University of Reading

# Intra-state equity implications of country ownership of climate change adaptation

Doctor of Philosophy

**School of Agriculture, Policy and Development**

Jessica Omukuti

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**Declaration of authorship**

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

## Abstract

Country ownership of climate change adaptation is a key criteria that defines engagement of LDCs in the international climate finance landscape. Country owned actions reflect LDCs adaptation priorities and needs. Climate justice is achieved when countries that are particularly vulnerable to climate change risks are prioritised in resource allocation to support climate change adaptation. The thesis applies a climate justice and equity lens to existing literature on country ownership and finds limited clarity on knowledge relating to *country ownership of what and for whom*, with existing assessments biased towards the national and international levels. This thesis investigates whether country ownership principles enable equitable intra-state adaptation i.e. adaptation that addresses local level adaptation needs and reduces the vulnerabilities of local level communities most impacted by climate change. Power is considered inherent to adaptation processes within states. The thesis constructs a conceptual framework of power and influence and applies it to a case study of a Least Developed Countries Fund-funded coastal adaptation project in Tanzania. Qualitative and quantitative data through project document and policy reviews, key informant interviews, questionnaires and Focus Group Discussion in three case study locations. Findings indicate that country ownership does not guarantee that local level vulnerabilities will be addressed. The thesis finds: a) the presence of government control of adaptation finance as preventing stakeholder ownership; b) the failure of country owned adaptation actions to reflect the priorities of local level communities who are most vulnerable to climate change and; c) limited ability of actions that work through local level stakeholders to *meaningfully engage* local populations that are affected by climate risks. The findings suggest that existing approaches to (international) climate change governance may be replicating injustices across scales and increasing local level vulnerability.

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## List of acronyms

| | |
|---|---|
| AAA | Accra Agenda for Action |
| AE | Accredited Entities |
| AF | Adaptation Fund |
| BMU | Beach Management Units |
| CBO | Community Based Organisations |
| C(B)FM | Community (Based) Forestry Management |
| COFMA | Community Forest Management Agreement |
| CCA | Climate change adaptation |
| COP | Conference of Parties |
| DAE | Direct Access Entities |
| ESS | Environment and Social Safeguards |
| FGD | Focus Group Discussions |
| GCF | Green Climate Fund |
| GEF | Global Environment Facility |
| GoT | Government of Tanzania |
| (I)NDC | (Intended) Nationally Determined Contributions |
| KII | Key Informant Interviews |
| LAPA | Local Adaptation Plans of Action |
| LDC | Least Developed Country |
| LDCF | Least Developed Countries Fund |
| LG; LNG | Local Government; Local Non-Government |
| NAPA | National Adaptation Plans of Action |
| NG | National Government |
| NNG | National Non-Government |
| PDAE | Paris Declaration on Aid Effectiveness |
| REDD | Reducing Emissions from Deforestation and Degradation |
| SLR; SLRI | Sea Level Rise; Sea Level Rise Impacts |
| SNG; SNNG | Sub-National Government; Sub-National Non-Government |
| UNDP | United Nations Development Fund |
| UNEP | United Nations Environment Program |
| UNFCCC | United Nations Framework Convention on Climate Change |
| URT | United Republic of Tanzania |
| RGoZ | Revolutionary Government of Tanzania |
| VPO | Vice President's Office |

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# 1 Introduction

## 1.1 Introduction

Climate change has been described as 'the biggest market failure' (Stern, 2007, p. 651), a 'super wicked problem' (Levin et al., 2012, p. 124) and a 'perfect moral storm' (Gardiner, 2006, p. 398). Climate change is a market failure because emission producers do not incur the costs of these emissions but instead transfer them to society which results in an inefficient allocation of costs of production (Andrew, 2008; Owen, 2006). Climate change is a wicked problem due to its persistent and political nature (Grundmann, 2016). Consequently, there are disagreements on the appropriate solutions, actors, values and norms or solutions, with an understanding the problem first requiring an identification of the solution (Perry, 2015). Lastly, a moral storm emerges when those who are least responsible for climate change experience the most severe impacts (Northcott, 2011). These descriptions of climate change necessitate effective policy to generate actions that will address climate change.

Climate change has global root causes whose impacts are mediated by local level social, economic and political conditions (Fünfgeld & McEvoy, 2014; Pelling, 2010). Countries least responsible for climate change have the least capacity to adapt to climate change impacts (Eckersley, 2016). Climate change generates a redistribution of costs and benefits from climate change, with disfavour to LDCs and poor households and communities (Allen et al., 2018). Socially and economically disadvantaged and marginalised groups within countries – mostly the poorest – are severely impacted (Hallegatte et al., 2015; Metz et al., 2007). LDCs are already incurring GDP losses due to climate change (Winsemius et al., 2015). For example, between 1977 and 2007, developing countries incurred an average of 0.69% of their GDP from climate change driven natural disasters as compared to <0.01% GDP losses by developed countries (Ibarrarán et al., 2009). Climate change will also exacerbate societal inequalities and increase poverty in these regions (Reckien et al., 2017). For example, climate change is likely to push an additional 122 million people into extreme poverty by 2030 (Hallegatte et al., 2015). Most of these chronically poor people will be in LDCs, where social protection is weak (UNCTAD, 2018). This will affect particularly poor regions in LDCs will be adversely affected by climate change.

Current and future climate change is expected to severely affect ecological and human systems in these LDCs (Barros et al., 2014a). Assessments indicate that current warming of 1.1°C is already generating severe impacts such as more frequent and intense extreme hydrological events, heatwaves and changes in ecological compositions of geographic locations (Chan et al., 2019; IPCC, 2018a; Parente et al., 2018). Some regions such as the Sahel and the Mediterranean are projected to experience severe impacts under a 1.5-2°C increase in global mean temperatures, for example through reductions in crop yields (Hoegh-Guldberg et al., 2018; Van Oort & Zwart, 2018). Mitigation and adaptation pathways are recommended as response measures to these climatic changes. These are expected to protect countries and communities from climate risks while also decoupling global economic growth from carbon emissions (UNFCCC, 2015; Zhang et al., 2018).

Adaptation is the only means available for LDCs to respond to climate change. Adaptation is defined as an 'adjustment to actual or expected climate and its effects' and is proposed as part of the critical action (Barros et al., 2014b, p. 1758). Internationally, policy actors aim to support LDCs to develop and implement adaptation policies and actions. The 13th SDG calls on nations to integrate climate change mitigation and adaptation measures into national level development planning processes (UN, 2017). The United Nations Framework Convention on Climate Change (UNFCCC), through the Conference of Parties (COP) coordinates adaptation policies at the international level. The most recent policy developments are the (I)NDCs where countries party to the COP identify national mitigation targets and adaptation priorities (Lyster, 2017). Other LDC climate change policies favour adaptation over mitigation due to the urgency of climate change impacts and adaptation responses (Nhamo, 2018).

Finance is central to adaptation efforts in LDCs as it enables climate change adaptation. Climate justice and policy scholars claim that LDCs have an entitlement to climate finance for the disproportionate responsibility and impacts of climate change (Duus-Otterström, 2016). The implementation of LDC adaptation policies is dependent on availability of adaptation finance (Pauw et al., 2019). Estimates indicate high current and future climate finance needs (IPCC, 2018b; UNEP, 2016). In recognition of these needs, COP 15 generated a commitment by developed countries to raising $100 billion in climate finance annually by 2020 (and later extended to 2025) (UNFCCC, 2009, 2016). Despite presence of domestic climate finance allocations in LDCs (Nhamo & Nhamo, 2016; Yanda et al., 2013), total available climate finance is insufficient and falls short of the global target (Halimanjaya, 2015; UNFCCC, 2018b). Other key climate finance policy issues relate to how climate finance is defined, tracked, measured and spent (Fankhauser & Burton, 2011; Roberts & Weikmans, 2017).

LDCs with high international climate finance needs are also highly dependent on ODA (UNCTAD, 2016). LDCs are encouraged to pursue sustainable development, which responds to climate change adaptation and mitigation and development needs. Achieving these goals requires an integrated approach that recognises LDC priorities and needs (Shine & Campillo, 2016). Country ownership is critical in ensuring that country needs are identified, articulated and resourced. This chapter introduces the thesis by discussing country ownership of climate change, making a case for the analysis of country ownership through an equity lens and then presents the research questions that guide this thesis.

## 1.2 Country ownership of climate change adaptation

Country ownership is a central tenant of international climate change policy. Country ownership refers to the ability of LDC citizens that are recipients of CCA finance to be involved in decision making on how climate finance is allocated and spent (Schalatek, 2012). Country ownership in bilateral climate finance is defined by ownership principles for Official Development Assistance (ODA) while country ownership in multilateral climate finance is defined by UNFCCC principles. Ownership is associated with limited or no conditionality for finance allocated by donors or contributors. Climate policy scholars advocate for a dissociation between climate finance and finance conditionality, which is often exhibited in ODA (Scoville-Simonds, 2017). Yet, bilateral finance is 20 times higher than climate finance allocated through dedicated multilateral climate finance channels (UNFCCC, 2018a). Even though

multilateral finance is a small portion of overall climate finance, this thesis is interested in county ownership of finance channelled through UNFCCC climate finance mechanisms.

