

BEYOND ACCESS - PROCEDURAL JUSTICE AND THE PURSUIT OF WATER SECURITY THROUGH COMMUNITY RELAY FRAMEWORKS

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GRANT / SUBVENTION: - MULTI-LEVEL BEHAVIOUR CHANGE FOR INCLUSIVE WATER SECURITY IN A CHANGING CLIMATE

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Beyond Access: Procedural Justice and the Pursuit of Water Security through Community Relay Frameworks

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Abbreviations

SSA: Sub-Saharan Africa

WASH: Water, sanitation and hygiene

IWRM: Integrated Water Resource Management

CBWM: Community-Based water management

CBRM: Community-Based Resource Management

INGOs: International Non-Governmental Organisations

Abstract

This dissertation addresses the complex challenge of water systems management for water security by examining the procedural justice of community participation projects structured around community relays. The research expands an existing procedural justice framework to encompass scalability, community decision-making power, and the various modalities of community involvement (monitoring, management, and political voice) identified through qualitative data analysis and surveying development literature. The research contributes to understanding community participation in innovative water planning by applying this framework to the community relay model. Considering the complex interplay of scale, power, and community roles in water sector governance, the study investigates the procedural justice implications of community relays in environmental decision-making through: (i) community engagement, based on legitimate and inclusive representation, and an adequate informational procedure, (ii) modalities of community participation in national environmental decision-making, and (iii) effective community participation in the project development, characterized by capacity to provide feedback throughout INGO planning and implementation of participatory frameworks. The evaluation found that community relay frameworks enhance procedural justice in rural water projects, identifying alignment with the framework in national and organizational planning and feedback strategies for effective participation. This paper also pinpoints areas for improvement in fostering full-scale community engagement. Lastly, the dissertation highlights the need to consider distributive and epistemic justice alongside procedural justice to comprehensively inform community participation processes. By addressing these limitations, future research can further enhance the procedural justice of community relay models.

Table of Content

INTRODUCTION	6
LITERATURE REVIEW	9
Historicizing Community Participation in Justice Frameworks	9
Equity theory, Distributive justice framework	9
Emergence of Procedural Justice.....	9
Rights-based Approaches.....	10
Major debates in the literature	11
Local Knowledge.....	11
Local Representation.....	12
Local Acceptance.....	13
Macro-level dynamics.....	14
National-level dynamics.....	14
Local capacity building.....	15
THEORETICAL UNDERPINNING AND METHODOLOGY	16
Theoretical Approach	16
Theoretical Framework.....	16
Data Analysis strategy.....	16
Methodology	18
Data Collection	18
Ethical Limitations and Reflexivity.....	19
RESULTS	20

DISCUSSION	27
Community Engagement	27
(i) Legitimate and inclusive representation.....	27
(ii) Informational Procedure.....	28
Modalities of Community Participation	29
(i) Community Monitoring.....	29
(ii) Community Voice for Effective Participation.....	30
Community Participation in Project Development	30
(i) Planning Process.....	30
(ii) Feedback in implementation.....	31
Limitations and Areas of inquiry	32
Epistemological Assumptions.....	32
Distributional Justice in Climate Resilience and Adaptation Strategies.....	32
CONCLUSION	33
REFERENCES	35
Appendix 1 - Participant Information Sheet and Consent Form.....	39
Appendix 2 – Interview Guide	42
Appendix 3 - Analysis codebook	44
Appendix 4 - Organisational chart of CBWM Implementation and Feedback Frameworks.....	45

Introduction

Natural resource management has been characterized as a 'wicked problem,' solutions to contemporary water management are subject to ongoing debate due to their complex, multifaceted, and contested nature (Lindsay, 2019). Despite sustained efforts in policy development and implementation, the sub-Saharan African (SSA) region is the worst affected worldwide in terms of water, sanitation and hygiene (WASH) service access, according to the Sustainable Development Goals Report (United Nations, 2018). As climate change intensifies, water insecurity will be exacerbated by these challenges, demanding innovative strategies to protect affected communities.

Community-Based Water Management (CBWM) emerged as the primary governance approach for rural water systems in low-income nations. It is aligned with a broader move towards demand-driven development model and the explicit recognition of water as a fundamental human right. CBWM grants user committees administrative and operational authority over their water supply systems (Shields, 2021; Blaikie, 2006). Community participation has been identified as an important means of implementation' for achieving sustainable management of water and sanitation for all (United Nations General Assembly, 2015). Community participation encompasses a broader scope for community engagement practices, including collaborative planning with diverse groups and feedback processes for water user groups (Shields, 2021), but the notion remains unclear, often being conflated with climate monitoring or community management. This research adopts a cross-cutting thematic focus on the emerging framework of community relays as a mechanism for community participation in environmental decision-making. The model relies on community engagement to foster awareness of sustainable natural resource management and enable communities to assume new roles and responsibilities within the decentralized governance of rural water supply. This framework involves capacity-building efforts, in which community members are selectively trained to monitor climate variability and collect data on local water resources to aid in sustainable resource management. This framework is referred to by various terms in the literature and by implementing organizations, including 'community champion' and 'citizen-scientist.' For consistency, this paper will use the term 'community relay' to describe this role.

The multiplication of community relay programs elicits a broader investigation into the implications for procedural justice considerations in water reform. Water security is fundamentally linked to social justice (Wade, 2018). While frequently framed as a matter of distributive justice, considering the equitable allocation of environmental costs and benefits, procedural justice also holds significant weight. This latter concept emphasizes fair decision-making processes, requiring the evaluation of planning processes at every stage to ensure adherence to procedural justice principles (Seigerman, 2022). This essay defines procedural justice in accordance with the principles outlined by Emami et al. (2015), encompassing ensuring the procedural framework for development initiatives is unbiased, inclusive of

legitimate representation, integrates transparency in informative procedure, effective public consultation, and provides conflict resolution mechanisms (Emami et al., 2015). Furthermore, an in-depth examination of the political ecology of procedural justice in development paradigms, coupled with qualitative data analysis involving International Non-Governmental Organisations (INGO) practitioners implementing community participation programs, highlighted the need for a broader framework. Drawing on key findings of this research, this paper contributes to the literature on procedural justice by expanding the framework to encompass the complex interplay procedural fairness, community involvement mechanisms, community decision-making authority, and scalability characteristic of community participation (Wade, 2018; Shields et al., 2021). The final framework examines community participation in innovative water planning by reviewing procedural justice according to: (i) community engagement, based on legitimate and inclusive representation, and an adequate informational procedure, (ii) modalities of community participation in national environmental decision-making, delineating community monitoring from effective community participation, and (iii) effective community participation in the project development, characterized by capacity to provide feedback in program planning and implementation by the INGO.

This paper contends that community participation including community relay model can enhance certain aspects of procedural justice in collaborative water planning, particularly by fostering effective community management and participation in the planning and implementation processes. However, its impact on broader community empowerment and the overall adaptability of the planning process may be limited.

First, the research starts by systematically reviewing literature on justice paradigms in water security, tracing the historical development of procedural justice, with a particular focus on its application in the context of community participation in environmental decision-making. To comprehensively examine this evolution, we have organized the history of organizational justice into three distinct phases, capturing the shifting emphasis of justice considerations within research and theoretical development. The subsequent chapter will outline the theoretical underpinnings and methodological approach of the study. It will detail the rationale for extending the procedural justice framework to the context of community relays, clarifying the conceptual underpinnings that were added to the framework. The chapter will also elucidate the research design, including the qualitative data collection methods employed, and address the ethical implications of the study. Third, the analysis will delve into the application of the procedural justice framework to community relays. By examining data of 7 interviews with water sector professionals involved in implementing these programs, the study will identify key themes and patterns related to procedural justice. Lastly, a comprehensive discussion of the research findings will explore the implications of procedural justice within the

Helene Duamelle

context of community participation. This section will consider the strengths and weaknesses of the community relay model in enhancing procedural justice and offer insights for future research and practice.

Literature Review

This dissertation seeks to extend an existing procedural justice framework to analyze community relays initiatives aiming to foster water security in SSA. This chapter provides a comprehensive literature review on procedural justice within the context of community participation programs for water security. It begins with a historical overview of justice frameworks in development literature, followed by an analysis of the reported outcomes and limitations of CWRM development programs.

