however, that does not occur and is not expected in the current circumstances
7: Representation of different groups within the community (religious, gender, age, disabled, etc…) is encouraged but not enforced or required in CDCs	7: Representation of different groups within the community (religious, gender, age, disabled, etc…) is encouraged but not enforced or required in CDCs
8: Larger environmental concerns (such as decreasing aquifer levels, saltwater intrusion, etc…) are not considered in the design phase and are not integrated into the regular O&M plans for the water distribution plants	8: Larger environmental concerns (such as the water sources and sustainable usage) are considered by the consultants and engineers during the design phase as much as possible. However, these concerns are not integrated into the regular O&M plans for the water distribution plants
9: The water distribution plants are not designed or managed with future adaptations or adoption of new technologies in mind	9: The water distribution plants are designed to be managed for at least 5 years with a 10 year lifespan as a solution to immediate need within the community. Other, locally available technologies such as rainwater harvesting are considered as much as possible.
10: There is no intention to eventually integrate the water distribution plants into larger municipal infrastructure	10: There is no intention to eventually integrate the water distribution plants into larger municipal infrastructure. Once the settlements are regularized and municipal services installed, the systems may function only as a backup or supplementary system.
11: The community will create a community action plan after the CDCs are formed as part of the COVID-WASH project	11: The community will create a community action plan after the CDCs are formed as part of the COVID-WASH project and for other projects such as climate action or SWM.
12: The community will sign a community contract with UNH to carry out work identified in the community action plan as part of the COVID-WASH project	12: CIA (community implementation agreements) have been signed and linked to water safety plans and the management of the water distribution systems. CAPs have been made among CDC, community members, local authorities, community leaders, and religious leaders. CDCs will not sign community contracts with UNH because UNH is only providing technical support and guidance.

Appendix F: Extended Actor Analysis

Table F.1: Actor Descriptions

Actor	Description
UN-Habitat Myanmar	UN-Habitat Myanmar is the initiator of the project. They are an office of UN-Habitat located in Myanmar tasked with carrying out UN-Habitat projects.
UN-Habitat HQ (Head Quarters)	UN-Habitat Head Quarters, located in Nairobi, Kenya is the parent organization for all UN-Habitat offices and broadly oversees all the work of the organization. UN-Habitat is tasked with realizing SDG 11: "Make cities and human settlements inclusive, safe, resilient and sustainable".
CDCs (Community Development Committees)	Community Development Committees are small community groups organized via UN-Habitat's People's Process. CDCs consist of volunteer community members who manage and oversee community projects.
Yangon Regional Government	De facto authorities of the Yangon region and formal extension of the de facto state authorities. The office consists of many ministries tasked with carrying out activities needed to manage and govern the region.
YCDC (Yangon City Development Committee)	Yangon City Development Committee is a semi-independent body organized under the de facto authorities that administers the city and is primarily responsible for city infrastructure.
Japan Embassy	The Japanese Embassy in Myanmar represents Japan's diplomatic work in Myanmar. The office is often responsible for managing development projects in Myanmar funded by the Japanese government.
Equipment Suppliers	Equipment suppliers are companies responsible for providing water treatment equipment for the water distribution plants. They are also responsible for providing operation and maintenance support as per contracts signed with CDCs.
MES (Myanmar Engineering Society)	The Myanmar Engineering Society is a professional association for engineers in Myanmar. They seek to promote and develop the engineering profession in Myanmar. They may also provide technical support to projects that aim to develop the country.
Arcadis	Arcadis is a design and engineering consultancy company. Through the Arcadis Shelter Program they offer technical support to select UN-Habitat projects.
Construction & Contractor Companies	Construction and contractor companies will carry out the construction of the water distribution centers.

Table F.2: Power and Interest relative to the issue of sustainable water governance

Actor	Interest	Interest Description	Power	Power Descriptions
UN-Habitat Myanmar	5	• Project owner • Carry out UN mandate	4	• Directs financial resources • Implements project • Forms agreements with implementation partners
UN-Habitat HQ	3	• Carry out UN mandate	4	• Approves or denies key project elements
CDCs	5	• Sustainable access to water is necessary to	3	• Forms agreements with collaborating partners

		improve quality of life		
Yangon Regional Government	3	• Well being of residents • Adherence to local laws	5	• Approves or denies land requests
YCDC	4	• Continuous supply of basic utilities to residents of Myanmar • Adherence to local laws	5	• Supplies or withdraws (long term) financial and technical support • Approve or deny land requests
Japan Embassy	3	• Successful implementation of the project in the short and long term	4	• Supplys or withdraws financial support
Equipment Suppliers	1	• Profit	2	• Supplies equipment • Provides O&M manual • Provides O&M training • Provides 1 year of contracted support after installation
MES	2	• Improving quality of life in Myanmar	2	• Supplies technical designs
Arcadis	2	• Supporting UN-Habitat	1	• Improve technical designs
Construction & Contractor Companies	1	• Profit	2	• Carries out construction