The emphasis on country ownership of multilateral climate finance within the UNFCCC is reflected in international climate change policies. The UNFCCC notes that 'ensuring country ownership requires a deep understanding of LDCs' needs and priorities on the part of multilateral climate funds and the relevant developing country authorities' and encourages 'multilateral climate funds and developing country authorities…to communicate closely with each other, including on strategies and approaches for achieving transformative change through country programming and on the latest policies and decisions of the funds' (UNFCCC, 2018b, p. 5). The Paris Agreement asserts that international climate change action 'should be country-driven, based on and responsive to national needs, and foster country ownership of Parties, in particular, for developing country Parties, including at the national, subnational and local levels' (UNFCCC, 2015, p. Article 11). UNFCCC climate finance mechanisms –the Green Climate Fund (GCF) and the Global Environmental Facility (GEF) and UNFCCC funds e.g. the Adaptation Fund (AF) operationalise UNFCCC approaches to country ownership (GEF, 1998; UNFCCC, 2018a).

Country ownership principles determine climate finance allocation by multilateral climate finance mechanisms. Funded projects are first required to demonstrate that proposed actions are in alignment with existing national policies (GCF, 2014). The AF commits to 'financ[ing] concrete adaptation projects and programmes that are country driven and are based on the needs, views and priorities of eligible Parties' with funding guided by policies and structures such as 'national sustainable development strategies, poverty reduction strategies, national communications and national adaptation programmes of action and other relevant instruments' (Adaptation Fund, 2019, p. 1). To enhance country ownership, UNFCCC finance mechanisms, such as the GCF provide financial and capacity support to enable LDCs to engage with the UNFCCC (Byrnes et al., 2017; GCF, 2015; Manzanares, 2017). This indicates a proactive approach by the UNFCCC to achieve country ownership.

Other than the UNFCCC, LDCs also seek to ensure that their adaptation processes are country owned. For example, LDCs have developed and submitted NAPAs, (I)NDCs and National Communications to the UNFCCC. These policies represent developing country adaptation priorities, which should structure the allocation of multi- and bi-lateral climate finance. Other approaches to enabling country ownership by LDCs include the development of dedicated institutions such as line ministries or mainstreaming of climate change across sectoral areas to ensure that climate change risks and impacts are understood and addressed. LDCs also emphasise on the need to achieve an equal split of climate finance between climate change mitigation and adaptation as adaptation is considered to be an urgent need for the LDCs (Ciplet et al., 2013). Table 1-1 presents examples of actions taken by climate finance mechanisms and LDCs to achieve country ownership of CCA.

Table 1-1: Examples of efforts by different actors to support country ownership of adaptation actions.

| Classification | Description | Examples |
|---|---|---|
| Developing country actions | LDCs commitment to promoting country ownership using domestic policies | - Development of national strategies and policies e.g. National Adaptation Plans of Action (NAPAs) and Nationally Determined Contributions (NDCs) and submission of national communications to the UNFCCC<br>- Achieving a 50/50 split between climate change adaptation and mitigation |
| UNFCCC and UNFCCC climate finance mechanisms actions | These are policies/structural changes that are created and maintained by the UNFCCC and its climate finance mechanisms | - Making country ownership central to international climate finance policies, e.g. the Paris Agreement<br>- Accreditation of developing country institutions<br>- (Enhanced) Direct access to climate finance by developing country institutions<br>- Readiness support for LDCs to develop institutional frameworks for accessing climate finance<br>- Increasing developing country representation capacity and participation in international climate change and development forums |

Source: Author.

The justification for country ownership of climate change adaptation and intended international structural approaches to achieving country ownership are clear. Yet, gaps remain, specifically relating to the operationalisation of country ownership at the international and national levels. First, at the international level, achievement of country ownership of adaptation is at the expense of other climate change adaptation policy priorities such as low carbon climate change action (Winkler & Dubash, 2016). For example, while the (I)NDCs are applauded for being bottom-up and country-owned, emission targets lack ambition and commitments are insufficient to avoid dangerous climate change (Du Pont & Meinshausen, 2018; Shukla et al., 2017). Country ownership also creates a North-South division of countries which limits collective climate action (Hermwille et al., 2017). There is limited clarity on the way forward for addressing these competing priorities.

Second, international support for country ownership has not translated into expected national level outcomes for LDCs. For example, Readiness support for Asia Pacific countries by the GCF, which is expected to increase the capacity of these countries to engage in adaptation planning has not unlocked access to multilateral climate finance (Samuwai & Hills, 2018). Extent to which these Readiness funds have been leveraged also remains limited (IEU, 2019a). The accreditation of national institutions by the GCF (which ensures that institutions meets the required fiduciary standards has not generated increased national access to climate finance as less than 20% of GCF funds are allocated to national Direct Access

Entities (DAEs) (Fonta et al., 2018). Hence, international efforts to promote country ownership have not translated into national level outcomes.

Third, beyond acquisition of climate finance, improved national capacity for adaptation and representation of LDC national adaptation priorities, limited attention is paid to the utility of country ownership beyond and below the national level. Consequently, the intra-state benefits of country ownership are poorly understood. This is important due to the potential of conflict between global goals and local realities (Corbera & Schroeder, 2017). Actions at the international level may not necessarily benefit the lower levels. For example, international social safeguard policies may generate maladaptation by alienating local marginalise social groups (Poudyal et al., 2016). While most research focuses on the role of local actions in promoting maladaptation (see Noble et al. (2014)), the role of international policy structures in enabling maladaptation remains less understood.

Fourth, the roles of intra-state actors in driving country ownership have been inadequately explored and or articulated. For example, while civil society, private sector and local government actors are critical for advancing adaptation in LDCs (Schalatek, 2012; Van Asselt, 2016), their role in country ownership remains is less understood (Bäckstrand et al., 2017; IEU, 2019a). Their engagement in adaptation interventions in LDCs is not considered (by policy actors at the international level) to contribute towards country ownership (IEU, 2019a). Instead, country ownership is only achieved when national governments are engaged in adaption (IEU, 2019a).

In summary, country ownership is a key factor within international climate change policy, with both multilateral climate finance mechanisms and LDCs striving to achieve it. However, several gaps exist on how to operationalise country ownership at the international and national levels, the roles of different intra-state actors in achieving country ownership and the benefits LDCs can generate from country ownership beyond accessing climate finance for adaptation from multilateral climate finance institutions. The following sub-section discusses how a climate justice and equity lens can be used to further understand and address these gaps.

## 1.3 Country ownership through a climate justice and equity lens

A climate justice and equity lens has the potential guide debates within academic research that seek to generate more clarity on intra-state processes and outcomes from country ownership. Country ownership principles seek to ensure that allocation of multilateral climate finance is guided by LDC adaptation priorities (UNFCCC, 2015). These principles assume that such adaptation are informed by actors' understanding of local level vulnerabilities and adaptation needs. Reduction of local level vulnerabilities is therefore an inherent goal of country ownership (Oberlack & Eisenack, 2014). An equity lens links country ownership to this inherent goal by enabling an understanding of country ownership processes and outcomes as political, scaled and dependent on not just inter-state and country institutions, but also intra-state adaptation governance structures. This section introduces the concept of climate justice and equity and discusses why a climate justice and equity lens is important in understanding country ownership.

Equity is informed by a desire to achieve social justice. Social justice is defined as 'the way that social and political institutions distribute both goods and bads among constituent members' (Vanderheiden, 2008, p. 47). The concern is with associations amongst societies and their situations (Grasso, 2007). Equity demonstrates awareness of differences between individuals and groups and pays attention to those who are socially and economically vulnerable to climate change (McDermott et al., 2013; Paavola & Adger, 2002). Equitable adaptation involves 'procedural fairness, meaning due process, equal protection and equal rights…equity in the availability of…and in the process of providing services and benefits…and…a guarantee of a place at the table to express views on policy choices and service delivery' (Guy & McCandless, 2012, p. 512). Equity is also linked to equality of opportunity (Jones, 2009) and the understanding that every person, irrespective of their socio-economic background should be treated fairly by institutions and policies (Shafritz et al., 2015).

Climate justice debates have focused on three interconnected themes –actors, times and approaches. Actor-based discussions focus on state-centric versus cosmopolitan responsibilities for addressing climate change (Caney, 2005, 2006; Harris & Symons, 2010). Temporal concerns highlight the inter and intra-generational climate justice issues emerging from climate change (Gardiner, 2006). Approaches focus on: a) mitigation e.g. who is most responsible for emissions and who should pay for mitigation (Okereke & Dooley, 2010; Roberts & Parks, 2009) and b) adaptation e.g. allocation of responsibility for climate change-related impacts and establishing the criteria for distribution of assistance between and within LDCs (Bulkeley et al., 2014; Paavola & Adger, 2006; Wenta et al., 2019).