Historicizing Community Participation in Justice Frameworks

Equity theory, Distributive justice framework

During the 1960s and 1970s, the predominant concept of fairness centered on distributive justice. Rooted in theories of equity, development discourse focused on equitable resource allocation among stakeholders (Seigerman, 2022; Emami, 2015). Concurrently, the emergence of environmental movements created a shift focus on conservation in water management priorities (Lukasiewicz et al., 2013). These paradigms fostered a technocratic approach emphasizing engineering, science, and top-down state-led initiatives in development models. This prescriptive orientation for planning and implementation, assumed a clear dichotomy between expert knowledge, often considered "scientific, reliable, authoritative, and reproducible" (Blaikie, 2006), and local communities perceived as possessing limited technical or organizational capacity (Blaikie, 2006; Flint et al., 2024; AICD, 2007).

Emergence of Procedural Justice

By the 1980s and early 1990s, the shortcomings of centralized, top-down water management became apparent, prompting a shift towards procedural justice and participatory evaluation. Leventhal (1976, 1980) challenged the exclusive focus on distributive outcomes in equity theory, expanding the justice framework to include procedural fairness, process control and individuals' perceptions of fairness in decision-making. This period marked a transition from engineering-focused to holistic water management approach accounting for environmental and social policy objectives, known as Integrated Water Resource Management (IWRM). IWRM prioritizes social equity through participatory methods, inclusive institutions, and consultation to mediate conflicts among water users and management agencies (Emami, 2015).

Community-Based Natural Resource Management (CBNRM) emerged as a key approach to rural development and sustainable resource management (Blaikie, 2006). Shifting from a top-down, centralized control to collaborative governance, emphasizing the participation of governments, stakeholders, and communities in policymaking (Allan, 2003). This period

witnessed a diversification of water stakeholders, with community engagement emerging as a cornerstone of the broader international development agenda. Development actors and International financial institutions increasingly focused on building and strengthening civil society to participate in democratic process (Kobayashi, 2014; Shields et al., 2021; Flint, 2024, Lukasiewicz et al., 2013). Aligning with this shift, Mamdani (1996) underscored the importance of "informed choices" in establishing demand-driven approaches to rural water supply, highlighting how community management can allow for process control by community members to realize their rights to transparency and accountability (Shields et al., 2021).

Thus, developmental agencies shifted from providing technical solutions to facilitating community capacity building for self-managed water systems. Communities transformed from passive receivers of technical goods to active participants accountable for their actions (Lammerink, 1999).

Rights-Based Approaches

Rights-based approaches introduced in the 2000s aimed for efficient and equitable water allocation (Kobayashi, 2014). This shift towards a demand-responsive development paradigm, with water accessibility recognized as a human right, elevated community participation in water supply as a global policy priority. Effective water management demanded context-specific approaches tailored to diverse geographical, socio-economic cultural and religious contexts on water stewardship (Giordano and Tushaar, 2014, Medema et al. 2008). This period saw the development of community participation strategies. The community relay framework, a focus of this research, exemplifies this trend. These approaches, often termed citizen science or community champion models, position themselves as fostering community participation by equipping community volunteers with water sector knowledge. They aim to promote practices such as climate monitoring and water resources management (Shields et al., 2021; Tseklevs, 2022; Rufino, 2018). While this approach assumes community participation principles are inherently embedded in the community management model, critics have emerged in the literature stating that community management gets conflated between participation and management, while participation involve intentionality in fostering political voices.

Debates in the literature

Local Knowledge

Community participation engages local communities in processes of knowledge co-creation, crucial for developing locally relevant solutions, implementing policies, and integrating traditional water knowledge into modern management practices. Embedding water projects within the local institutional context by incorporating stakeholder input and knowledge throughout the management cycle (selection of methods, goals, and assessment in planning and implementation) aids in effectively addressing complex water challenges (Wilk & Jonsson, 2013; Flint, 2024; Shields et al., 2021; Cummings, 2022). Emami et al. (2015) argue the recognition of the value of public participation and public experience help accommodating diverse social and cultural values and meet public expectations, elements that are constitutive to fairness and procedural justice. In other words, fostering community participation empowers local citizens to define and shape accurate, equitable and just development strategies (Jackson, & Kassam, 1998). Moreover, local collection feedback on project performance is crucial for informing future system designs and improvements (Hope, 2015). For instance, attuning to local norms and cultural sensitivities by adapting infrastructure to align with local customs, such as modifying urinals to respect Muslim practices in Tanzania, was critical for project viability (Tseklevs, 2022).

Despite the increasing focus on cultural and socio-economic inclusivity in judgments of procedural justice. IWRM was criticized for promoting the dominant discourse in the mainstream evaluation field in the North, which is rooted in a rationalist-objectivist epistemology and conceived technical application of a “toolbox” of method (Flint, 2024). “Procedural justice literature lacks a comprehensive model”, for assessing making it necessary to strike a balance between designing technical rules and incorporating the needs of the individuals involved (Emami, 2015). The dominant discourse in development cooperation, is characterized by demands for accountability, efficiency, and measurable results grounded in scientific knowledge, marginalizing non-western perspectives, local knowledges and realities (Flint, 2024; Ulloa, 2012; Solorio, 2023; Blaikie, 2006; Loftus, 2006).

Local knowledge has been marginalized in favor of official scientific knowledge, outsiders frequently select and disseminate specific aspects of local knowledge that align with their predetermined environmental goals, effectively silencing alternative viewpoints and misrepresenting community voices (Blaikie, 2006; Solorio, 2023). Risks perpetuating colonial power dynamics that hinder equitable outcomes echoing a notion developed by Wade (2018) referring to soft power can further entrench existing unfair outcomes in water resource

management. Epistemic injustice is linked to larger structures of socio-economic inequality and may even entrench and amplify them (Cummings, 2023).

Local representation

Managing water resources requires navigating complex interactions among stakeholders with diverse interests, power dynamics, and resource dependencies (Wilk & Jonsson, 2013). Effectively addressing these challenges necessitates inclusive processes that ensure all voices are heard and valued, regardless of social identity (Flint, 2024). Representation in participatory approaches to water management are widely recognized as effective strategies for ensuring the human right to water access and empowering vulnerable populations (Kobayashi, 2014). Sen (1999) argues for a robust institutional framework that supports public deliberation and decision-making on resource management will help the poor that are stripped of entitlement and their voice on regional resources, such as the poor, women, and small-scale farmers.

Cultural factors such as the gender roles of women in the community and traditional beliefs are also recognised as barriers to participatory development. Flint (2024) notes that in Ethiopia, women are systematically excluded in most societies from knowledge-production processes that are dominated by men. Therefore, many in literature argue integrating women into leadership roles in community water management makes is likely to enhance the effectiveness and sustainability of water reforms by addressing women's needs. Representation in community relay programs, for instance, could empower marginalized groups to challenge oppressive structures by acquiring and utilizing credible knowledge (Flint, 2024; Tseklevs, 2022).

Criticisms against participatory methods have been criticized for their idealistic conceptions failing to address intersectional factors such as culture, religion, gender or economic status (Tseklevs, 2022). Flint (2024) explained participation does not guarantee meaningful influence, as marginalized groups may be present but excluded from decision-making (Flint, 2024). Another important contribution to the literature was that while women face challenges in accessing decision-making processes, they are usually in charge of the water supply and management of the household (Das, 2024). Accordingly, water innovation and research projects that place demands for unpaid community contributions may place a disproportionate burden on women (Shields et al., 2021).

The concept of 'community' in SSA has been fluid, often shaped by external influences through time. Community participation initiatives typically view communities as spatial units, distinct social structures, or shared norm-based groups. However, critiques have challenged the

notion of community management as unitary, benign, and apolitical (Mamdani, 1996; Blaikie, 2006). Moreover, the clear territorial boundary characteristic associated with such frameworks are ill-suited to managing transboundary water resources, which necessitate complex, regional responses (Hope, 2015). The failure to use local languages, address cultural nuances, and prioritize national needs can undermine the legitimacy of water policies (Giordano & Tushaar, 2014).

Local Acceptance

Advocates for participatory actions indicate that the use of such framework for policymaking in water security forms the basis for improved legitimacy and acceptance (Jackson & Kassam, 1998). Cognitive science supports the notion that participatory evaluation enhances community acceptance. Habermas (1984) emphasized community participation as a means to achieve consensus through discursive deliberation free from coercion and deception. His concept of communicative rationality posits that collective problem-solving emerges from shared understanding and mutual agreement between communities. Peterson (2009) advocates for participatory methods as a more effective approach to knowledge generation. His 'knowledge in use' theory emphasizes learning through interaction, unlike traditional classroom settings, participatory methods foster active knowledge construction (Peterson, 2009).