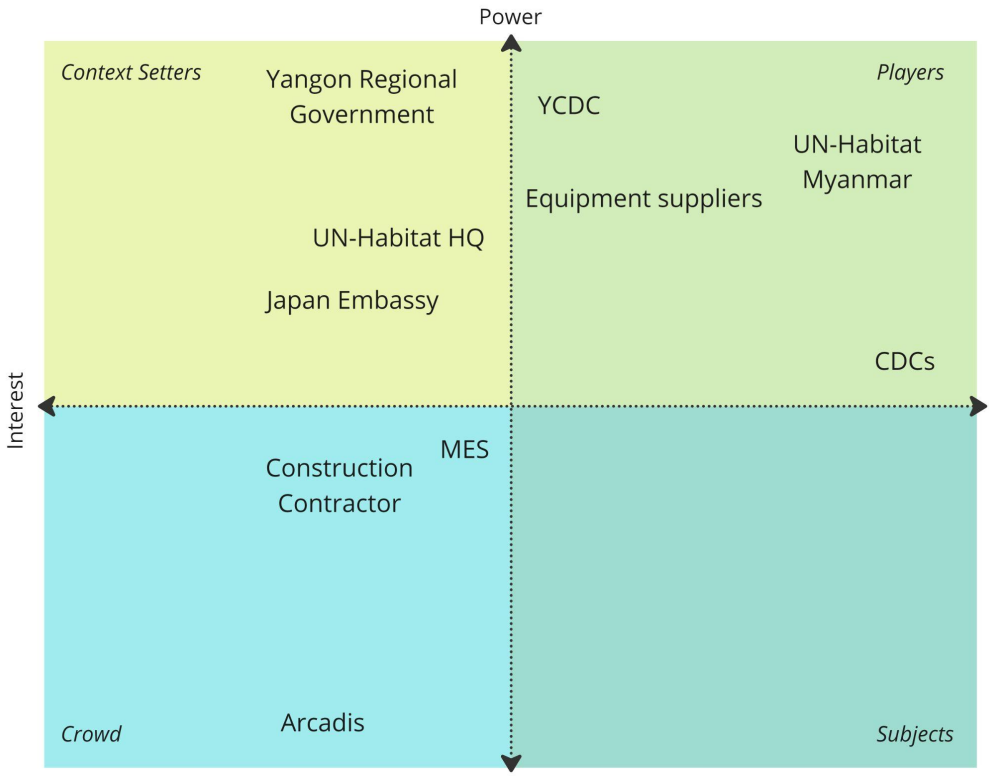

Figure F.1: Power interest diagram

Appendix G: Interview Summaries

Interview 1

1. What is the people's process and how does it impact UN-Habitat's work?
    - The People Process is based in traditions of people coming together during disasters to help each other
    - UNH's People's Process was inspired by the million houses program in Sri Lanka during the 70's and 80's
    - The process has been tested and improved over time in many different contexts
    - The People's Process is designed to be inclusive and consensus based
    - The People's Process utilizes local leaders and indigenous knowledge along with social mobilizers and participatory action planning guidelines
    - Communities determine their own goals in the short and long term through Community Action Planning
    - Fostering a sense of ownership is a key feature of the people's process that enables it to be effective
2. How does UN-Habitat apply the People's Process when it's difficult to find agreement between community members?
    - The People's Process encouraged community members to consider their collective goals
    - Communities are able to engage in the Community Action Planning process on their own timeline to reach collective decision
    - Neutral facilitators are selected and trained by UNH to lead the process
    - Communities are trusted to make their own decisions resolve conflict on their own
    - Communities typically set aside their differences and conflict has rarely impacted the success of programs
3. What role do CDCs play in the participatory processes?
    - CDCs refer to Community Development Councils and the terminology is used only in a few locations such as Afghanistan and Indonesia
    - In places like Afghanistan, the government has been encouraged to recognize the CDCs as grassroots or local governance entities
    - CDC committee members are selected by the community and consist of a chairperson, secretary, and treasurer
    - There is a requirement that 50% of the members must be women
    - CDCs are used to promote area based programming in comparison to sectoral development
4. How do CDCs manage themselves? How are rules and violations of rules handled?
    - CDCs have policies and procedures
    - CDCs can form subcommittees dedicated to tasks such as monitoring, religious affairs, procurement, etc… based on the challenges they are facing
    - Every CDC has the same governance policies and these function as check and balances

- For example, treasures cannot sign checks without a certain number of witnesses present

5. How do CDCs work with other organizations and stakeholders to deliver services?
    - The Community Action Plans that CDCs develop include a variety of needs that cannot be met by UNH alone
    - The government and other UN agencies are encouraged to fill these gaps
    - UN agencies coordinate with each other to fill in gaps
    - When the government is not able to support communities UN agencies are asked to step in
6. How does sustainability factor into the People's Process and the work CDCs do?
    - Sustainability is one of the most important aspects of the People's Process
    - The ability of communities to afford the operation and maintenance of machinery is key
    - The People's Process encourages sustainability by encouraging community members to select interventions that work for them
    - Donors can provide guidance for O&M
    - User fees then help fund system O&M without the goal of repaying the initial investment
7. Do any monitoring and evaluation take place to ensure the quality of service delivery?
    - Facilities are provided with an O&M manual and user fees are collected to afford O&M
    - CDCs form committees to conduct O&M
8. How are external factors such as climate change taken into account when engaging with communities?
    - Climate change is of particular concern in the Asia Pacific
    - Community Action Plans are intended to take into consideration cross cutting issues
    - Manuals and guidance are provided to the community to assist in creating a Community Action Plan
    - Working with the community to create a Community Action Plan can take 3 months, 6 months, to 1 year
    - In conflict settings some shortcuts may be taken, but the quality of the process is not compromised
9. Does UN-Habitat maintain contact with communities after the initial engagement to create and train CDCs?
    - The community are the owners of projects, UNH only takes on the role of a facilitator
    - Many communities around the world have become healthy and robust human settlements that govern themselves
    - UNH assists member states and will fill in the role of the government when necessary or requested

Interview 2

1. What stage is the COVID-WASH project in right now?
    - The plan is to build 22 water distribution systems divided into 2 batches
    - The first batch has begun construction
    - The second batch is still under financial review by UN-Habitat office in Nairobi
    - So far UNH is only engaging with the community volunteers who may become CDC members
    - Our team has experience establishing CDCs after past work in the dry zone and with 4 other water distribution plants in Yangon
2. How did UNH first engage with the communities?