Climate justice and equity is tripartite. It involves procedural, distributive and recognition justice (Adger et al., 2006; Schlosberg, 2003). Procedural justice relates to decision-making processes that occur in a participatory space, characterised by inclusion, representation and accountability (Klinsky & Dowlatabadi, 2009; McManus et al., 2014). It contributes towards the legitimacy of climate change actions (Anand, 2001). Procedural justice also lays the groundwork for distributive justice (Huq, 2006). Distributive justice is determined by how costs, benefits and risks are shared amongst groups (Fraser, 2009; Grasso, 2010). Equitable distribution (or lack of it) is dependent on social structures, cultural beliefs and institutional contexts, all of which are affected by factors that mediate social relations (Schlosberg, 2007). On their own, distributive and procedural justice may be unable to address sources and impacts of risks in communities with heterogeneous values (Forsyth, 2014). Recognition acknowledges the differences within groups and communities and ensures that these distinctions are incorporated in the adaptation process (Nightingale, 2017). This enables the root causes of vulnerability to be addressed.

While all three elements are important for climate justice and equity, there is preference for some elements over others. For example, local level preference for procedural over distributive justice can still generate equitable adaptation (McManus et al., 2014). National governments are encouraged to progress from consultation to co-production of policies, which suggests a preference and spectrum of procedural justice (Moore, 2016). In some instances, the absence of one element of justice in policies is considered inequitable (Bulkeley et al., 2013a; Suiseeya & Kimberly, 2016). Preferences for one type

of justice over another are context-dependent and vary across scales but collectively contribute towards climate justice and equity.

This thesis considers equity and climate justice as interlinked. Climate justice policies and actions at the international level enables the allocation of climate finance to particularly vulnerable countries. Equity involves a vulnerability-based allocation of climate finance at the sub-national level and ensures that local level vulnerabilities are addressed (Barrett, 2014; Colenbrander et al., 2018; Lebel et al., 2018). This is informed by knowledge of patterns of local level inequalities as drivers of vulnerability, such as historical political and economic marginalisation (Baptiste & Kinlocke, 2016; Smith & Rhiney, 2016). Addressing these inequalities contributes towards equitable adaptation. This link between climate justice and equity asserts that climate justice and equity emerge from 'an accumulative multiscalar *process*' (Barrett, 2013b, p. 216) (emphasis in original text) where international climate justice enables countries to engage in equitable adaptation. this also recognises the importance of addressing local level drivers of vulnerability as a pre-cursor for successful international climate justice.

Climate justice and equity is extensively reflected in current climate change adaptation policy and in adaptation research literature. For example, Shi et al. (2016) summarise how research on climate justice can be advanced at the sub-national scale and focuses on how policy processes provide opportunities for integration of climate justice. Gonzalez (2019) presents a case of why and how the Paris Agreement and the SDGs should demonstrate sensitivity towards climate-induced migration, which is overlooked in the loss and damage debate. One critical policy question is whether country ownership is 'informed by principles of justice, shaped by equity criteria, and perceived to be fair' (Grasso, 2009, p. 4). This is not explicitly addressed in existing literature. An equity lens contributes towards an understanding of how international country ownership policies and processes can be operationalised within states to address local level inequalities and also generates an understanding of the *effects* of country ownership to intra-state adaptation actors.

Applying an equity lens enables consideration of processes and outcomes of country ownership and whether these address local level vulnerability. Climate justice literature underscores the multi-scalar nature of climate change adaptation. Adaptation may compromise development (Thomas & Twyman, 2005). An equity lens enables climate change policy decisions to be made with consideration for the local level adaptation trade-offs and the winners and losers that emerge (Klinsky et al., 2016; Ryder, 2018). By prioritising those who are disadvantaged, an equity lens also integrates ethics into country ownership (Patterson et al., 2018).

An equity lens acknowledges politics, power and influence in country ownership of multilevel governance of climate change adaptation. Struggles for 'authority and recognition' that occur within adaptation processes within states are acknowledged (Nightingale, 2017, p. 12). These determine the types of decisions and types of actors who influence these decisions (Næss et al., 2005). This transforms existing understandings of multilevel governance of adaptation which are utopic and apolitical (Dodman & Mitlin, 2015), to an understanding that demonstrates an awareness of the intra-state politics that drive adaptation processes (Kerr et al., 2018; Lindegaard, 2018; Nyantakyi-Frimpong, 2019). Consequently,

the focus is not only on vulnerable states as indicated in the Paris agreement, but also vulnerable populations within those states (Kuyper et al., 2018). Questions of the effects of country ownership become about whether adaptation addresses vulnerable populations' needs as opposed to the priorities of countries.

In summary, this sub-section has presented the value that an equity lens would add to an analysis of country ownership. It argues that an equity lens enables an understanding of country ownership processes and outcomes as more political, scaled and dependent on institutional and governance structures. This research presented in this thesis attempts to understand the processes and outcomes of country ownership through an equity lens by investigating whether country-owned adaptation engages with intra-state actors and reduces local vulnerability to climate change. Sub-section 1.4 presents the research questions that will guide the discussions in this thesis.

## 1.4 Research questions

The main objective of this thesis is to understand the intra-state equity implications of country ownership of adaptation to climate change in LDCs. The overall research question for this thesis is:

***Does country ownership of adaptation interventions in LDCs generate local level adaptation that addresses the needs of vulnerable local level communities?***

Six questions are used to answer this overall research question. These sub-questions are categorised into three themes: a) engagement of multi-level adaptation actors in country owned initiatives b) alignment of country-owned initiatives with local priorities and c) links between local institutions in country ownership and engagement of local level vulnerable groups. These themes are discussed in the sub-sections below.

### 1.4.1 Engagement of multi-level actors in country owned initiatives

Stakeholder engagement in adaptation decision making has a normative utility –for good governance, and instrumental utility (Bauer & Steurer, 2014). This also enables vertical and horizontal integration of adaptation and adaptation plans (Ford & King, 2015). Stakeholder participation in adaptation decision making enables processes to leverage the different types of knowledge and other resources provided by these stakeholders, thus smoothing the costs of, and uncertainty in, adaptation decisions (Atela et al., 2016; Sherman & Ford, 2014; Tompkins et al., 2008). Country owned adaptation actions are therefore expected to engage these intra-state actors in adaptation planning and implementation.

International climate change policy uses stakeholder engagement as an indicator of country ownership e.g. the Least Developed Countries Fund (LDCF) and GEF (Climate Funds Update, n.d; GEF, 1998). Targeted stakeholders include government, non-government and local level actors (UNFCCC, 2015). By engaging country stakeholders, projects intending to be country owned are assumed to be informed by these stakeholders' knowledge of adaptation priorities.

The questions in this theme will seek to understand the processes and outcomes from intra-state stakeholder engagement in interventions that adopt country ownership principles.

*Question 1: What are the approaches to intra-state stakeholder collaboration in projects that intend to be country owned?*

*Question 2: Does intra-state stakeholder collaboration as a principle of country ownership enables intra-state adaptation stakeholder to influence adaptation decision making.*

Equitable actions engage actors who have knowledge of local level vulnerability patterns and adaptation priorities. Within states, this includes a range of multi-level cross-sectoral actors who can contribute towards generating an understanding of vulnerability profiles and appropriate adaptation measures. These questions will generate insights into the engagement approaches of national, sub-national and local actors in country-owned adaption processes. They will also contribute to an understanding of the profile of actors who are engaged in adaptation decision making processes that are considered country-owned.

### 1.4.2 Alignment of country-owned initiatives with local priorities

Multi-level adaptation projects should reflect local level adaptation priorities. This is through co-production of knowledge which recognises the importance of nuanced links between climate change risks and socio-economic impacts (Green et al., 2012; Vedeld et al., 2016; Ziervogel et al., 2016). Climate change projects that reflect external priorities (e.g. donors) as opposed to local priorities are criticised for lacking country ownership (Shankland & Chambote, 2011).

International climate change policies emphasise that the engagement of multiple stakeholders and multi-level approaches to adaptation generate a trickle-up of local knowledge and adaptation priorities into adaptation planning and implementation (Adaptation Fund, 2019; UNFCCC, 2015). Measures like the use of environmental and social safeguards assessments which are conducted by accredited entities are assumed to generate actions are aware of the risk of harm to local communities and vulnerable groups (GCF, 2018c).

The questions in this theme will facilitate an understanding about whether projects that are guided by country ownership principles reflect local level priorities for climate change adaptation through climate risk management. The questions focus on the framings of climate risk management, which can be used to generate an understanding of the different processes and outcomes that are perceived to be essential for adaptation processes and outcomes.

*Question 3: What framings of adaptation are reflected in country owned adaptation initiatives?*

*Question 4: How do local vulnerable communities' framings of adaptation compare to that adopted by projects that are considered to be country owned?*

Equitable adaptation underscores the importance of engaging intra-state and local actors in adaptation decision making due to their knowledge of problems and potential solutions associated with climate change. Local level actors' experiences and knowledge inform how adaptation is designed and implemented. The questions on framings will seek to understand whether country owned projects approach to adaptation reflects preferred approaches by local level communities.