Furthermore, by involving communities in climate monitoring, we can mitigate information asymmetries in climate science and foster positive norm shifts. Sustainability transitions literature highlights the pivotal role of community champions in environmental decision-making alongside community engagement and collaboration. Communities must be educated about the importance of water conservation to protect this vital resource. Here, community relays play the role of multi-scalar knowledge brokers (MKBs) who bridge local, national, and international levels to translate global climate knowledge into actionable local strategies (Tabassum, 2022). Through exposure to environmental knowledge, communities gain a deeper understanding of climate change and the imperative for water-sensitive solutions (Peterson, 2009; Tseklevs, 2022).

Macro-level Dynamics

While IWRM is often conceptualized as an impartial framework for resource management, critical scholars like Wade (2018) emphasize the importance of addressing power dynamics and historical context for achieving water security. True community participation should include consideration to unseen power in water dynamics, requiring INGOs to shift focus from access to water as a purely technical challenge (Shields et al., 2021). Traditional aid evaluation models often prioritize donor accountability, concentrating power in the hands of sponsors (Flint, 2024). This dynamic is evident in Tanzania's 1991 water policy, where the pursuit of donor funding led to policy shifts away from critical national needs like water storage towards donor-preferred models such as IWRM (Giordano & Tushaar, 2014). Similarly, international climate policy's focus on financial transfers to developing countries for mitigation and adaptation has been criticized for imposing Western-centric solutions, often labeled "green colonialism" (Van Asselt & Gupta, 2009). Community participation is hindered by power imbalances exacerbated by a "dependency culture" rooted in decades of paternalistic state-community relations, having fostered expectations of external provision rather than local agency (Lammerink, 1999)

National level dynamics

The decentralization of rural water supply to communities has engendered a new dynamic in state-community relations. Political ecology underscores the complexity of factors shaping state power. While participatory evaluation claims to invert the top-down power dynamic, prioritizing local participation and recognizing community members as genuine stakeholders. Interrogation of local power structures and hierarchies is critical because, without careful design and ongoing support, for incorporating improved levels of inclusion, community-led governance can replicate existing hierarchies, limiting community capacity-building (Flint, 2024; Loftus, 2020). The case of Malawi exemplifies this issue. Despite efforts towards decentralization and community-based natural resource management initiatives, the enduring legacy of a patrimonial state and corruption impeded the implementation of local governance (Blaikie, 2006). Other studies have suggested that development partners should aim to strengthen existing water supply management institutions, practices, and governance systems to consider local realities rather than attempting to create new institutions (Nkiaka, 2016).

On the other hand, advocating for increased community participation and responsibility can be utilized by governments to reduce spending and distancing from communities

(Lammerink, 1999). This underscores the need to scrutinize government intentions in decentralization efforts (Lukasiewicz et al., 2013). Effective local governance hinges on trust in authorities, requiring transparency, representation, and inclusivity (Flint, 2024). Inadequate community participation can lead to apathy and environmental degradation (Brotosusilo, 2016).

Local capacity building

Wade (2018) extends existing frameworks by incorporating both scale and power dynamics, recognizing that these factors interact across levels, such as local and national jurisdictions. Multi-scalar processes contribute to socio-ecological inequalities at the local level. Shields et al. (2021) distinguishes between community management and community participation, explaining for meaningful participation to occur, powerful stakeholders must relinquish control and genuinely engage with rural communities.

Shields et al. (2021), also criticizes the community management model for rural water supply, arguing its' sustainability and scalability is limited without external support. Local community management alone often falls short of achieving substantial change because community structures need adequate capacity building to act effectively (Flint, 2024; Kobayashi, 2014). Weak water governance is exacerbated by poor coordination among different governmental and non-governmental actors operating at various levels (Nkiaka, 2021). This fragmentation often results in inadequate representation and engagement of marginalized groups, particularly small-scale users who may lack awareness of their rights or the means to participate in decision-making processes (Kobayashi, 2014).

Theoretical Underpinning and Methodology

THEORETICAL APPROACH

Theoretical framework

This research investigates questions of procedural justice within water security projects, particularly focusing on community participation. An interpretivist lens was adopted to comprehend practitioners' perspectives on water security issues within their social context (Walt, 2020). Interpretivism facilitated an iterative approach to data collection and analysis, enabling the co-construction of the methodology through in-depth interviews. This process involved the continual refinement of coding categories with the identification of patterns and relationships within the data. The dynamic interplay of data collection, theoretical development, and analysis established an open research structure.

The research initially took an inductive approach, building on Emami et al's (2015) framework for procedural justice to identify the main requirements of procedural justice in water security and guide the interview questions on community participation. Emami et al. (2015) argued the development of fair and procedurally just natural resource plans should include in the planning process (i) an absence of bias; (ii) provision of information; (iii) representation that is inclusion and legitimate; (iv) active, as opposed to passive, participation; and (v) resolution of conflicts (Emami et al., 2015, page). Second, the researcher combined analytic moves to deepen the framework of procedural justice. Through a deductive approach they identified key themes arising from the interviews as playing a role in the community relay framework for water security. The research drew from observations to devise a comprehensive framework for procedural justice in water security. The components added to the methodology considerations of power and scale in community participation developed by Wade (2018) and on questioning the interplay between community management and community participation in rural water security programming by Shields et al. (2021).

Data Analysis Strategy

Procedural justice is commonly assessed by examining each step of the decision-making process. Following Emami's (2015) framework, this study analyzed the justice implications of each procedural step. Considering the complex interplay of scale, power, and community roles in water sector governance, three primary themes emerged as foundational to procedural justice in community relay frameworks for water security: (i) community engagement, based on legitimate and inclusive representation, and an adequate informational procedure (ii)

modalities of community participation in national environmental decision-making, delineating community monitoring from effective community participation (iii) effective community participation in the project development, characterized by capacity to provide feedbacks in program planning and implementation by the INGO.

Theme 1: Community engagement

The first theme assesses community engagement in environmental decision-making, focusing on legitimate and inclusive community representation and effective informational procedure as requirements for procedural justice.

Code 1: Legitimate and inclusive representation

Legitimate and inclusive representation enhances credibility and acceptance in environmental decision-making, particularly in the context of water security. This requires a transparent, defensible, and unbiased selection process in community leadership for participatory processes. Additionally, providing equal opportunities and valuing diverse perspectives in environmental decision-making is crucial to empowering communities to take ownership of these processes.

Code 2: Informative procedure

Effective public participation requires timely, relevant, and accessible information. This includes providing background on the region, a clear explanation of the planning process, potential outcomes, and the legal implications of the plan. Such information empowers participants to contribute meaningfully and offer informed feedback.

Theme 2: Modalities of Community Participation

The second theme identified relates to the different roles the community can take depending on the modalities of the specific community participation initiative.

Code 1: Community Monitoring

How are capacity building efforts focused on community involvement in water management? Specifically, trying to evaluate if programs prioritize community management and climate monitoring, or if they prioritize genuine community participation to influence decision-making.

Code 2: Community Voice for Effective Participation

Effective community participation involves the integration of local perspectives into broader decision-making processes. This includes active community involvement in shaping water reform and outcomes at different jurisdictional levels by building political voice into community participation.

Theme 3: Effective Community Participation in Project Development

Code 1: Planning procedure and project Implementation

A successful planning process for community participation requires accurate, inclusive, and culturally appropriate information to effectively manage power dynamics among stakeholders. Additionally, consistent implementation across personnel, methods, time, and objectives enhances participant engagement by creating a clear and accessible process.

Code 2: Feedback processes

The ability to voice concerns, as identified by Emami, is a key indicator of a fair participatory process in environmental decision-making. Mechanisms for effective feedback and alternative power structures can contribute to ensuring fair participation and allowing for corrections in environmental decision-making.

METHODOLOGY

Data collection

This research undertook a qualitative, interview-based data collection to capture the nuanced and context-specific nature of implementation of community participation in water security. While a thematic analysis of NGO programs was initially considered, this approach was deemed insufficient as it would overlook the complexities of implementation and exclude community perspectives. Additionally, direct community engagement was left out due to logistical and ethical challenges, including accessibility, security, and cultural sensitivities.