- The communities were initially involved in the COVID-19 resilience program
- 45 communities were engaged in that program but we have narrowed it down to 22 communities for water systems
- The communities do not already have CDCs so we will form CDCs in these communities just to manage the water systems
- Some members of the CDCs may be community volunteers that work on other things however
- We have already conducted some training with these community volunteers

3. What role do community members play?
    - UNH collaborates with communities to implement activities
    - Some community members were paid to help implement other parts of the COVID-WASH project
4. Who is involved with the Water Safety Manuals?
    - The water safety manuals are used as part of the training
    - We've modified the water safety manuals that were used in the dry zone projects to be more appropriate for the urban projects
    - They originally came from the manufacturers manual
    - We are revising it currently with the CDD team
5. What role does the CDD team play?
    - CDD means community driven development and it's a unit at UNH
    - We are part of the CDD team and it includes senior community mobilizers, monitoring and evaluation staff, senior engineers, and finance members
6. Will community volunteers end up becoming CDC members?
    - Community member choose the CDC members
    - But we do think the community volunteers will become CDC members
    - That's why the community volunteers are getting training already like for the water safety manuals
7. How are rules and regulations for CDCs dealt with?
    - We look for people who already have experience working with ward authorities or township authorities so that they know how to reach out for help in the future
    - Most community members have already had some dealings with the local authorities
8. How do the equipment suppliers help with O&M?
    - The equipment suppliers support during the construction
    - They also provide operation and maintenance support for one year
    - The equipment suppliers draft a contract between them and the CDC which UNH reviews
    - The equipment suppliers also give the community O&M training and an O&M manual
    - MES only provided oversight during the construction phase
9. How is monitoring and evaluation conducted?
    - The CDC monitors the water quality annually or every 6 months
    - UNH provides coaching
    - At the end of the project UNH conducts a project evaluation and uses the OECD evaluation criteria related to water supply systems
10. How do CDCs get help after the end of a project?
    - They can get help from the equipment suppliers for 1 year
    - After one year they can communicate with the township engineers
    - Or they can continue the contract with the equipment suppliers if they have enough money
    - The community still has to pay for maintenance or part replacement during the 1st year

- CDCs can always come to UNH for additional support too
- In the past they have gone to the YCDC or the GAD

11. How do you define the People's Process?
    - Person 1: The People's Process is UNH mainstream approach for project implementation that involves the community to increase their sense of ownership. It is also about utilizing local materials and reducing the cost of projects to have a more sustainable impact
    - Person 2: Our culture already has aspects of the People's Process in that people support each other in the community, for instance giving food to monks. The People's Process is ld by the people to increase ownership and sustainability
    - Person 1: It is also about building capacity of people through leadership and helping them identify their needs and concerns
12. Can you discuss how issues of trust are handled in communities?
    - Mobilizing the community is the first step so that they understand their own objectives
    - There are not issues in the community because they feel that the process is owned by them
13. How are issues of mismanagement handled?
    - Selecting good leaders is important for sustainability
    - We coach the community to understand which qualities are important in leaders
    - Only some villages have had issues where the leader left and the person whole replaced him was not good
    - Mostly we do not have any issues
    - When issues do arise UNH encouraged communities to handle the issues themselves, but if they cannot they can get UNH involved or the local authorities
14. How have the recent political changes impacted the implementation and intended outcomes project?
    - There have been many issues
    - We could not do procurement in the same way and had to change to international procurement
    - We could not implement through community implementation agreements (CIA) because the CDCs could not be legally formed without interacting with the township authorities
    - It would be been cheaper to implement with a CIA because the cost goes up with international procurement
    - It was also difficult to form groups because we could not make new bank accounts
    - Some original project components that involved the government were changed

Figure F.1: Diagramming exercise from Interview 2

Interview 3

1. What was the scope of the projects in the Dry Zone?
    - Past WASH projects were implemented by UNH in the dry zone spanning 9 years (6 years in partnership with I/NGOs + 3 years) and covering around 500 villages
    - The approach (see figure) evolved over time to become more cost-effective and more sustainability due to the communities engagement and their own initiatives and local knowledge and experience
    - Committees were always elected by the communities themselves and were required to involve women
    - These projects often involved more than just water distribution, for instance livelihoods, capacity building, etc
    - The projects were also a means to raise people's awareness on WASH practices
    - Meters were used to monitor and charge community members for how much water they used
    - That money was used for maintaining the system
    - Because the program was implemented incrementally with villages yearly, there was an opportunity to monitor project activities in villages were projects had already implemented
2. How did UNH select and approach the communities involved in these projects?
    - UNH selected communities on the basis of needs while working with the Department of Rural Development
    - Rapid assessments were used to determine which communities were most in need
    - Operational cost-effectiveness was also factored in and considered factors such as travel time
3. How does UNH work with the leaders in the communities?
    - Communities have 100 household leaders which are put in by the government
    - UNH and the communities involved these local village authorities who are appointed by the government
    - The communities ultimately elected their own Community Development Committee to implement the project activities
4. How does the People's Process deal with competing interests and conflict?
    - In a few cases some community members tried to serve their own interests
    - We tried to create transparency from the beginning
    - Disagreements are handled and resolved within the community and outside authorities are only involved in the case that the disagreement cannot be resolved
    - Big banners in the community were used to help encourage transparent financial management
    - The aim was to develop ownership through trust, and the sense of ownership in turn helped avoid fraud, misuse, etc
    - Cultural elements such as fear of losing 'face' also incentivized responsible management
5. Do CDCs use a formal or informal set of rules?
    - There are regulations that each CDC must follow that are tailored to the community
    - A social contract is signed when the committees are formed and it lasts until the end of the project
    - Community members are selected by the community and then given training
    - The community also has 3-4 books which they have to fill out including a financial statement book, training books, and a beneficiaries book
    - Copies of these books are kept with the CDC and UNH