### 1.4.3 The link between local institutions in country ownership and engagement of local level vulnerable groups

Country ownership is judged based on the extent to which it engages with local level actors. Actions that fail to engage the local poor and reduce vulnerability lacks country ownership (Ebi & Otmani del Barrio, 2017; Oberlack & Eisenack, 2014) by prohibiting local ownership of adaptation (Nkoana et al., 2017). Local institutions, e.g. local civil society institutions, are proposed for their ability to link local populations to national and global adaptation decision-making processes (Comte et al., 2019; Dombrowski, 2010). Country owned adaptation interventions are encouraged to use community-based adaptation approaches which leverage local institutions to engage local level vulnerable communities (Agrawal et al., 2012; Colenbrander et al., 2018; Fenton et al., 2014; Muok & Kingiri, 2015). Decision making on adaptation finance allocation and spending by the climate finance mechanisms is also expected to engage local institutions as this enables local actors to inform adaptation spending (Schalatek, 2012). Consequently, policies and projects funded by UNFCCC climate finance mechanisms adopt these recommendations and engage local level institutions (including civil society organisations) in adaptation planning and implementation (see Adaptation Fund (2014); FAO (2019a); Garcia (n.d); Ranabhat et al. (2018)).

Literature on the politics of climate change however indicate a dissonance between local institutions and local level vulnerability reduction. Local institutions can facilitate elite control of local level adaptation decision-making processes and outcomes, which hinders vulnerable local populations from influencing adaptation processes (Chu et al., 2016; Regmi et al., 2016b; Sovacool, 2018). Governments may also selectively work with individuals who are thought to represent local institutions (Regmi et al., 2016a). When this occurs, actions may still have engaged local populations even though vulnerability may not have been addressed (Ciplet, 2015).

The question in this theme will investigate the extent to which engagement of the local level through local institutions in country owned adaptation enables local level vulnerable groups to contribute towards local level adaptation decision making.

*Question 5: How are country-owned adaptation actions engaging local level populations that are vulnerable to climate change?*

*Question 6: Do the engagements of local level populations through local institutions enable local level vulnerable groups to influence adaptation decision making?*

Together, the questions in 1.4.1, 1.4.2 and 1.4.3 will seek to understand influence by intra-state stakeholders and vulnerable local level communities in intra-state country-owned adaptation decision making. The focus is on processes and outcomes of adaptation interventions, which are considered country owned by multilateral climate finance mechanisms. The research emphasises the importance of going beyond stakeholder engagement to consideration for the types of stakeholders, extent to which they can influence adaptation decision making and the decision outcomes emerging from these processes. Section 1.5 presents an overview of the structure of the thesis.

## 1.5 Structure of the thesis

This thesis is situated in the broad academic literature on the governance of climate change adaptation. It politicises country ownership of adaptation and explores intra-state equity in country-owned adaption processes by investigating whether (and the extent to which) these processes engage multi-level stakeholders, the extent to which country owned processes reflect the needs of multi-level stakeholders and the involvement of local level vulnerable groups in decision making on projects that are structured to be country-owned. This thesis is presented as a collection of papers. Two chapters (5 and 6) and Appendix 7 are currently under peer review in international academic journals. Chapter 6 is an accepted manuscript.

The thesis is based on two main arguments. First, while country ownership of adaptation is a key defining factor of the current climate change regime, existing research on this is biased towards justifying the contribution of country ownership towards international climate justice and focuses on international climate change governance while overlooking the value-add of country ownership within states. Second, the thesis argues that understanding the value of country ownership within states requires use of an equity lens to assess whether country ownership enables adaptation to address the needs of local level communities who are vulnerable to climate change. Based on these arguments, the thesis develops research questions and presents a conceptual framework, which is used to frame analyses of country ownership. Three chapters present the empirical findings of an assessment of intra-state equity outcomes of an LDCF-funded coastal adaptation project in Tanzania (Chapter 4).

Tanzania is chosen as a case study country for two main reasons (see section 4.3 for a detailed discussion). First, it is a LDC which is highly vulnerable to climate change risks (Ahmed et al., 2016; Watkiss et al., 2011). This makes it a representative of other LDCs whose socio-economic and political characteristics make them vulnerable to climate change risks (Reid et al., 2010). Second, Tanzania has a project that is funded by a UNFCCC climate finance mechanism and is therefore governed by country ownership principles. The project chosen for the case study was near completion at the time of data collection provided an opportunity to conduct an ex-post assessment of the processes and outcomes from the application of country ownership principles.

The thesis has seven chapters. Chapter 2 presents a critical review of the literature on country ownership. It finds that literature on country ownership of adaptation is informed by concepts of ownership in development assistance, specifically by the PDAE and the Busan agreement on country ownership, where the goal is to ensure the effectiveness of development finance. The review in chapter 2 finds that literature on country ownership has two limitations. First is the weak conceptual understanding of country ownership of what and for whom, which emerges from the assumptions used to define country ownership. This results in country ownership being assumed to be by national government stakeholders. Second is a methodological limitation, where empirical assessments of country ownership of CCA fixate on the national level and overlook intra-state processes and outcomes from country ownership.

Chapter 3 presents a conceptual framework for analysing extent of intra-state equity in country ownership interventions. It considers power as normative to all adaptation decision making processes,

where those who are more powerful are more likely to influence decision making processes. The chapter argues that equitable processes are those that enable less powerful and marginalise local level populations to influence adaptation decision making through either restructuring institutional structures that create or reinforce power inequalities or bypassing them in favour of less powerful vulnerable local level groups. It builds on concepts from social exchange, local level participation and a framings approach to present how power and influence can be understood in adaptation processes within states. Empowerment is also presented as critical for equitable adaptation which engages with the relationship between agency of adaptation actors and local level communities and the structures that mediate social relations between actors in adaptation . Sections of chapter 3 are broadly based on Appendix 7 which is under peer review with *Ethics, Environment and Policy*.

Chapter 4 presents the methods used to collect and analyse data. A case study approach is used. A coastal adaptation project in Tanzania, funded by the Least Developed Countries Fund (LDCF) which is managed by the GEF is used as a case study. Qualitative and quantitative data is collected through interviews and surveys with key informants and local level community members in three project locations on Tanzania's mainland and on the islands of Unguja and Pemba in Zanzibar. A thematic analysis approach is used to analyse the qualitative data while quantitative data is analysed in Stata (SE 15) to generate a descriptive analysis of the quantitative data.

Chapters five, six and seven present the major research themes highlighted by the research questions. Chapter 5 discusses questions 1 and 2. It discusses the processes and outcomes of the engagement of multi-level stakeholders in decision making on CCA processes that are structured to be country-owned. The manuscript for this chapter is under review in *Geoforum*. It has undergone two rounds of review. Chapter 1 is guided by questions 3 and 4. It investigates whether framings of adaptation by country owned projects aligns with framings by local level vulnerable communities. A version of this chapter is published in *Climate and Development*. Chapter 7 is guided by questions 5 and 6. It discusses whether the participation of local level actors in country owned projects generates actions that reflect local level priorities. A version of this chapter is published in the Journal of *Land Use Policy*. The three chapters adopt a multi-level approach to understanding country ownership, where actors, processes and outcomes are studies at the national, sub-national and local levels. Chapter eight presents the conclusion. It presents the main findings and frames them within broader literature on country ownership of climate change adaptation and climate change justice and equity. Chapter 2 presents a critical review of existing literature on country ownership.

# 2 Literature review

## 2.1 Introduction

The history of country ownership dates back to the late 20th century when ownership of development emerged within the development cooperation community as a concept that needed to be integrated into future policy. Country ownership was discussed in relation to the Millennium Development Goals (MDGs) and the Poverty Reduction Strategy Papers (PRSP) (Ghebreyesus, 2010; Gore, 2010a; Stewart & Wang, 2004). The MDGs were aimed at supporting LDCs to achieve specific development goals such as gender equality and empowerment of women (Sen & Mukherjee, 2014). The PRSPs were used to propel countries to different MDGs (Elkins et al., 2018). Country ownership has featured in subsequent international development and climate change policies such as the Sustainable Development Goals (SDGs) and UNFCCC agreements. Concepts of country ownership in climate change adaptation are recent but are informed by an understanding of country ownership in development. For example, in the UNFCCC, country ownership is achieved through ensuring that adaptation to climate change is aligned with national and local priorities and implements adaptation through leveraging existing country institutions (UNFCCC, 2017). The definition of country ownership that is used in this thesis is adopted from climate finance and policy literature.

Links between country ownership in adaptation and development emerge from the theoretical and practical links between adaptation and development in LDCs. Climate change risks will mostly affect LDC's key economic sectors like agriculture (Huq et al., 2004). Climate change adaptation in LDCs cannot be dissociated from development as vulnerability to climate change is driven by poverty and underdevelopment (Schipper, 2007). CCA that is solely informed perceptions of climate change are challenged in existing literature (Dorward et al., 2019), as risks may be driven by development deficits as opposed to climate change risks CCA requires a shift from development as usual to sustainable development which is pro-poor (Cannon & Müller-Mahn, 2010; King & Harrington, 2018). This involves reducing the effects of current and future anthropogenic climate change on development (Boyd et al., 2009). For example, collaborations between organisations in Mozambique promotes pro-poor ecosystem-based adaptation while also protecting ecosystems from coastal flooding and erosion (Quinn et al., 2018). LDC development institutions are leveraged to advance pro-poor development through the mainstreaming of adaption into development.