Interviewees were purposively selected based on their expertise in water security within sub-Saharan African NGOs. This purposive sampling strategy targeted individuals with direct experience in water champion initiatives across various organizational levels, including international and national NGOs branches, and governmental institutions across French and English-speaking sub-Saharan African countries.

Semi-structured interviews, approximately one hour in duration, were conducted using a problem-centered approach. This method enabled structured inquiry into procedural justice while allowing for respondent-driven exploration. A rolling interview approach was employed to capture diverse perspectives by encouraging participants to suggest additional relevant participants. All seven interviews were conducted remotely via Teams, with simultaneous audio and transcription recording. Recordings were subsequently transcribed and anonymized.

English audio recordings were transcribed directly, while French recordings were translated into English and transcribed by a transcriber fluent in both languages.

An inductive approach guided the coding and analysis process, allowing themes to emerge from the data. To enhance reliability and incorporate deductive elements, a two-stage coding process was employed. Coded excerpts were organized thematically to identify similarities and differences in perspectives and experiences. Due to the exploratory nature of data collection, not all themes were addressed by every organization.

Ethical Limitations and Reflexivity

A primary limitation of this framework is the extrapolation of a grassroots program to broader environmental decision-making, potentially obscuring complex power dynamics. Given the research scale, generalizations are necessary, limiting the representativeness of findings to specific instances of community participation. Moreover, the turnover of committee membership, INGO staff, and government representatives poses additional challenges.

The study presents limitations in terms of sample representativeness due to its reliance on voluntary participant involvement and gatekeeper access. Interviewee bias may also influence findings, given their roles as implementers of the strategies under investigation. Additionally, the reliability of interviewees' memories and recollections of community participation projects may limit our findings. Furthermore, the inherent power dynamics among implementers, community relays, and communities could potentially skew perspectives.

As a researcher, my positionality inevitably influenced the research process. Given the deductive nature of the methodology, personal biases and assumptions may have shaped research questions and interview dynamics. My limited firsthand experience of local and regional dynamics in the study countries necessitated a reflexive approach to acknowledge potential biases stemming from reliance on academic literature. Recognizing the risk of overgeneralization, I maintained a critical awareness of the research design's limitations.

Results

Community engagement

Legitimate and inclusive representation

INGO staff reported that their organizational strategy for community participation was designed to directly address community needs for climate adaptation and resilience. The respondents explained program implementation took a decentralized approach, with international headquarters delegating program control to country offices to align their activities with local needs and priorities. This model empowers country offices run by local staff to lead program design, implementation, and strategy, fostering a deep understanding of the local context, while international offices provide support, guidance, and critical feedback. One respondent also mentioned the complexities of operating as an international organization in local contexts sometimes pushes INGOs to adopt a partnership model, collaborating with local partners to implement community-level activities to bridge the gap between the INGO's identity and community-level trust.

Respondents also emphasized the importance of strong community representation in ensuring programs effectively respond to water-related challenges and needs. Respondents emphasized the issue-specific nature of INGO programs on water security, explaining it's essential to engage all community members, especially marginalized communities, in creating action plans. Practitioners argued their rationale is based on the notion that community members' proximity to watershed resources makes them better positioned to identify and monitor changes in water conditions. Furthermore, ensuring community participation programs include marginalized groups pertains to needs for intersectional programming that will enhance the community benefits overall. An implementation officer interviewed stated:

“Engaging community members directly experience water scarcity is particularly effective, groups like women face challenges in accessing water, which intersect with economic hardship, or gender-based violence. Their firsthand understanding of these issues makes them valuable partners in developing solutions.”

Practitioners also acknowledged the challenge of engaging an entire community and therefore advocated for a representative approach through community relay frameworks. This approach builds in a selecting community members to lead water reform efforts on behalf of their community. All organisations established a social inclusion criterion to select individuals

who could effectively gather data for community monitoring (ie. literacy requirement), as well as represent the broader community's needs and goals in water management. There was a general commitment to fostering inclusive representation, with the imposition of gender parity in community relays and designs to include individuals from marginalized groups like people with disabilities and youth members. However, respondents also explained achieving full inclusivity proved challenging due to socio-cultural norms and barriers. For instance, women's participation was often hindered by familial responsibilities and traditional gender roles, limiting their involvement in planning and decision-making processes.

Informational Procedure

Practitioners explained INGOs initially needed to secure institutional approval for water resource management projects by engaging with statal institutions in the development sector that collaborate with regional and local state institutions to implement community participation. Project details are then communicated to local communities through their representatives (eg. traditional authority, or water user committees) to ensure understanding and support.

A core objective of community participation programs, cited throughout interviews, is to raise public awareness to improve sustainability of water management. Most information about technical infrastructure, services, and climate monitoring capabilities appears to be focused on training community relays, with less emphasis on community involvement. Community relays receive specific training by technical advisory bodies for sharing climate information with the community, enabling them to effectively communicate complex technical information to community members during regular reporting sessions. The knowledge retribution sessions aim to enhance community awareness about water resource dynamics. Data collected on water resources allows communities to gain a better understanding of their local water situation and its connection to broader issues like climate change. Sharing findings with communities is crucial for fostering behavioral changes, understanding climate impacts, and cultivating a sense of responsibility for water security. This knowledge empowers them to identify priorities and participate in agenda setting processes to find strategies for climate adaptation and resilience:

“When the rainy season ends, relays bring back data collected by rainfall routers to their communities. This information helps communities identify water shortages and make informed decisions about farming, planting, and overall water management practices”

Modalities of Community Participation

Community Monitoring

This section explores the modalities of community participation within participatory projects. Community relays are primarily volunteers who monitor local water resources and build water-related knowledge. Project staff reported providing technical support to community relays regarding water resource management practices. This technical assistance ensures that project proposals are grounded in scientific evidence and enhances the credibility of community-driven initiatives. This technical assistance provides technical underpinnings needed to align local action with institutional frameworks:

“The teams are also trying to show relays that today, you can't make decisions without being based on data on water”

Community relays sometimes collaborate with technical specialists from government agencies that provide essential guidance to ensure their service delivery aligns with national and organizational standards. These processes empower water relays to voice their concerns during meetings with district and national-level officials and provide a platform for direct community input into decision-making processes. For example, an interviewee recalled a focus group of community relays, that had identified flooding as a challenge and explained how they had responded by planting trees along the riverbanks to mitigate future flooding.

These technical advisory bodies are also deeply embedded within the broader government structure. A governmental official working in community participation noted these technical advisory bodies were bearers of development policy at national level and support the executive office of the key in defining, planning and monitoring activities. While technical specialists lack formal decision-making authority, they work closely with community relays in an advisory capacity. This strategic positioning enables them to bridge the gap between technical knowledge and policy implementation.

Information gathered by relays is shared with higher-level decision-makers through established procedures that vary across countries and organizations. In Burkina Faso, for example, relays participate in meetings with government officials and other developmental stakeholders to advocate for community needs and influence program priorities. Their input is valuable for program development, as relays feedback influences program focus. However, their influence is not exerted on overarching policy decisions, the actual policy formulation and technical implementation remains top-down.

Community Voice for Effective Participation

Some organizations emphasized empowering community relays to take on advocacy and negotiation roles. Through a flagship process, these relays act as conduits, gathering community concerns and channeling them to relevant authorities.

“One of the crucial things that we're going to do is to give the community a voice to hold accountable institutions that are tasked to assist in addressing climate change challenges

Empowering communities involves establishing effective communication channels between communities and the state, allowing communities to voice concerns and hold duty-bearers accountable. Regular interactions between community representatives and government officials are crucial for fostering responsiveness and addressing community needs promptly. This relies heavily on having an active and well-informed community, there is a growing recognition that informed communities can effectively hold officials accountable for their duties. Relays can play a crucial role in this process by publicizing instances of non-compliance and lack of responsiveness to communities. For example, in the heavily polluted Msimbazi River Basin, communities are working with relays to identify pollution sources, document evidence, and expose the issue publicly to pressure regulatory authorities into acting against polluting industries.

Post-implementation surveys highlighted the negative impact of leadership turnover on project continuity. When key community or institutional roles changed without effective knowledge transfer, project implementation suffered due to communication breakdowns and decreased community engagement. The reliance on institutional actors, often subject to rotation, exacerbated this issue, as project continuity was jeopardized by personnel changes. Furthermore, project implementation can be hindered by political pressure. Consultation processes may be hindered by conflicting priorities among political factions regarding environmental protection and sustainable water resource management.