6. What falls within the scope of the work CDCs do?
    - CDC can do many things based on the needs of the community
    - If other NGOs are working in the area, we will inform and connect with another CDC to implement different project activities so there is coordination within the village
7. How is monitoring and evaluation carried out?
    - Monitoring is carried out throughout the project
    - The CDC, UNH, and local government are engaged in the monitoring process
    - Milestones are measured through indicators/KPIs usually every quarter
    - The community will conduct a social audit based on the programs KPI's at the end of the project
    - The social audit is designed like a questionnaire
    - The questions are designed around the expected outcomes, outputs and indicators
    - For example, questions may be about inclusion of women or open defecation
8. How would you define sustainability in the context of these water systems?
    - First they are functioning and are they used
    - Must be able to afford the maintenance of the system
    - People have to be engaged in order for a system to be sustainable
9. How does UNH work with other stakeholders?
    - UNH has access to a lot of knowledge which needs to be transferred to the communities
    - Since the people's process focuses on working with and centering affected or target communities for their own development, NGOs are only engaged when their support is necessary, for example to facilitate access to places UNH cannot reach
    - By working directly with the communities, the project budget is injected into the communities and the operations budget is also reduced
    - UNH will also partner with and provide support to LNGOs/CBOs through capacity building
10. Define the People's Process in your own words.
    - People are just like you with dreams and aspirations but they do not have access to the same opportunities as you, so you have the ability to give those opportunities back to the community because you are in a position to help them help themselves