This chapter critically reviews literature on country ownership of adaptation to climate change and climate change finance and identifies research gaps. This review is based on literature on development cooperation, CCA and climate change finance. The review identifies two sets of limitations in existing literature –conceptual and methodological. Conceptual understandings of country ownership adopt a common agency model for country ownership, which is based on an understanding of ownership in development. This results in literature on country ownership of CCA lacking clarity of the *of what and for whom* of country ownership, as this is not informed by current concepts in adaptation. Methodologically, empirical evidence fixates on national level outcomes of actions that are thought to be country owned. This review proposes two solutions for these limitations: a) development of a

conceptual framework that links country ownership to climate justice and equity and b) the generation of empirical evidence from country ownership of CCA processes and outcomes within states, which extends the focus from national level actors to others at lower levels of governance.

## 2.2 Ownership in development

Flows of Official Development Assistance (ODA) from developed to developing countries emerged in the 1960s as an effort to support developing countries to achieve desired economic development objectives (Hynes & Scott, 2013). ODA was mostly allocated bilaterally. Donors determined their approaches to allocation, dispersion and monitoring of aid. For example, the amount and tools of aid allocation (i.e. grants versus loans) depended on the state of donor's economies (Kawai & Takagi, 2004). Developments within the ODA policy space have led to the emergence of concepts such as aid for trade and actions to increase the role of the private sector in ODA (Mawdsley, 2015). One key policy development is the need to increase ODA effectiveness and the legitimacy of actions that are funded by ODA. This effectiveness agenda has generated calls and justifications for ownership of ODA (Cranenburgh, 1998). The following sub-sections use effectiveness and legitimacy as entry points for discussing the different ways through which ownership in development is conceptualised and understood.

### 2.2.1 Effectiveness and legitimacy of development cooperation

Effectiveness and legitimacy concepts have guided development cooperation over the past half century. These are interdependent (Kindornay & Samy, 2013). Their definitions (and justifications) are linked to how aid is conceptualised in development cooperation policy and literature. Development literature considers aid as a treatment given to LDCs to generate growth (Doucouliagos & Paldam, 2008). The link between aid effectiveness and growth emerges from economic theories of development. Neoclassical growth models conceptualise that aid disbursement to LDCs enables investments and capital accumulation which results in micro- and macro-economic growth (Burnside & Dollar, 2000; Hansen & Tarp, 2000). In this context, aid is considered to only generate economically quantifiable returns. Other development literature consider aid as linked to poverty reduction in LDCs, which requires more than economic growth (Bourguignon & Sundberg, 2007; Mosley et al., 2004). This is achieved through institutional and policy reforms which generate benefits for both aid donors and recipients. For example, the Aid for Trade approach to development aid is embedded in improved trade regulations and policies which contribute towards trade integration but also enables donor countries to access good and services at competitive market rates (Higgins & Prowse, 2010). This indicates how the goal of development aid has previously been understood differently.

Literature on whether aid generates economic growth is divided into three groups based on main conclusions of these literature. First, there are direct and positive links between foreign aid and growth (Rajan & Subramanian, 2008); Second, the links between aid and growth depend on pre-existing conditions e.g. the ability of savings to generate growth or the presence of a good policy environment (Arndt et al., 2015b; Burnside & Dollar, 2000; Hansen & Tarp, 2000; Mekasha & Tarp, 2013). Achieving effectiveness and legitimacy requires appropriate recipient country and donor institutions

that create incentives for reform (Tawiah et al., 2019; Wagner, 2014). The (potential) reforms and donor's contextual conditions determine the approaches used to achieve aid effectiveness (Dietrich, 2015). Assessments that find none or negative effects of aid on both human and economic development attribute this to the misalignment between development country needs and donor priorities, and limited incentives for LDCs to engage in policy reforms (Williamson, 2010).Third, some literature find that it is difficult to understand the links between foreign aid and economic growth due to the noise along the causality chain, meaning that the extent to which aid is effective varies depending on the level at which it is defined (Bourguignon & Sundberg, 2007). Additionally, other factors which may contribute to effectiveness may not be captured in these analyses. This diversity in findings leads to questions about why aid effectiveness is still pursued.

Legitimacy is a core goal for development, especially in post-war contexts. Legitimacy relates to justification for authority, which can be obtained if actions follow the correct procedure or if they generate outcomes that are beneficial to a certain group (Best, 2007). International organisations that transfer funds to LDCs have had problems acquiring the required legitimacy in order to achieve their set goals. For example, the IMF's legitimacy within the international community came under question when it failed to generate the required poverty reductions (Best, 2007). Contestations for legitimacy occur between international and intra-national actors and processes (Sending, 2009) and within intra-national boundaries (Barnes, 2017). Whatever kind of legitimacy that is achieved is considered important for development

Ownership is presented in many policy documents as a solution to the effectiveness and legitimacy challenges that are experienced in development cooperation (e.g. see Leonardsson and Rudd (2015, p. 828). For example, local ownership is used by external actors operating in post-war contexts to achieve legitimacy of actions (Narten, 2008). Literature on ownership has advanced in two waves. The first was informed by local level development actions emerged in the late 20$^{th}$ century and emphasised local ownership. The second wave of literature on ownership was driven by international policy and placed emphasis on country ownership. The following sub-sections (2.2.2 and 2.2.3) discuss these concepts of ownership.

### 2.2.2 Local ownership in development cooperation

The concept of local ownership of development in LDCs emerged in the 1990s. It was informed by similar concepts of local ownership in the global North (e.g. Bracht et al. (1994); Clapham et al. (1987)). Local ownership of development was premised on the need to ensure that development actions recognised local actors as independent but also as having agency in their local economic development (DeFilippis, 1999). The general idea informing local ownership is the need to ensure that local voices and priorities emerge during development processes. This concept is built on post-colonial concepts of development, which emphasise on sovereignty as a determinant of agency. It is informed by 'localised factors' such as 'self-determination, human rights,…political representation, cultural property, [and] indigenous groups' (Richmond, 2012, p. 356). Local ownership is linked to capacity development for

actors who are the target of local ownership (Hope, 2009). The direction of causality is however contested i.e does ownership generate development or vice versa?

Literature on local ownership is divided into two groups, based on who is considered the subject of the ownership process. In the first group, local ownership is by local actors at the community level (Richmond, 2012). The absence of local ownership is considered to be a major contributing factor to the failure of local development interventions (Zanotti et al., 2016). Local ownership is used in two ways – a) donor-facing, to criticise paternalistic development interventions and b) to generate projects that are locally informed and driven (Reich, 2006). Early 20$^{th}$C development literature emphasised the need for 'new professionalism', where the needs of the rural poor were considered more important than those of external actors (Chambers, 1995, p. 198). Ownership by local actors is achieved through a promise of participation by local actors, the development of local institutions and the promise of transfer of power to local structures (Narten, 2008). This enables 'local control' and 'relevance to local needs' (Robinson & Gfeller, 1997, p. 295). The definition of local and identification of spatial boundaries for the 'local' is however left to subjectivity i.e. lacks clarity and therefore dependent on who makes the decision

The second group of literature speaks of local ownership but considers all intra-state actors to be local. Development literature notes that 'the idea of local ownership is straightforward: whatever the policy, it should be formulated by locals or nationals, reflect the preferences of locals or nationals, and be put into work through local or national institutions –in partnership with international partners' (de Carvalho et al., 2019, p. 191). Due to the heterogeneity of local actors, clarity on whose ownership should be prioritised in development projects is limited. For example, questions relate to whether ownership is by local level communities, national or political elites (Hellmüller, 2012; Narten, 2008).

In both groups of literature, a distinction between internal and external actors and processes exists. External actors are expected to work with local actors to build local ownership and therefore take a facilitative role to development (Ball, 2005). Externally-driven and locally implemented actions lack local ownership (Reich, 2006). Such actions generate non-socially and economically transformative outcomes from locally-owned interventions which involves 'having developing states do what the international community would have liked them to do without having to tell them to do so' (de Carvalho et al., 2019, p. 184). Presence of external actors generates locally-driven (led by local actors but decisions fail to reflect local priorities) as opposed to locally-owned solutions (Zanotti et al., 2016). The distinction between the internal and external determines ownership.

However, sovereignty as a practical concept is contested, specifically on who owns rights to political authority (de Carvalho et al., 2019). Boundaries of sovereignty can become blurred (Plank, 1993) and the identification of internal and external actors likely to be subjective. This makes local ownership a politically charged term (Arensman et al., 2017). The implementation of locally owned projects becomes characterised by 'constant negotiation between different spheres of authority, multiple actors, allegiances, affiliations and interests', with tensions between local and international needs, shifting boundaries of who is local or not (de Carvalho et al., 2019, p. 191). This has prompted a shift from local ownership to a specific focus on countries whose physical national boundaries are distinct.

### 2.2.3 Country ownership of development cooperation

Country ownership is the most recent concept of ownership to emerge in development cooperation. This concept emerged in the mid 2000s and was driven by an international policy shift that emphasised the need for countries to play more significant roles in development. Specifically, the Paris Declaration on Aid Effectiveness (PDAE, 2005) and the Accra Agenda for Action (AAA, 2008) were the initial policy tools that sought to formalise country ownership by ensuring that delivery of development finance by donors was in alignment with developing country priorities (Dornan, 2017; OECD, n.d.). The Busan Agreement reinforced the principles outlined in the PDAE and AAA (see OECD (2011)).