Community participation in Project Development

Planning Procedure and Project Implementation

Across different organisations, it appeared that these institutions functioned on the basis of core structure that they adapt to each new project implementation and national context. INGOs employ a software framework then tailored to specific country contexts through a water security scan assessing both technical and institutional factors They emphasize the importance of understanding the institutional landscape as a foundational step in project

implementation. By aligning with existing laws and national water management strategies, they leverage established local institutions to set up community relay systems.

“To access the community, you must work within the existing institutional framework. The platform setting is done in the context of the institutional framework around the federation. Local assessment of the situation is done in Institutional structures.

This approach fosters comprehensive coordination and stakeholder engagement across the board, including political institutions, state development coordinators, technicians, and grassroots communities. By aligning project goals with broader development policies, it ensures that identified needs are addressed within the national framework. Moreover, implementors argued it avoids creating parallel governance structures, preventing dependency relationships and astroturfing of the process.

Participatory appraisal

An implementation officer explained conducting comprehensive initial assessment to understand the holistic project context. This information gathering phase focuses on baseline data collection on the geographic, cultural, and related factors. To complement this, participatory appraisals are conducted to gather community perspectives on water challenges through focus groups and surveys. This integrated context analysis combines quantitative and qualitative, to cross reference their lived experience with what's known about the water context from the data to inform the project design. INGOs then support the communities in developing climate adaptation action plans based on climate vulnerability and capacity assessment. Practitioners explained, by involving communities in identifying priorities and developing action plans, INGOs aimed to counter the historical donor-dependent, top-down approach associated with water projects. This approach empowers communities to take ownership of agenda setting and solutions, such as selecting freshwater points, while benefiting from technical guidance.

All organizations emphasized the importance of combining community-led decision-making with integration into the existing institutional landscape to ensure project sustainability beyond their involvement. The goal of embedding project structures within existing institutional frameworks is to foster long-term, self-sustaining community participation in environmental decision-making. This approach aligns with participatory development principles, empowering communities to conduct their own monitoring and evaluation without external support. For instance, an interviewee stated:

“If the project withdraws, the community relays and the local water committees are already in contact and already working together, so the impact of our withdrawal won't be felt.”

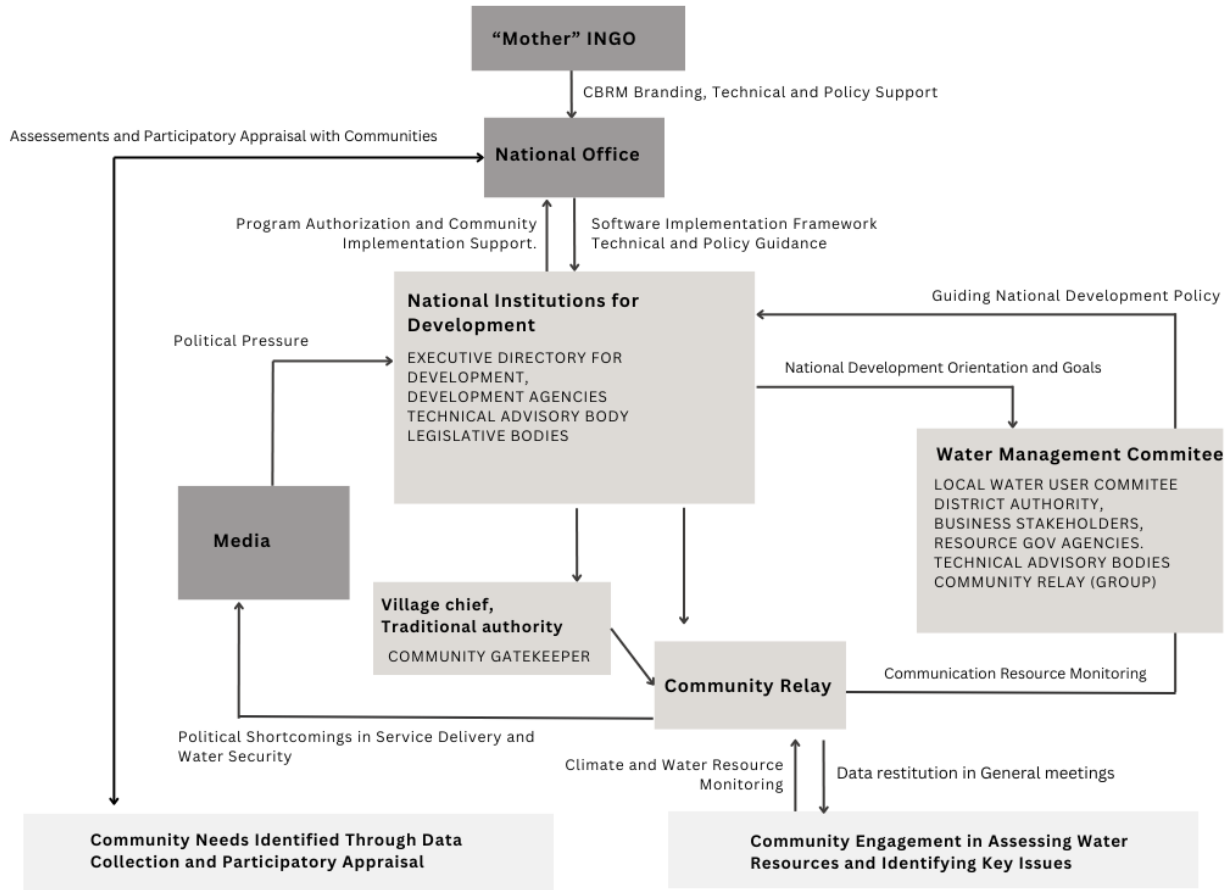
Respondents noted that community participation programs often faced challenges in sustaining momentum beyond initial activities. Without ongoing support from implementing INGOs, logistical and financial challenges often hindered the long-term integration of community participation.

Feedback in implementation

This section explores how feedback on community participation is incorporated into project implementation.

As noted earlier, organisations emphasized their commitment to a learning-oriented approach, prioritizing adaptability. Implementation processes are maintained as flexible to accommodate evolving circumstances and integrated into project design feedback from both community and institutional stakeholders. Consequently, regular engagement with community relays and community feedback are integrated into project planning and strategy to ensure that community perspectives are central to the initiative. The interviewee stated this strategy had been successful in minimizing misunderstandings and aligning organizational and community expectations.

Another organization emphasized the importance of formal supervision and project review processes. These mechanisms facilitate direct feedback from field operations and enable discussions with implementing partners. By analyzing project reports, the organization identifies areas for improvement to enhance project relevance and sustainability. This includes refining feedback and accountability mechanisms, improving equipment durability, and providing essential monitoring tools like rain gear and lighting.



Organisational chart of CBWM Implementation and Feedback Frameworks.

Legend:

Third-party Stakeholders: Dark gray boxes represent external organizations or individuals involved in the CBWM implementation and feedback processes.

Government Institutions: Medium gray boxes indicate government agencies or departments participating in the CBWM framework.

Outcomes and Outputs: Light gray boxes denote the results or products generated by the CBWM processes.

Arrows: Indicate the direction of information flow or relationships between entities.

Discussion

Community engagement

Legitimate and inclusive representation

Discussions with respondents on representation for community participation, have the same emphasis as in the literature reviewed, including arguments that local communities in climate change-affected countries are on the 'front line' of climate-related challenges, making them crucial stakeholders in environmental decision-making (Flint, 2024). Findings in this study demonstrate that community participation programs utilize a variety of strategies, including participatory needs assessments, water security data collection, and community relays, to prioritize frontline community voices in program design and knowledge generation. These practices align with the principles of procedural fairness, emphasizing inclusive community representation in decision-making to address the needs of community members (Emami et al., 2015). By adhering to procedural justice, and fostering legitimate participation, INGOs can effectively identify community priorities, fostering a sense of ownership and acceptance for the projects.