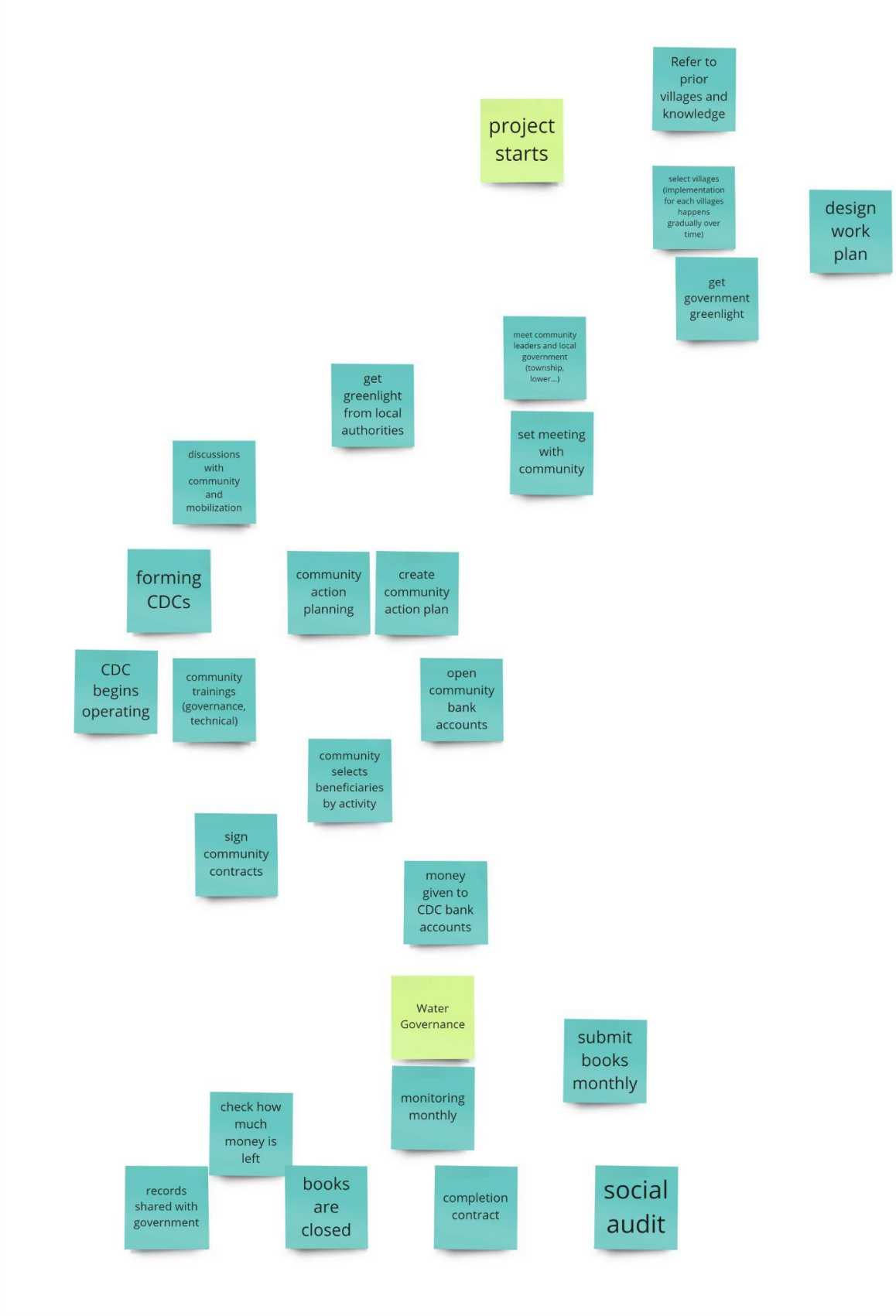

Figure F.2: Diagramming exercise from Interview 3

Interview 4

1. Describe the People's Process in your own words.
    - The People's Process is a methodology developed by UN-Habitat
    - To me it is about participatory processes the concept of the "right to the city"
    - The right to the city is about letting people take part in design decisions that impact the space around them
    - It also has a lot to do with inclusion of vulnerable groups
2. What does UNH hope to achieve with the People's Process?
    - In the Asia pacific region there are a lot of people living in informal settlements and it is important to be able to include them in decision making since they are often not recognized by the authorities
    - It is sometimes necessary to have parallel structures to be able to include marginalized groups
3. How does UNH choose which communities to work with?
    - Communities are selected based on the target area of work and the needs of the specific community
    - Consideration is given on how to best work with the communities considering the local government and the work that intermediaries or counterparts to UNH are doing
4. What role do CDCs play in the community?
    - CDCs are like organizations that manage and maintain projects in a community
    - They act like mini municipality or local governance system
    - The allow UNH to implement and design projects in the communities
5. How does UNH make sure CDCs are successful?
    - UNH provides a lot of capacity building and works closely with the communities
    - Communities are empowered to champion similar initiatives and share their knowledge with other groups
    - CDCs play a role in community monitoring after the end of a project
    - UNH may still continue to collaborate with these communities in the future
6. What kinds of guidelines or rules do CDCs follow?
    - CDCs function as a formal structure which UNH helps establish
    - Training on financial management and democratic management of public good and spaces are provided
    - CDCs have their own rules, hierarchy, and authority etc…
7. How do CDCs work with the local government?
    - Sometimes CDCs may not be able to interact directly with local authorities depending on the exact circumstances of the community
    - Ideally, the government would handle all the work that the CDC does
    - In Myanmar, the CDC are formally recognized and registered and there is dialogue between them and the local authorities
    - The local authorities can form contracts and work with the CDCs
8. How do other partners contribute to the formation and work of CDCs?
    - Partnerships might form between the CDCs and the private sector, school communities, or technical partners
    - There is potential for the CDCs to get financial support from partners too
9. What does sustainability mean to you?
    - Sustainability is more than the economic dimension but also social and environmental components
    - Sustainability is about the overall ability to competently manage a system

- Financial management may sometimes take too much prominence over the other elements
- It is important that the system can keep up with the needs of the community
- Sustainability is easier when there is a municipality
- Financial concerns are often the main concern for communities so they cannot worry about other dimensions
- NGOs and the private sector can sometimes help address sustainability issues

10. How does UNH determine if a program is sustainable?
    - Because of the complexities inherent in humanitarian work, it's difficult to measure the sustainability of programs
    - We try our best, but sometimes things are sustainable
    - All communities are deserving of need, but we try to select communities that are able to be effectively helped
    - UNH tries to make smart investments of resources
    - UNH often takes on the role of the government to provide support to these communities
11. How does monitoring and evaluation factor into program sustainability?
    - Because UNH operates on a project basis, it is not possible to keep the monitoring and evaluation going forever because that would require funding
    - M&E begins immediately after a project is initiated
    - Additional M&E activities may happen in the case that the community or government request or in the case of research like this
    - This is particularly difficult because the effects of some project cannot be measured for 5-10 years
    - This is not unique to UNH but a common problem in development projects
    - It is ultimately the responsibility of the government to carry out long term M&E
12. How has the political situation impacted UNH's work?
    - We have had to formulate all our projects to use a non-state actor approach
    - We work more with NGOs, CSOs, and the private sector now and it has forced the UN system to be more coordinated
13. How has the political situation impacted UNH's goals?
    - A lot of traditional UN activities have to be on hold until there is a change to re engage with the government
    - It is impossible to work on any policy oriented programs
    - We have been providing mostly humanitarian and emergency aid
14. How is climate change impacting the design of programs?
    - UNH is implementing the Myanmar Climate Change Alliance program right now
    - There are a lot of challenges related to climate change right now and vulnerable groups are becoming more vulnerable
    - Despite the urgency of the conflict, nobody denies the relevance of climate change
    - The pressing issues now are adaption rather than mitigation since Myanmar is not a big emitter
    - Myanmar is unfortunately not eligible for most funding given current restrictions
15. How does the work UNH does in an informal settlement compare to a formal settlement?
    - The People's Process becomes more important in an informal setting
    - More flexibility is also required
    - There is usually more contribution form community members in informal settings because the government, which usually represents the residents, does not represent them or their interest
    - It is important to understand the local context