Under the PDAE and AAA, country ownership is achieved through a number of ways including direct budget support to developing country priority sectors, policy support and a shift from project-based support to programmatic support (Prizzon et al., 2017). Budgetary support by donors enables finance management by LDC actors as opposed to by external actors (Herfkens & Bains, 2015). This is expected to result in better national level accountability and spending flexibility, as money can be re-allocated to urgent sectoral needs (Herfkens & Bains, 2015). Development finance aimed at supporting country owned development is also required to have minimal or no donor conditionality. Only priority development areas presented in national development policies are funded, as these are assumed to have emerged from inclusive stakeholder processes within states. The formalisation of country ownership in the PDAE and AAA has generated a sustained high demand for country owned aid by LDCs (Davies & Pickering, 2017). This means that country ownership is now a key principle in the allocation of development aid and is highly desired by LDCs.

The assumptions linked to the conceptual understanding of country ownership is challenged by some development literature. Country ownership of development is considered to emerge from government (as opposed to donor) leadership on development. Two assumptions arise –a) that governments are democratic and have the desire to address the needs of their populations b) that donor states disburse development aid in order to achieve development-based agendas without the desire to achieve self-interests (Booth, 2012; Dijkstra, 2011). These concepts also assume that national development plans emerge from inclusive state processes (Unwin, 2004; Vogus & Graff, 2015). These assumptions are idealistic and apolitical (Whitfield & Fraser, 2009).

Development cooperation in reality is political. It is characterised by struggles between donor and recipient states for control over development processes and outcomes (Dijkstra, 2011). Country ownership may not be an immediate desire for donors. Instead, country ownership may be used as a weapon against allocation of aid and for creating conditions for LDCs. For example, governance is recognised in policy literature as a key determinant of country ownership. Donors use governance reforms as a condition for the allocation of aid so as to drive meaningful governance changes in LDCs (Hughes & Hutchison, 2012). This is referred to as ‘new conditionality’ of aid (Dornan, 2017; Mosley et al., 2004). While this provides motivation for governance reforms in LDCs, the country ownership of these reforms is compromised. The sustainability of these reforms (after the receipt of aid) may not be

guaranteed. Consequently, countries that are unable to generate meaningful governance reforms do not get opportunities to engage in country owned development.

The politics of country ownership is exhibited through the persistence of conditionality in development cooperation. As noted by Selbervik (1999, p. 17) 'aid has never been given unconditionally'. Conditionality, whether new or old, does not improve effectiveness and is counterproductive to ownership (Doucouliagos & Paldam, 2010). Conditionality is sustained by the power differences that emerge from the internal-external divide and the donor-recipient relationships (Zanotti et al., 2016). This sustains donor control in development (Abrahamsen, 2004; Bidaurratzaga-Aurre & Colom-Jaén, 2012; Goldberg & Bryant, 2012; Kragelund, 2012). Policy reforms emerging from the new conditionality are superficial and represent 'isomorphic mimicry', where governments implement reforms that generate assurance of external financing without the desired institutional transformations (Andrews et al., 2013, p. 235). Policy reforms advocated for by donors may sometimes be agreeable but not suitable due to their failure to fit in existing contexts (Centre for Policy Dialogue, 2005; Quibria & Islam, 2015). Countries receiving aid guided by new conditionality tools like results-based management are likely to prioritise donor-driven agendas (Sjöstedt, 2013). This means that international policy reforms for country ownership may be unable to deliver country ownership in practice.

Policy recommendations on achieving ownership question the assumptions informing country ownership and emphasise the need to address power asymmetries between internal and external actors. For example, focus should be on donor beneficiary power and relationships instead of focusing on donor and beneficiary distinctions and a redefinition of the identify of local actors, what they will/should own and who decides ownership (Reich, 2006). Consequently, actions are more aligned with the original intent of development cooperation where 'aid is given to LDCs on the assumption that it will help those most in need; contributing to their development in a sustainable way' Riddell (2014, p. 1). The extent to which these recommendations are implemented is unknown.

In summary, the concepts of country and local ownership in development cooperation have taken external-internal dimensions, where lines are drawn along state boarders in accordance with sovereignty intentions. The result is a donor-recipient and external-internal distinctions which overlook the power asymmetries between different groups of actors between and within states. Instead, there is a generalisation of the identity of local or country actors, an emergence of a depoliticization of development processes within states and the misrepresentation of ownership within states. The following sub-section discusses how country ownership is presented in climate change adaptation while the rest of this chapter analyses whether the gaps in country and local ownership of development cooperation are still evident in country ownership of adaptation to climate change.

## 2.3 Country and local ownership of climate change adaptation

Ownership is reflected in tools and approaches used to support multilateral climate change action. Two main themes emerge from literature of country ownership of adaptation to climate change: a) ownership of climate change adaptation features interlinked concepts of local and country ownership, and b)

assessments of country ownership of development cooperation and CCA find absence of country ownership. This sub-section presents these themes.

The concern with effectiveness in climate finance is equally important as in development cooperation. In climate change adaptation and mitigation, effectiveness relates to ensuring linkages between international policies and local level actions and the ability of local actions to contribute towards global goals (Forstater et al., 2013; Makondo & Thomas, 2018; Pinsky et al., 2019). In mitigation, effectiveness is linked to whether tools such as carbon markets generate reductions in GHG emissions (Purdon, 2014; Steckel et al., 2017). For example, effective mitigation is achieved when carbon pricing is used to eliminate fossil fuel subsidies and discourage emissions (Steckel et al., 2017).

Adaptation policy literature is interested in how adaptation plans can be more effective (Makondo & Thomas, 2018; Smit & Pilifosova, 2001). Effective adaptation is assessed against whether it delivers on either vulnerability reduction, cost-efficiency and cost-benefits produced from actions (Stadelmann et al., 2015). Assumptions about the outcomes of efficient adaptation are made e.g. about the value placed on non-market adaptation outcomes in cost-benefit approaches (Kull et al., 2013). Assessments of effectiveness of adaptation use vulnerability reduction as a key measure (Barrett, 2013a; Webb et al., 2019). For example, these focus on identification of the scales at which adaptation has the greatest vulnerability reduction outcome (Kotchen & Costello, 2018), the combination of funding sources that generate better outcomes (Kotchen & Negi, 2016) and how the involvement of different intra-state actors affects approaches to climate change adaptation and mitigation (Skovgaard, 2017). This demonstrates the strong links between climate finance effectiveness and vulnerability.

Country ownership is one of the determinants of effective climate finance and climate change policies (UNFCCC, 2019a). Country ownership is achieved when multilateral climate finance engages with national, regional and intra-state actors to channel funds to LDCs in need of climate finance. Country ownership of adaptation emerges through allocation of finance to developing country governments working with intra-state stakeholders and building capacity of intra-state stakeholders (see section 1.2). This enables multilateral financial and technology support to LDCs to address the adaptation needs of LDCs. Local ownership is expected to guide the allocation of multilateral climate finance. While local ownership means alignment with the subsidiarity principle (Schalatek & Bird, 2011). It is achieved when decisions about allocated finance and development of policy tools is made at the local level. Local ownership also occurs through 'transparency and accountability' of climate finance mechanisms to LDC citizenries, which enables 'public oversight' of adaptation funding and projects (Schalatek, 2010, pp. 51,54). These are linked to principles of country ownership in development, which is reflected in the PDAE and AAA.

The concepts of country and local ownership are reflected in the policies and approaches by the UNFCCC and its finance mechanisms to support country ownership of CCA in LDCs i.e. national communications to the UNFCCC, National Adaptation Plans of Action (NAPAs), National Adaptation Plans (NAPs) and the (Intended) Nationally Determined Contributions ((I)NDCs) (Stringer et al., 2009). NAPAs and NAPs and (I)NDCs highlight countries' adaptation and mitigation priorities (Kissinger et

al., 2013). The UNFCCC provides financial support towards adaptation policy development in LDCs (Huq & Burton, 2003). UNFCCC guidelines for policy development underscore principles such as participatory stakeholder engagement (UNFCCC, 2012b). UNFCCC mechanisms support the establishment of Accredited Entities (AEs) and National Designated Authorities (NDAs) through its financial instruments(Masullo et al., 2015). The GEF also encourages its focal points to communicate information about their projects to the public (GEF, 1998). These seek to increase national control over adaptation funding and country and local ownership over initiatives

Studies find a lack of country ownership in multilateral climate finance. Critique is based on the ability of country ownership tools to involve stakeholders and support the reduction of vulnerabilities. In Burkina Faso, NAPAs were unable incorporate the needs of local level vulnerable populations (Kalame et al., 2011). While NAPAs were expected to be informed by local and national stakeholders, some research shows that local stakeholders were superficially consulted during policy development but did not influence the policy decisions (Ojha et al., 2016). The NAPAs are also identified as utopic technocratic, apolitical and unable to address the underlying root causes of vulnerability (England et al., 2018; Ford et al., 2015; Nagoda, 2015). National climate change policies (e.g. INDCs) have no legal requirements to be implement (Hermwille, 2016). The accreditation of national institutions by the GCF has not translated into allocation of funding to these institutions (Fonta et al., 2018). This suggests that the difference between intended and actual country ownership of CCA is dependent on whether policies and tools are implemented to generate vulnerability reduction outcomes.