Inclusive policymaking necessitates a comprehensive understanding of local norms and perceptions related to water security, gender, age, and bodily concerns (Tseklevs, 2022). Marginalized groups experience impacts of hidden power structures that undermine procedural justice, including limited opportunities for decision-making. Accordingly, promoting inclusive community representation through superficial actions like enforcing gender parity in relay selection falls short of inclusivity and representation requirement of procedural justice. Without challenging hegemonic norms and practices to amplify marginalized voices throughout program design, projects risk perpetuating underlying power dynamics, and socio-cultural barriers that hinder equitable access to resources and decision-making (Tseklevs, 2022). Water reforms implemented by INGOs that disregard these concerns can exacerbate burdens on marginalized communities. For instance, women face both normative limitations on participation but undertake all domestic water responsibilities (Tseklevs, 2022). Accordingly, community relay frameworks can place a disproportionate burden on women to take on extra responsibilities for water security without pay.

Informational Procedure

INGOs interviewed seemed to have successfully incorporated arguments about the importance of education, awareness, and sensitization for fostering community acceptance of water reforms and promoting sustainable water resource management. The planning processes described in interviews highlighted efforts towards comprehensive stakeholder engagement, emphasizing the benefits of informing key stakeholders.

Access to communities is often mediated by state institutions (Shields et al., 2021), which act as gatekeepers for community entry and dictate the trajectory of community participation through institutional feedback mechanisms. While structured implementation frameworks facilitate engagement for those familiar with institutional landscapes, community members often possess limited knowledge of democratic political structures. Consequently, they rely on project-provided information and ongoing interactions with community relays to navigate the system. Thus, these platforms are crucial for procedural justice to inform individuals to understand institutional frameworks and participate meaningfully.

However, community participation based on community relay frameworks tend to solely provide technical expertise to the community relay, overlooking the importance of broader community engagement outside of initial communication regarding project implementation and data retribution sessions organized by community relays. Exclusive training on climate processes and water managements limits wider participation. Communities are less likely to meaningfully engage with participatory measures if they don't have the kind of scientific knowledge that is recognized by the national and organisational standards (Shields et al., 2021; Tseklevs, 2022).

Research consistently highlights the critical gap in promoting comprehensive community awareness and education within water resource management. This holistic approach is essential for effective community participation, which promotes the scalability and sustainability of water management strategies. Flint (2024) argues that unrealistic expectations for community initiatives without adequate support undermine their effectiveness. Successful community programs require education, training, resources, and capacity building.

Moreover, insufficient education and training for the broader community hinders the sustainability of community relay frameworks. This limitation hampers knowledge transfer from one community relay to another taking up that initiative, ultimately jeopardizing long-term community engagement in water management. Accordingly, to fulfill the requirements of procedural justice, there should be more efforts to engage the rest of the community for broader positive norms change. Effective communication strategies include simplifying

scientific information and employing human-centered storytelling can empower community members to express concerns effectively (Tseklevs, 2022). Cultivating community change agents, especially among youth, can facilitate knowledge dissemination and behavior change at the grassroots level.

Modalities of Community Participation

Community Monitoring

A primary goal of integrating community monitoring into national development paradigms is to enhance understanding of land use impacts on water resources. However, while projects often frame water management as community-led, implementing organizations acknowledge the necessity of ongoing external support, including training, financing, and management. This raises questions about the long-term sustainability of community monitoring efforts and mitigates claims of pure community-focus (Shields et al., 2021; Flint, 2024). For instance, it can be assumed that technical advice for monitoring and managing water resources will align with national development policy goals, potentially hindering innovative water security solutions from the bottom-up.

Furthermore, the interviewees demonstrated an awareness of the necessity for sustained resource allocation to foster ongoing community engagement in monitoring and management beyond the initial phase of INGO intervention. Particularly, sustaining engagement for unpaid community involvement is challenging without insurance these processes will achieve institutional policy changes (Shields et al., 2021).

Additionally, some organizations have not prioritized the development of sustained community capacity to engage with institutional decision-makers as a core component of community participation. However, basic community monitoring falls short of the criteria for procedural justice, failing to provide fairness and equity in policy formulation and environmental decision-making, as advisory roles tend to have limited influence on policymaking. Also, effective bottom-up policy approaches through these means can be significantly constrained by the prevailing political regime.

Community Voice for Effective Participation

The majority of organizations reported a focus on community empowerment, specifically aiming to enhance communication and accountability with institutional decision-makers. This alignment of community management and participatory decision-making is crucial, as it empowers communities to leverage their technical knowledge of climate change to influence policy direction. Empowering communities to engage with their water management committees beyond data provision brings governance closer to communities, rendering them into active participants in the development process (Tseklevs, 2022). This approach to community involvement fosters procedural justice by promoting community ownership and acceptance through co-designed and co-produced water security planning (Tseklevs, 2022).

As an extension of this strategy, certain organizations advocate for empowering citizens to utilize collected data to engagement with alternative political actors, including the media, to exert pressure on government bodies to listen to community-based water management plans and concerns. By cultivating community relays as change agents, this strategy addresses the imperative effective community participation in procedural justice, ultimately embedding effective community participation within the country's democratic framework (Flint, 2024).

However, understanding the power dynamics within communities should lead to more cautious optimism about the effectiveness of community-led frameworks. While community participation is important, it alone cannot guarantee fairness for all members. There's a risk the project might undergo elite capture as aid workers or local elites could dominate the evaluation process, influencing its results (Wade 2018). To truly address power imbalances, INGOs must recognize that development work is inherently political, rather than purely technical.

Community Participation in Project Development

Planning process

The planning process aligns with procedural justice expectations by adapting to the specific cultural, social, ecological context of implementation sites (Emami et al., 2015). Organizations typically engage in comprehensive processes to establish community connections, requiring institutional approval and a deep understanding of local structures. Furthermore, software-based planning framework mentioned by one organization exemplifies efforts to tailor participation to specific community contexts. Considering factors such as social

structure, socio-economic values and goals, water-related needs or concerns etc., the software facilitates the development of customized approaches to community participation.

The legitimacy of state institutions in the eyes of communities remains unexplored in the organisations that were interviewed for this research. A crucial question arises: how do state institutions interact with alternative, community-based governance structures? Seemingly, reflecting Mamdani (1996) argument there was a 'political failure to grasp the specificity of the mode of rule that needs to be democratized," the western infatuation with civil society can conceal the actual form of power through which rural populations are ruled' (Mamdani, 1996, pp. 288-289). This conversation also brings into question criticisms against developmental paradigms for imposing Western values and lifestyles, labeled "green colonialism" (Van Asselt & Gupta, 2009).

Feedback in implementation

The capacity for communities to provide feedback to implementing INGOs is crucial for ensuring fair participation and enabling corrections in environmental decision-making. To avoid the perception of externally imposed projects, feedback mechanisms are essential for fostering community ownership of participatory processes and adapting project activities accordingly.

Feedback mechanisms are crucial in this context. Despite efforts to involve local communities, respondents reported that INGOs were still perceived as outsiders, indicating a lack of ownership over program outcomes. This perception is exacerbated by the historical context of top-down development approaches in SSA countries, which were often implemented by foreign institutions and reinforced colonial power dynamics (Lammerink, 1999). To address this, there is a need to gradually cultivate a culture where local stakeholders have greater control over decision-making processes and governmental institutions assume increased responsibility.

Limitations and Areas of inquiry

Epistemological Assumptions

Discourses on community capacity-building within development practice frequently use Western, scientific knowledge as the epistemological foundation for community monitoring reports, positioning it as essential for legitimizing community relay outputs within institutional structures. This approach overlooks the critical issue of epistemic justice, failing to interrogate the hierarchical valuation of knowledge systems (Cummings, 2023). Rather than investigating the potential contributions of local knowledge to community participation and actively challenging its marginalization, practitioners inadvertently reproduce the privileging of scientific rationality, thereby reinforcing the marginalization of local knowledge and perpetuating a cycle of inequity. This epistemic violence results in the silencing of marginalized voices, experiences, and concerns, as their contributions are deemed insufficient unless validated through externally imposed, "legitimate" channels.

This undermines the fundamental principles of community participation by compromising community autonomy. Local knowledge is instrumentalized as mere data for decision-making rather than being recognized as a core component of governance (Solorio, 2023).

Distributional Justice in Climate Resilience and Adaptation Strategies

Water security projects implemented by INGOs often overlook the politicized nature of climate change knowledge, which is shaped in international negotiations and transmitted through climate action plans and resilience projects (Tabassum, 2022). While these projects aim to build community resilience and adaptation to climate-induced disasters, they frequently neglect the issue of distributive justice. Communities disproportionately affected by climate change, who have contributed least to the crisis, are burdened with adapting to the disruption of their entire livelihood systems. The researcher interrogates the lack of focus on retributive justice or capacity building to hold those responsible for climate disasters accountable.