Interview 5

1. Please briefly explain what a Community Development Committee (CDC) does.
    - The CDC manages a water treatment plant, operates a free clinic/dispensary, and runs a funeral committee
    - The water treatment plan sells water (300 kyat per 20 L bottle) which is 200 kyat cheaper than commercial sellers
    - The person in charge of the plant and the clerk/accountant are paid a minimal honorarium while other members work as volunteers
2. How do you check if the water distribution system in your community is working well?
    - The treatment plan was installed 3 years ago by a company who gave a one year warranty
    - If there is a problem an engineer from the same company will come to help service the plant for a fee
    - The community will buy replacement parts as recommended by the engineer
    - The company gave instructions about how to maintain the plant which someone follows
    - Records are kept
3. How are members chosen or selected to be part of the CDC? Can you describe the process?
    - 3 years ago a meeting was held where CDC members were nominated and roles decided
    - The UN endorsed the CDC members as well
    - Almost all community members attended the meeting
4. Can you tell me about the rules or guidelines that the CDC follows when managing the water distribution system?
    - There are no written rules or guidelines
    - CDC members work due to their willingness and commitment to serve the community
    - They are minimally paid, but not well
    - The people who transport the water bottles are paid
    - The CDC saves profits from the treatment plan in a bank and only keeps a small amount of cash on hand to replace parts with
5. Are there ever disagreements within the community about the management of the water distribution systems? If so, how are these disagreements resolved or dealt with?
    - Initially some members thought they could earn money by being on the committee
    - When the plan was officially opened by the Yangon Mayor who they thought believed gave a blessing to me
    - They afterwards realized they would not be highly paid on the committee
    - Afterwards there were not complaints about the management of the system
6. What are your thoughts on the level of trust community members have in the water distribution management committee?
    - There is a high level of trust in the management committee
    - Community members keep an eye on what we do
    - There are been no complaints, no disruptions, and no security concerns
7. Do you think people in your community know about important decisions that are made?
    - Important decision are made by summoning the CDC members
    - Community members expect a incentive if they are asked to join a meeting because they are poor
    - Decisions are therefore made only among the CDC members and the community is informed by word of mouth

8. Could changing the way decisions are made about the water distribution centers help the community?
    - Maybe not
    - Community members are poor and would complain if something was not to their linking but there have never been any complaints
    - When there is surplus money, CDC member decide how it will be spent for the good of the community
9. How do you encourage community members to actively participate in the CDC? Are there any strategies or approaches used to increase involvement?
    - Community members are not doing well financial so it is hard to incentivize them to participate in the CDC
    - COVID-19 made their lives more difficult
10. What happens if a community member who was part of the management committee leaves?
    - The task is really challenging
    - Only a few people attended a meeting called to replace a member that left
    - We try to recruit members we are familiar with
    - There were 10 people in the CDC when it was first formed but now there are 4-5
    - Some members died from COVID-19 and others left for other reasons

Interview 6

1. Please briefly explain what a Community Development Committee (CDC) does.
    - We sell potable water at a subsidized rate (100 kyat per 20 L bottle)
    - When sold door to door the distributor takes an extra 100 kyat per bottle
2. How do you check if the water distribution system in your community is working well?
    - Maintenance and repair is done in consultation with the company that installed the plant
    - When major parts need to be replaced, savings from the profits in the bank are used
    - We have 5 million kyat saved currently
3. How are members chosen or selected to be part of the CDC? Can you describe the process?
    - A mass meeting was held to form the CDC 4 years ago
    - Community members living nearby who would be consumers were invited
    - About 60% of the community attended
    - CDC members were chosen by the committee and the committee decided among themselves who would hold which position
    - Positions include chairperson, vice chairperson, secretary, treasurer/accountant, and general committee members
    - There are 2 male members and 5 female members
    - Women have more time to spend on community welfare activities
4. Can you tell me about the rules or guidelines that the CDC follows when managing the water distribution system?
    - There are no specific written rules and guidelines
    - Meeting minutes are recorded and do’s and don'ts for members are prescribed. We don't have specific written rules and guidelines. Meeting minutes are put on record.
    - Do’s and don’ts for the CDC members are then prescribed and done on an ad hoc basis
5. Are there ever disagreements within the community about the management of the water distribution systems? If so, how are these disagreements resolved or dealt with?
    - There have never been disagreements about the management of the distribution systems

- When community members feel the water quality is below expectation they complain to us
- They respond by trying to resolve the problem
- Currently we are pumping water at night so it has time to settle and improve the color of the water
- We don't have the resources or know-how to clean the water bottles and make them as attractives as the commercial water sellers

6. What are your thoughts on the level of trust community members have in the water distribution management committee?
    - I believe we win the trust of the community members
    - There have never been any complaints about how we work
    - The only issue is that the water quality is inferior to the commercial sellers who charge more (500-600 kyat per 20 L bottle) although our quality is good for the price
    - We are also not making a profit considering electricity bills, wages, and maintenance
    - But we cannot charge more considering the quality and availability of other public water nearby
    - Major renovations would cost more than is in the bank and a lot more to be competitive with commercial sellers
7. Do you think people in your community know about important decisions that are made?
    - We keep records of financial statements
    - Decisions about the plant are put on notice boards for public viewing
8. Could changing the way decisions are made about the water distribution centers help the community?
    - We seek feedback from community members and listen to their wishes
    - Two committee members are always available during operation
9. How do you encourage community members to actively participate in the CDC? Are there any strategies or approaches used to increase involvement?
    - We encourage members to participate in the CDC but it is hard because they are struggling to make a living and cannot do much community welfare work
10. What happens if a community member who was part of the management committee leaves?
    - One member passed away due to COVID-19
    - His daughter volunteered to become a member
    - Not many people in the community want to engage in community welfare activities

Interview 7

1. Describe, in your own words, what is the People's Process?
    - The Peoples Process is as community based approach
    - The community forms a committee to implement projects on behalf of the community
    - The committee manages funds, purchases materials, hires laborers, etc…
    - UNH provides technical assistance and monitoring
2. How does UNH select communities to work with?
    - UNH gave priority to communities with drinking water problems
3. How are CDC members chosen?
    - Community holds a mass meeting where the project and implementation is explained
    - The People's Process is explained in the meeting
    - The community then chooses the CDC members
4. How are the rules for running/managing the CDCs created?