The gaps in country ownership can be attributed to the development-based governance of country ownership in climate change. This emerges from the reliance on development-based institutions and approaches to stakeholder engagement (Colenbrander et al., 2018). Accredited institutions (national and international) are institutions that have previously been used to implement development in LDCs (Scoville-Simonds, 2017). These institutions have historically been unable to effectively challenge existing political structures in LDCs and address local level inequalities (Nagoda, 2015). Stakeholder engagement, which is critical to country ownership, is poorly understood. Broad terms are used to define these stakeholders. International guidelines on stakeholder engagement are unclear (Remling & Persson, 2015). For example, the GCF encourages its programs to conduct 'consultation with *relevant* national, local, community level, and private sector stakeholders' (GCF, 2017, p. 3) (emphasis added). There is limited clarity on who these actors should be. Instead, accredited institutions are expected to follow their own internal policies and procedures in identifying and engaging stakeholders. This suggests that ownership in climate change adaptation is generally informed by development principles.

In summary, this section has presented a review of literature on ownership in development cooperation and climate change adaptation. Studies identify country ownership gaps, with LDC policies and practices being technocratic and apolitical. This is attributed to the use of development-based institutions as the drivers of country ownership. The following section presents limitations in literature on country ownership of adaptation that are identified in this review.

## 2.4 Limitations in existing literature on country ownership of CCA

Two limitations are identified in existing literature on country ownership in adaptation. These limitations feature in both country ownership of adaptation and development cooperation. The first limitation is a weak conceptual understanding *country ownership of what and for whom* of country ownership in adaptation, which emerges from the use of common agency models in adaptation to climate change and assumptions associated with country ownership. The second limitation is weak methodological approaches, which focus on national level outcomes while overlooking processes and outcomes at other levels of governance within states. These limitations are discussed in the rest of this section.

### 2.4.1 Weak conceptual linkages between country ownership of adaptation and CCA

Existing literature on country ownership exhibits a limited understanding of country ownership for adaptation. Development concepts inform country ownership in adaptation principles. Most literature on country ownership in adaptation is policy based, meaning that it engages with how climate change adaptation policy should achieve country ownership but does not map out the conceptual principles and justifications for doing so. Despite the theoretical clarity on the goal of country ownership—to improve effectiveness of climate change adaptation and development finance—there is very limited number research presenting the conceptual framings that inform country ownership in adaptation. Consequently, country ownership of adaptation is not based on current conceptual thinking in CCA, but is informed by development concepts. This generates limited clarity on *country ownership of what and for whom* in CCA (Hasselskog & Schierenbeck, 2017; OECD, n.d-a). This is discussed in the following paragraphs.

First, the *ownership for whom* remains focused on national level government actors. Most existing literature on country ownership of climate finance refer to ownership *by* national governments (Ayers et al., 2014; Rai et al., 2014; Shankland & Chambote, 2011). This inference is reflected in development literature (e.g. De Renzio et al. (2008)). Country ownership focuses on the role of 'executive authority' within states with budgetary support restricted to development sectors that are controlled by these institutions (Deutscher & Fyson, 2008, p. 18). National governments are the basis for an operational definition of country ownership. Development literature makes a distinction is made between joint ownership and country ownership. Joint ownership is distinguished from country ownership in development. The former emerges from a coordination between select government ministries in driving the development agenda as opposed to a government-wide contribution to defining development priorities (Dijkstra, 2011; Dornan, 2017). This distinction is inadequately made in adaptation literature.

The lack of clarity on the whom of country ownership is also reflected in the broad understanding of the meaning of 'country'. What is meant by 'country' can vary from a single individual to a government institution (Buiter, 2007). Very few authors e.g. Osei (2010) in development and in adaptation (Dombrowski, 2010) consider whether country ownership actually includes lower levels of governance, including the local level and civil society. The focus on non-national government intra-state actors who are linked to country ownership of climate change finance is limited.

Second, the *ownership of what* is unclear in adaptation literature (e.g. Gomez-Echeverri (2013); Horstmann and Abeysinghe (2011)). Ownership of CCA is framed as a) commitment to policy process and outcomes irrespective of how they were arrived at and b) control of how policy and policy outcomes are generated (Whitfield & Fraser, 2009). This is reflected in development literature, where ownership can range from a country playing a significant role in the design and/or implementation of policy or being informed about this or agreeing with the objectives of the programme being designed or implemented (Buiter, 2007). Country ownership (in both development and CCA) is associated with the policy space i.e. the ability of national government institutions to influence externally funded national policy agendas (Best, 2007; Sridhar, 2009). Yet, policy processes as non-linear where policy design and implementation may fail to occur or can occur concurrently which makes it difficult to identify these distinct stages. Appropriate levels of influence of these policy processes are also not made explicit. This means that decisions about how policy design and implementation is done and the desired levels of influence are likely to be contextually determined and based on value judgement. This is likely to disadvantage vulnerable groups.

The limited clarity on *country ownership of what and for whom* can be traced back to the original definitions of country ownership and aid effectiveness in development cooperation policy. The PDAE states that 'partner countries commit to exercise leadership in developing and implementing their national development strategies through broad consultative processes' and to 'take the lead in co-ordinating aid at all levels in conjunction with other development resources in dialogue with donors and encouraging the participation of civil society and the private sector'(OECD, n.d-b, p. 3). Indicators for country ownership in the declaration are 'number of clear strategic priorities' that are 'linked to a medium term expenditure framework and reflected in annual budgets' (OECD, n.d-b, p. 9). These lack clear guidance on the content of these national strategies or who should be involved in developing them.

Underlying the conception of country ownership and bias towards national government ownership is the common agency model. Single actors are responsible for decision-making and governance while all other actors compete to influence the actions of these single agent (Bergemann & Välimäki, 2003; Dixit et al., 1997). Interest groups influence governments through, for example, lobbying or veto playing (Arpac, 2007). Interest groups create opposition to government actions (Paloni & Zanardi, 2006). This assumes 'trust in domestic institutions, the effectiveness of political structures and whether the government negotiating on behalf of its citizens has sufficient support to speak for a fair majority' (Khan & Sharma, 2001, p. 15). Based on this model, country ownership emerges as a 'normative, highly [a]political term' where it is assumed that interest differences and contestations between actors is absent (Woll, 2006, p. 231). This covers up the power asymmetries between external and internal actors (Reich, 2006). The politics of multi-level climate change governance are ignored.

Local level vulnerability is central to climate change adaptation. Climate change causes local level impacts which affect local vulnerable populations (Fünfgeld & McEvoy, 2014). Adaptation actions are evaluated based on whether they address the vulnerability of those who are vulnerable to climate change (Pelling et al., 2015). While local level actors are critical in enabling local level adaptation that addresses

local vulnerabilities (Fraser et al., 2011; Klenk et al., 2015), adaptation should also involve multilevel adaptation stakeholders and institutions (Eriksen et al., 2011). These intra-state processes are political and characterised by power struggles between actors (Eriksen et al., 2015; Nagoda & Nightingale, 2017; Nightingale, 2017).

The recognition of these power structures and inequalities should be accompanied by approaches that challenge inequalities to enable vulnerable groups to influence decision-making. For example, this can be achieved through approaches that recognise local knowledge (Eriksen et al., 2015; Vogel et al., 2012) and the capacity of institutions at different levels to support local level adaptation (Shi et al., 2016). This understanding of the links between local level vulnerability and adaptation should underscore conceptualisation of country ownership of adaptation, which in turn reflects concern for intra-state country ownership processes and outcomes.

The gap between conceptual country ownership and vulnerability-based conceptualisation of CCA prevents the operationalisation of country ownership. Consequently, 'ownership' emerges as 'a particularly slippery concept, which lends itself better to policy than empirical study' (Arensman et al., 2017, p. 2), which makes it better suited as a policy ideal as opposed to a concrete project objective (Reich, 2006). Development-based country ownership remains 'an ostensibly insubstantial concept' that prevents both developing country national actors and donor countries from being accountable for the effectiveness of aid (Esser, 2014). Its use 'lacks precision concerning its target' and has become 'a convenient technocratic argument that neither calls into question the design of the programme nor takes into consideration the conditions for its implementation' (Spanou, 2016, p. 20). Consequently, 'country ownership' has become a buzzword that aims to demonstrate the structural changes that accompany delivery and use of climate finance to and in LDCs (Goldberg & Bryant, 2012). This means that while country ownership can be used to define policy through application of the normative principles of ownership, its operationalisation and measurement can be challenging.

In summary, this subsection has highlighted one gap in literature on country ownership of CCA – the weak conceptual linkages between country ownership in CCA and CCA. Conceptual understandings of country ownership do not reflect the politics of CCA. As a result, there is a lack of clarity on *country ownership of what and by whom*. The following sub-section discusses a second limitation in existing literature, which relates to the methodological approaches used to understand country ownership.