Conclusion

In conclusion, this essay makes two primary contributions to literature. Firstly, it expands Emami's procedural justice framework by incorporating additional dimensions essential for effective community participation. Building upon Emami's original components of implementation, informative procedure, representation, consultation, and feedback, this study integrates the concepts of scale and power as outlined by Wade (2018). By acknowledging the critical role of these factors in environmental justice, the framework is enhanced to better assess the potential for meaningful community engagement.

Furthermore, this research distinguishes between community management and community participation, drawing on Shield et al.'s (2021) work. This distinction highlights the importance of political engagement in addition to monitoring roles. By incorporating these refinements, the expanded framework provides a more comprehensive tool for evaluating procedural justice and its impact on decision-making processes within water supply systems.

The second major contribution of this research is the examination of the community relay framework for community participation in water security, based on interviews with implementation officers and organisation executives and researchers. The researcher examined the procedural justice implications of this framework according to: (i) community engagement, based on legitimate and inclusive representation, and an adequate informational procedure, (ii) modalities of community participation in national environmental decision-making, and (iii) effective community participation in the project development, characterized by capacity to provide feedback throughout INGO planning and implementation of participatory frameworks.

This research found that in most organisations there is an intentional effort to bring forward effective community participation combining community management and community empowerment to enhance political voice at the national scale, but also at the INGO level through feedback processes and establishing software plans to ensure flexibility to the local context. The rationale community relays with their newfound knowledge from monitoring climate processes have more legitimacy in advocating for local needs and policy priorities to institutional decision-makers. Furthermore, community relay projects also tend to introduce new institutional mechanisms for the transmission of knowledge and political voice from the bottom up, enhancing procedural justice.

However, community engagement at the scale of the whole community is still lacking and creates genuine barriers to procedural justice. Despite efforts at gender mainstreaming in the relay selection process, not much is done to create privileged spaces for marginalized

communities to express their needs and concerns, while oftentimes the voices of marginalized communities are the most at risk to climate vulnerability and the better placed to find solutions to the issues that are directly affecting them. Furthermore, for genuine community behavior or norms change, there should be more efforts to engagement the whole community in the informational procedure rather than simply focusing on technical training and general capacity building at the level of the community relay. It is reductive in terms of knowledge transmission but also in terms of project sustainability. Implementers must also transition to community participation efforts that give community members real decision-making power and influence by incorporating community members' priorities and ideas and acknowledging community agency. This is valuable for the community participation in national level institutional dynamics, as well as in the project implemented at the organisational level.

Lastly, the research underscores the limitations of current participatory processes, particularly distributive and epistemic issues underlying developmental dynamics. These projects promote climate resilience and adaptation through community participation without penalizing the real drivers of climate change. Furthermore, an area of inquiry would be to include local or traditional institutions and forms of knowledge production because community participation seems to be embedded in western epistemic foundations that displace local populations knowledge systems and might cause legitimacy issues.

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Helene Duamelle

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Appendix 1 - Participant Information Sheet and Consent Form

Embedding communities in NGO practice: LSE Masters Dissertation research for
the BASIN Project,

Helene Duamelle, Geography and Environment;
Alexis Mccauley-Pearl, Geography and Environment
Information for participants

Dear Participant,

Helene Duamelle

Thanks for your interest in our dissertation research which seeks to explore the way in which communities are embedded within NGO practice. This research explores this question with particular focus on 1) the importance and challenges of involving community-led initiatives in promoting positive water security behaviours and 2) organisational behavioural theory and change in environmental NGOs working in sub-Saharan African countries. The work has been designed to produce insights that will support the work of the BASIN project (<https://www.lse.ac.uk/granthaminstitute/basin/>) and insights obtained through this research may be used to inform BASIN programming, research design, and communications. In this email, we give you information about the project and ask for your consent to participate. If you agree, please reply to this email, stating your name and that you agree to the statements in the table below to give your consent.

What is the study about?

This study focuses on exploring the questions outlined above through NGOs in the water sector, including among NGOs partnered in the BASIN project. Particularly the research 1) examines the distributive, procedural, and epistemic challenges that hinder local knowledge production and reproduction in water security and 2) analyses how non-governmental organisations (NGOs) operating in Burkina Faso, Tanzania and Malawi interact with, respond to, and incorporate local community feedback

What will my involvement be?

A one-hour interview to inquire about your perceptions of the ways in which NGOs interface with communities, including based on your own past or current involvement in NGO projects that address water security.

The interviewer will be interested in your experience with projects or programs that address water security challenges at the community-level, particularly looking at 'water champion', 'relay' programs and how your NGO implements them. The interviewer will also inquire about your understanding of how your place of work incorporates feedback from communities, and your perceptions on the effectiveness of doing so in the domain of water security.

Do I have to take part?

Participation is **voluntary**. There are no negative consequences for you if you decide not to take part in this study. If you decide to take part but then later on you change your mind, you can let us know up until July 15th, 2024 (after which we will publish the results of our work) – you will not have to give any explanation why. It is also absolutely fine if you feel that you don't want to answer any specific questions – you can just tell us, and we will move on.

What will my information be used for?

Helene Duamelle

It will be used for the master's dissertations of Helene Duamelle and Alexis McCauley-Pearl. If you agree, your information may also be stored for access and use more widely in the BASIN project moving forward, either in other research for wider project team members or other master's dissertations. Should you consent to this storage, the data will be stored in confidential folders on the BASIN SharePoint to which initially only a small number of LSE researchers associated with the BASIN project will have access, but which will be made available to other BASIN researchers and masters students on request to support broader BASIN aims. Your information may also be used in future publications that result from the research.

Will my information be anonymous?

Your participation will be anonymous in the write up of the research – your name and any other identifying information will not be used in any reports or publications resulting from the study. The information you share will also not be directly attributed to your individual organisation within the write-up of the research. However, due to the involvement of the participants (interview respondents) within the BASIN project, if you consent to the storage of your data for use within the wider BASIN project, anonymity within the project itself is not possible.

Who has reviewed this study?

This study has undergone ethics review in accordance with the LSE Research Ethics Policy and Procedure.

Data Protection Privacy Notice

The LSE Research Privacy Policy can be found at: https://info.lse.ac.uk/staff/divisions/Secretarys-Division/Assets/Documents/Information-RecordsManagement/Privacy-Notice-for-Research-v1.2.pdf?from_serp=1

The legal basis used to process your personal data will be Legitimate interests. To request a copy of the data held about you please contact: glpd.info.rights@lse.ac.uk

What if I have a question or complaint?

If you have any questions regarding this study please contact the researcher, Helene Duamelle, at h.l.duamelle@lse.ac.uk; and Alexis McCauley-Pearl, at a.mccauley-pearl@lse.ac.uk. As well as the Dissertation supervisor, Kate Gannon, at k.e.gannon@lse.ac.uk.

If you have any concerns or complaints regarding the conduct of this research, please contact the LSE Research Governance Manager via research.ethics@lse.ac.uk.

Helene Duamelle

If you agree to take part in the research, please complete the consent sheet attached/below.

Appendix 2 - Consent Form

Embedding communities in NGO practice: LSE Masters Dissertation research for the BASIN Project

Helene Duamelle, Geography and Environment;
Alexis Mccauley-Pearl, Geography and Environment

Participant's name: (first and last name go here).

Please read these three statements. If you agree with them, put an X in the boxes below.	
I have read and understood the study information dated 10/06/2024 and had the opportunity to ask questions.	
I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and that I can withdraw from the study at any time up until 15/07/2024, without having to give a reason.	
I agree to the interview being audio recorded.	

Helene Duamelle

I understand that the information I provide will be used for Helene Duamelle's and Alexis Mccauley-Pearl's dissertations. I understand that my responses will be kept confidential and anonymous from anyone, in any research outputs	
I consent to the data obtained through this interview may also be stored for access and used more widely in the BASIN project moving forward, either in other research for wider project team members other master's dissertations. (optional).	

Please retain a copy of this consent form.

Participant name:

Signature: _____ Date _____

Interviewer name:

Signature: _____ Date _____

Once completed, please email this back to us. Thank you!