- The CDCs and UNH staff discuss together to develop the rules and regulations for the water treatment plans

5. How do CDCs deal with issues such as lack of trust or rule violations?
    - CDC will meet to discuss and resolve issues if they arise
6. How will the water distribution systems be managed by the CDCs?
    - The management systems are also developed with the rules and regulations
7. What other organizations do/will CDCs work with (government, private, etc…)?
    - Not sure, but maybe have worked with WaterAid
8. How will the water distribution systems be evaluated for success?
    - The treatment plants are evaluated based on if the savings in the bank are enough to cover the cost O&M and long term maintenance
9. What measures are taken to prevent mismanagement and ensure transparency?
    - CDCs must announce expenditures to the community
    - They also maintain a records book with expenditures which the community can check
10. What other/external factors does UNH consider when working with communities?
    - UNH considers the availability of land
    - UNH also discusses with authorities to get permission for the project

Interview 8

1. Briefly outline the results of the water governance comparative done by WA.
    - It was a brief study to understand how different organizations are doing water governance
    - The scope was limited
    - Data was conducted by a few consultants and verified through a workshop before preparing the report
2. What is WA's approach to participatory processes?
    - WaterAid is committed to empowering women so we ensure 50% of the participation is by women
    - We ensure women are involved in the management board and the voices of people are included in the design and management of the system
3. How do you select which communities to work with?
    - We do an initial assessment of the area to understand who is most in need of water
    - We have a list of criteria by which we identify and shortlist communities
    - We then do a detailed assessment before selecting the final communities
4. How does WA adapt their approach when working in different contexts?
    - We follow a standard process
5. Briefly outline WA's participatory process.
    - After selecting the community we a meeting with all the members
    - Then we explain the project and ask for volunteers
    - Then we invite them to an orientation and hold rigorous trainings on management, financial systems, transparency, accountability, and procurement
    - Then we take them through the development and construction process
6. What are the differences between WA's approach and UNH's approach?
    - Our rural supply systems are organized in the same way as UNH
    - In urban areas we use a commercial approach
    - From the governance study, we realized that management of the system is a huge burden for the community since it is like running a professional factory
    - So we developed a partnership with a commercial company to provide the management, but the ownership remains with the community

- We adapted our approach in this way

7. Were the changes inspired by Myanmar Kitchen?
    - No because Myanmar Kitchen uses a charity model
    - Myanmar Kitchen still owns the systems
    - In our model the women group earns the surplus so they can invest further in the community
    - The profit goes back to the community
8. What kind of rule structure do they follow?
    - People make promises with regards to fixing the price and giving the surplus back to the community
9. How do the private organizations support O&M?
    - WaterAid and their donors cover the cost of management or the cost of the commercial company
    - After WaterAid leaves the project, the cost will be covered by the income from the company
    - Regular maintenance is covered by the income
10. How does WA deal with issues of trust in communities?
    - In peri urban areas, people come from many different places in Myanmar
    - The are involved in local businesses and selling things so they have their own competition
    - We try to organize activities with the community like cleaning up solid waste and hygiene change programs
11. How do communities deal with issues of transparency and mismanagement?
    - There was one case where a group of people tried to capture all the power
    - But as long as WaterAid is regularly monitoring misappropriation is not possible
    - Our concern is after we leave the area, which is why we have brought a management company to do that
    - They will be accountable to the community in a public forum and have to regularly report on the cost and sales and management
    - The community members will not have direct access to the cash
    - One group is responsible for the production and one responsible for the distribution and sales and they are accountable to each other
12. How does monitoring and evaluation work?
    - The management group is involved in collecting data on the production, finances, and distribution
    - They also monitor the relationships among the community
13. How do you define sustainability?
    - One part is that affordable drinking water is continuously being supplied and is accessible by the community
    - The other part of sustainability is sustainable management of the system and that the system is upgraded over time
14. How have the recent political changes impacted your work?
    - We shifted our approach to a more social business model
    - We found one company that has a social commitment and sells water at prices even below some NGOs
    - The governance study helped us identify this company
    - We want to develop this approach because I do not see the state being able to supply drinking water any time in the near future
    - We found that a UNH system was from 4 or 5 years ago stopped operating after 1 or 2 years because the people managing it left

- This is why a commercial approach is necessary

15. Would WA change their approach if they were able to work with the government?
    - Even under the previous government, the plan was to pipe water for domestic use to all of myanmar by 2040, but even that did not include drinking water
    - So providing affordable drinking water by social business is more practical to me
16. Do you get land permissions or register your work with the government?
    - It's good to have a business registration because there is some accountability to the FDA (Food and Drug Administration) to ensure the water quality
17. What kind of external factors, like climate change, do you consider in your approach?
    - We try to be proactive about issues like climate change
    - We try to renovate nearby ponds or lakes and maintain the aquifer level
    - We mobilize the community to clean canals and provide trainings for solid waste management in order to keep the community active and
    - We also collect rainwater in the during the rainy season at the production plants so we don't need to withdraw as much from the ground
18. Elaborate on the issues you found with the UNH distribution center?
    - The UNH system has very good quality equipment
    - However it was not running because of a conflict within the management and because the committee became inactive
    - We are currently planning to renovate that system after talking with UNH
19. How are members who leave the management team replaced?
    - The social enterprise is our answer
    - NGOs and the UN cannot be there after a project ends, do there has to be a third party
20. Explain more about how the management company works.
    - During the governance study, we found a water factory run by a private company that was selling water at below market price, even cheaper than some NGOs
    - The community members now serve on a board in unpaid roles, but the private company is paid for the production and distribution
    - The management company also recruits their own staff
    - It is a joint project between the community board and the management company
21. How long has WaterAid been using this model and how has it been working so far?
    - We've only been using this model for 7-8 months
    - In that time we have seen a lot of improvements
    - The production has doubled or more than doubled and is closer to the actual capacity of the plant
    - The plan is also cleaner and more professional
22. Do you have any final remarks?
    - Since WaterAid was established from the UK water industry, it is not surprise that we are using a social business model
    - The state is not in a position to provide drinking water, so this is the interim solution
    - But the interim period may last for a while