Researcher names: Helene Duamelle and Alexis McCauley-Pearl

Email: h.l.duamelle@lse.ac.uk; a.mccauley-pearl@lse.ac.uk

Dissertation supervisor: Kate Gannon (k.e.gannon@lse.ac.uk)

Contact, should you have a complaint: research.ethics@lse.ac.uk

To request a copy of the data held about you please contact: glpd.info.rights@lse.ac.uk

Appendix 3 - Interview Guide

1. Introductory questions - 5 minutes

- a. Which organisation do you work for?
- b. What is your role in this organisation?
- c. How long have you worked for this organisation?
- d. Do you have a supervisor?
- e. Can you give a brief description of your main job tasks and duties?

2. Identifying community participation program implementation

- a. Could you describe the framework of implementation (at the different scales)?
- b. Who designs the planning procedure? What are the goals identified?
- c. How does the planning procedure include public consultation?
- d. What is the informative procedure with the community like?

3. Identifying community relay implementation structure

- a. Do you personally interact with the community relay?
- b. How is the community relay chosen?
- c. What is their role in the program implemented by your organisation?

4. Would you consider your organisation to be open to change?

5. What are the feedback mechanisms in place?

6. Closing questions?

- a. Is there a topic we haven't address in this interview you think we should address in our in this research?
- b. Is there anybody that you would recommend me to interview for this research?

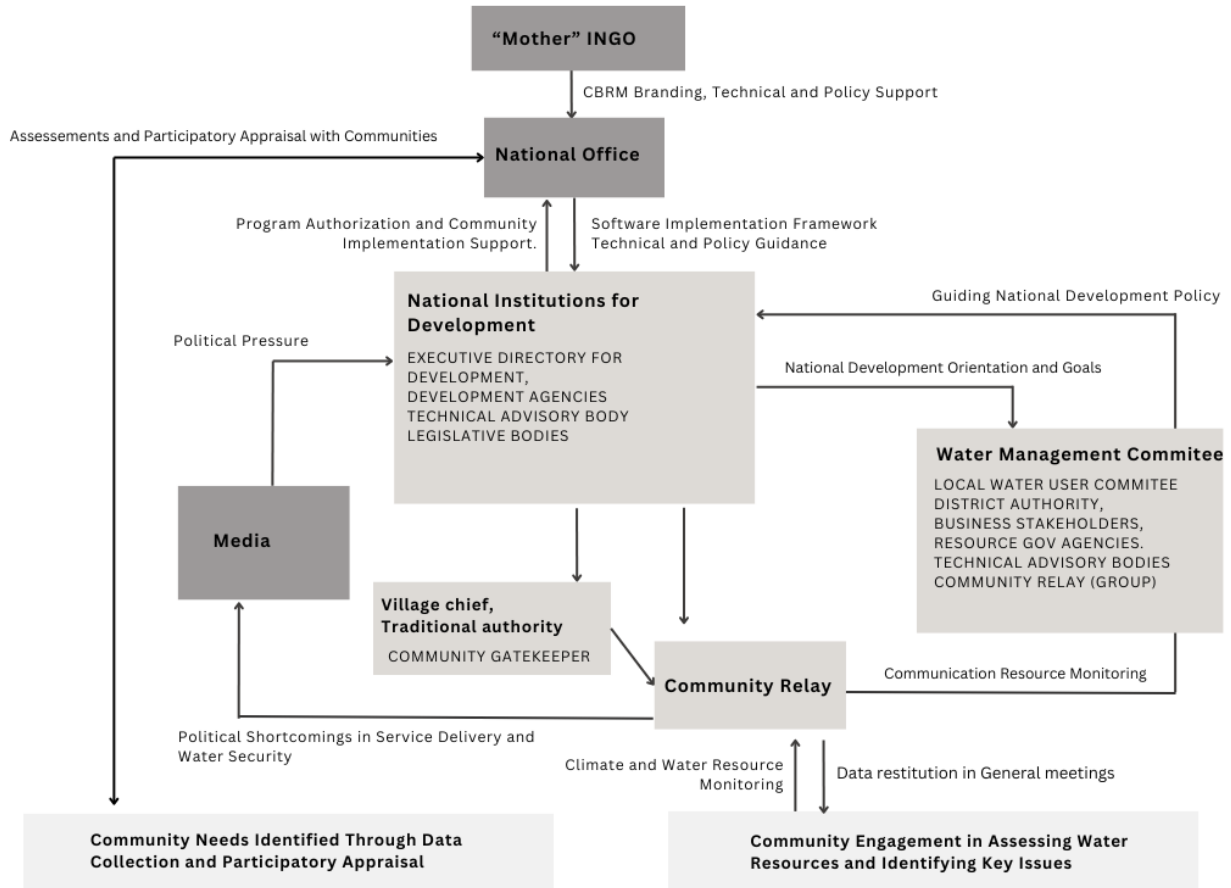
Appendix 4 - Analysis Codebook

Global Theme	Themes	Code	Description	Examples
Procedural justice analysis of <u>community participation</u> initiatives in the water sector	Theme 1: Community Engagement	Legitimate and inclusive representation	Providing equal opportunities and valuing diverse perspectives in environmental decision-making and leadership.	<p>“Community engagement is essential for effective water resources management. People living near water sources are directly impacted by water-related issues and are often the first to notice problems.”</p> <p>“How can we ensure equal participation and benefits - so in that way, we are empowering communities in the way we carry out our program.”</p>
		Informative Procedure	Effective public participation requires timely, relevant, and accessible information to empower	“We organise specific training courses with all the relay, for example on climate change, to understand techniques for monitoring water resources.”

			<p>participants to contribute meaningfully to community participation and offer informed feedback.</p>	<p>“Targeting the whole population, we're working much more on strengthening the relays, so mastering the techniques of monitoring and group facilitation. Every year they must report the data, the population is invited to attend the reporting session.”</p>
Theme 2: Modalities of Community Participation	Community Monitoring		<p>The orientation of capacity building efforts within the broader context of community participation in water resource management.</p>	<p>“The teams are also trying to show them that today, you can't make decisions without being based on something, particularly data or relevant information on water.”</p> <p>“The community relays are mainly used for monitoring and water resource knowledge acquisition.”</p>
	Community Voice in Water Resource Management		<p>Effective community participation involves the integration of local perspectives into broader decision-making processes. This includes active community involvement in shaping water reform and outcomes at different jurisdictional levels.</p>	<p>“The process that we have involves identifying community champions who are going to drive whatever the solution that the community decides on might be, and hopefully indeed drive further future discussion about challenges and solutions.”</p> <p>“Coming up some step to the leadership of the community, I'm responsible to ensure the institutional set up of that project is well informed to the leadership at Community that could be able to engage effectively in the implementation and take up ownership after they phase out.”</p>

	Theme 3: Community Participation in Project Development	Planning Procedure and Project Implementati -on	A successful planning process for community participation necessitates accurate, inclusive, and culturally appropriate information, coupled with consistent implementation across personnel, methods, time, and objectives to foster participant engagement.	<p>“To access the community, you must work within the existing institutional framework. The platform setting is done in the context of the institutional framework around the federation. Local assessment of the situation is done in Institutional structures.”</p> <p>“We focus more on climate adaptation, yeah. What do we do first is to conduct a baseline assessment, we do a scoping study, to identify what are security issues in this community and that we do participatory appraisal with the respective committees in the village”</p>
		Feedback processes	Mechanisms for effective feedback and alternative power structures can contribute to ensuring fair participation and allowing for corrections in environmental decision-making.	<p>“The first iteration, champions were drawn from the village officials rather than individuals from the community, and that was changed because I think the sense was that they tended to take a more, uh, directive approach, rather than working on community decision making and collaboration.”</p> <p>“Feedback from the forums we are holding. But they still face some challenges in terms of how actively the Champions can give that feedback, as an organisation would want to be progressive and implement solid bottom-up tools to discuss issues with rain gear and lighting”</p>

Appendix 5 - Organisational chart of CBWM Implementation and Feedback Frameworks



Legend:

Third-party Stakeholders: Dark gray boxes represent external organizations or individuals involved in the CBWM implementation and feedback processes.

Government Institutions: Medium gray boxes indicate government agencies or departments participating in the CBWM framework.

Outcomes and Outputs: Light gray boxes denote the results or products generated by the CBWM processes.

Arrows: Indicate the direction of information flow or relationships between entities.