Interview 9

1. What projects is the Afghanistan office currently working on?
    - Since the big donors don't' want to fund projects through the government in Afghanistan, most of the work we are doing is humanitarian aid or emergency response
    - CDCs are the community based organizations through which the People's Process is implemented

- They were formed under the first taliban regime
- Projects were implemented though the communities because it wasn't possible to work with the government
- It was also possible to deliver aid to people this way because donors did not see it as building the capacity of the government
- From 2001 to 2021 under the American led coalition the CDCs were more integrated into the municipal finance mechanism in order to make them more sustainable
- Now all of that is gone and the links between the CDCs and the government are gone
- So we are implemented as we did in the beginning through the CDCs
- A main issues is the collapse of the banking system which means the CDCs don't have bank accounts anymore
- Projects that the office is currently implementing are tackling issues of climate resilience, communal housing, land and property rights, and mitigating the risks of gender based violence.

2. How would you define the People's Process in your own words?
    - At its heart it's participatory
    - But it goes further by establishing community based organizations that are involved in all aspects of their development
    - The CDCs are formed through democratic processes which ensure they are representative
    - The next part of the People's Process is that the communities identify their own needs, capacities, vulnerabilities, etc…
    - Then there is a planning process where they prioritize what investments they needs called Community Action Planning
    - The community manages the finances, the labor, and the whole project from beginning to end
3. How do you identify which communities to work with?
    - It depends, but we may do an assessment of the places most in need
    - We have city scale databases that can be used
    - We will then surely these areas
    - If there are already CDCs we will work with them and provide capacity building otherwise we will help establish CDCs
    - Then we will implement the project
4. How does UNH integrate prior existing community structures into CDCs?
    - There are already many CDCs in Afghanistan
    - From 2001 to 2021 they were implemented as a part of the state building
    - They are like a unit of governance
    - They are below the lowest level of formal governance (500 household level)
5. How do CDCs deal with internal conflict?
    - The CDCs are not the primary mechanism for informal dispute resolution
    - The shura and the jirga play that role and are based more on islamic principles such as Sharia law
    - Disputes may arise with the CDC however
6. What kinds of rules do CDCs follow and how are the rules created?
    - There is a set of formal rules that the CDCs have to adopt
    - This was more the case before 2021 when they would register with the government
    - Their accounts have to be monitored and audited
    - They have to follow processes for electing members and selecting beneficiaries
    - At the moment there is a lot more ambiguity with the law in Afghanistan with regards to which rules are enforced and which laws apply to community groups

- There is probably a lot of corruption that goes on anyway considering the power dynamics at play and there's not a perfect distribution of power
- And if there are formal rules, there are also informal rules and processes

7. What role do CDCs play?
    - Their main role is the development of the community, identifying, implementing, and managing
    - The UN, World Bank, and other organizations that use CDCs serve to monitor the process
8. What kind of formal engagement happens between CDCs and other organizations?
    - Since CDC members are just lay people, there are contracting companies and UNH engineers which design and sometimes build the facilities
    - The community may contribute manual labor
9. How does UNH deal with O&M issues?
    - It depends on the project because right now the focus is on humanitarian interventions and less on resource management
    - What used to happen is that there would be linkages between the community and the government and strategic plans would cover operation and maintenance
    - Other needs now have priority such as massive food insecurity and the economic impact as a result of restricting women's role in society
    - The days of massive amounts of funding are also now gone
    - Resources now go to saving lives and less is available for maintaining critical infrastructure
10. How do you understand sustainability in this conflict setting?
    - Before it was all about sustainability
    - The sustainability really came through integrating the financial system
    - As the UN your not going to be able to ensure sustainability unless you work with the government or funding is an open tap
    - You can engage in community strengthening and capacity building, but to an extent that is just a platitude
    - Even if you have the skills, without money, without linkages with the government it's inherently unsustainable
11. Are financial issues the primary issue posed by the regime change?
    - Yes because then you are putting everything in the hands of the community which is good to a certain degree
    - Things can be sustainable to a point but not transformative
12. What other impacts are important besides financial issues?
    - We're using different mechanisms to provide sustainability
    - We have shifted more towards building the capacity of NGOs and civil society
    - Outcomes for women has also become more important
13. How does UNH engage with civil society?
    - My team is providing the funding and capacity building for national NGOs and civil society organizations
    - Capacity building for CDCs is the main route that UNH takes as CDC can be considered a form of civil society
14. What kind of M&E does UNH do?
    - One example is our project on gendered violence
    - The CDC monitors the gendered impacts of the intervention
    - The project is also monitored by engineers
    - Social mobilizers also work with the communities to ensure thinks like work days are counted properly

- CDCs were never really meant to operate independently because there government was there for oversight
- Now the UN goes to check everything is ok and has replaced the state to a certain degree

15. How does climate change factor into UNH's work?
    - We have introduced a new methodological approach
    - We use participatory hazard, vulnerability, and capacity assessments (PHVCA)
    - The climate breakdown has multiscale impacts in Afghanistan
    - A lot of people have migrated to the cities where they live in informal settlements
    - The CDCs are a good way of organizing resilience building

Appendix H: Large Print Theoretical Framework