### 2.4.2 Methodological limitations

Existing literature on country ownership of climate finance also exhibits two methodological limitations in how country ownership is evaluated. These are: a) country specific studies on country ownership of adaptation are scarce or missing, with most existing empirical assessments of country ownership focusing on development; b) there is a tendency (by existing empirical assessments of country ownership of development cooperation) to focus on single levels i.e. the national level. Hence, empirical assessments of country ownership of development cooperation focus on outcomes of country ownership as opposed to intra-state multi-level actors and processes. These assessments cannot be used to judge ownership of climate change adaptation finance. These are discussed in the following paragraphs.

First, even though country ownership is embedded in UNFCCC and multilateral climate finance mechanisms policies and approaches, there have been limited empirical assessments of country ownership processes and outcomes from interventions funded by these mechanisms. Most existing literature on country ownership of climate finance is policy-based. These justify the integration of country ownership into international climate change policy structures (Mathy & Blanchard, 2016; Mitchell et al., 2008). They tangentially engage with country ownership within countries (Ayers et al., 2014), but do not generate any empirical evidence on intra-state country ownership. The exception is a very recent evaluation of country ownership by the Independent Evaluation Unit (IEU) of the GCF, which conducted a meta-analysis of country ownership (IEU, 2019b). Empirical evidence on how country ownership works in different contexts is needed.

Second, existing approaches to evaluating country ownership (of development cooperation) are biased towards national level actors. Most empirical assessments focus on the relationships between national level structures and donors e.g. the extent to which these structures have developed partnerships with external actors, the level of accountability by national structures, recipient capacities and their commitment and responsibility to the cause (e.g. Brown (2017); Watson-Grant et al. (2017)). Country ownership assessments evaluate whether donors institutions have institutional structures to adequately engage with national or international stakeholders (IEU, 2019b) or whether national actors have control over policy design and implementation (De Renzio et al., 2008). Data on evaluation of country ownership is obtained from the national level (Hayman, 2009). These overlook the emphasis within adaptation literature on other levels of adaption (Archer et al., 2014; Fünfgeld, 2015; Vedeld et al., 2016). These do not consider the dynamics of country ownership within states.

Empirical assessment of country ownership in development cooperation emphasise on the outcomes of country ownership rather than process and outcomes. By fixating on generating 'a measurable, monitorable and…clearly defined notion of country ownership…[such assessments constrain the] usefulness [of country ownership] as an operational concept' (Arpac, 2007, p. 50). This means that country ownership outcomes are an end goal as opposed to a means of enabling CCA in LDCs. For example, national capacity development is important for country ownership (Winkler & Dubash, 2016). However, an outcome-based focus of capacity development only identifies the number of actors whose capacity is developed and overlooks approaches to capacity development and the types and value of capacities developed which are critical for achievement of the Paris Agreement (Khan et al., 2019a). Adaptation outcomes at the national level, even though significant, cannot be representative of the cumulative multilevel processes that contribute towards the outcome.

By focussing on single level outcomes of country ownership, empirical assessments of country ownership overlook the scalar politics of adaptation and the implications of the multi-level nature of climate change. For example, these assessments overlook the processes through which CCA policies evolve across the national and other levels (Westerhoff et al., 2016). Adaptation responses to climate change are shaped by cross-level power inequalities, resulting in some actors having comparatively more control over policy design and implementation (Di Gregorio et al., 2019). This literature also

ignores the scalar politics of climate change adaptation, which focuses on the levels at which adaptation decision making and implementation occurs. Due to the priority given to single levels and on national government ownership, empirical assessments overlook other forms of ownership (e.g. local ownership) that may be present in CCA (Gautier & Ridde, 2017).

Development and adaptation in LDCs are linked. However, empirical findings from country ownership of development cooperation cannot be used to judge country ownership of adaptation. This is due to the differences in operational structures of country ownership (not country ownership principles) between official development assistance and UNFCCC-based multilateral climate finance. For example, structural requirements such as the demonstration of fiduciary standards and direct access are not part of country owned structures of development finance. Sources of development and climate change finance are also separate, especially when considering country ownership of multilateral climate change finance. This requires that new empirical evidence on country ownership of adaptation be generated.

In summary, literature on country ownership exhibits methodological limitations due to the focus on single levels of analysis (national level), resulting in a focus on national level outcomes as opposed to the multilevel processes that contribute toward these outcomes. The following section presents proposed solutions for addressing these limitations in literature.

## 2.5 Proposed solutions

Section 1.3 has identified is the bias towards a national level definition of country ownership and analysis of outcomes from country ownership and the lack of clear conceptual linkages between country ownership and climate justice and equity. This section proposes that a solution for addressing these limitations in literature would be to: a) develop conceptual framework for the linkages between country ownership, intra-state adaptation processes and climate justice and equitable adaption; b) empirical assessments focus on intra-state actors and processes that generate national level-country ownership outcomes. In doing so, research can generate an operational definition of country ownership, which acknowledges the dynamic nature of ownership and the heterogeneity of actor interests present in climate change adaptation (Boughton & Mourmouras, 2002). These proposed solutions are discussed in the following sub-sections.

### 2.5.1 Conceptual framework for intra-state equity and country ownership

This thesis proposes a conceptual understanding of country ownership of climate change adaptation that matches the conceptual developments in adaptation literature. This would frame country ownership as a political process, thereby recognising the power struggles within country owned processes which generates winners and losers (Pelling, 2010). The current climate change landscape is best described as a ‘regime complex’, made up of actors and groups with different interests (Abbott, 2012; Keohane & Victor, 2011). A diversity of interests exists at different scales of governance, including within states. A conceptual framework for intra-state equity outcomes of country ownership expands the conceptualisation of country ownership to encompass intra-state adaptation actors, processes and outcomes, which is in alignment with current understandings of the CCA landscape.

The proposed conceptual framework would also consider the role of politics, power and interest in determining adaptation processes and outcomes within country owned interventions. A focus on power and influence would be in line with research on local and country ownership. This underscores that power inequalities between different actors in development and adaptation processes, determines extent of country ownership. The proposed conceptual framework would identify conceptual linkages between intra-state structures, power and influence by different groups of actors involved in climate change adaptation interventions intended to be country owned. This framework can therefore be used to generate a better understanding of *country ownership of what and for whom* that is in alignment with the goal of climate change adaptation.

### 2.5.2 Empirical evidence of intra-state equity outcomes from county owned interventions

Analyses of country ownership need to go beyond the national level outcomes and include the processes and outcomes at other levels within states. This would provide empirical evidence on *the extent of country ownership* in climate change adaptation processes and outcomes within states. Ownership should go beyond national actors and processes to include sub-national and local level processes and actors. Assessments of ownership should generate an understanding of actual costs and benefits of country ownership as opposed to perceived costs and benefits which are captured when only the national level was used (Spanou, 2016). This empirical evidence can further inform adaptation policy within states and at the international level. This offers the opportunity to address the methodological gap in literature on country ownership of CCA, as these assessments would focus on intra-state processes and outcomes from adaptation.

This thesis proposes an empirical approach to assessing country ownership that addresses the methodological limitations in existing literature where the focus has mostly been on national level outcomes from country owned processes. The proposed approach takes a holistic view of country ownership. Country ownership is treated as both an outcome and as a process (Keijzer et al., 2018). By incorporating intra-state processes and outcomes into the analysis of country ownership, assessments consider political economy of country ownership and avoid making assumptions about what enables or undermines country ownership (Boughton & Mourmouras, 2002). This also acknowledges the multiplicity of country ownership e.g. when actors own segments of an adaptation process.

The proposed empirical assessment builds on existing literature on the politics of and multilevel adaptation to climate change. For example, it would make a distinction between government ownership and national ownership (Woll, 2006). This aligns with the goal of country ownership of engaging multiple national and international actors to support climate change adaptation by being 'broad-based and inclusive, decentralised…[and] representative' and engaging both government and civil society actors, private sector and local communities (Eberlei, 2001). Country ownership would therefore be assessed based on the extent to which they are citizen-centric, i.e. '(i) the right of the country representatives to be heard in the process of diagnosis and program design…(ii) the freedom and ability of the country to choose the programme to be implemented, without coercion' (Johnson, 2005, p. 3). Agency of different actors in adaptation within states becomes a core component of country ownership.

The interest is on processes and outcomes emerging from interventions guided by country ownership principles. Participation of intra-state actors in adaptation decision making and the extent to which their adaptation priorities are reflected in adaptation processes would be a key determinant of country owned processes (Johnson, 2005). This shifts an assessment of country ownership from finding out whether processes and outcomes are 'government-based to multi-stakeholder ownership' where actors from different levels of governance and from different sectors contribute towards development and adaptation planning and implementation (Keijzer et al., 2018, p. 59).

A number of empirical assessments have attempted to capture these intra-state and multi-stakeholder aspects of country ownership e.g. Hasselskog (2018); Hasselskog and Schierenbeck (2015); Shankland and Chambote (2011); Tumusiime and Cohen (2017). However, factors such as power, resources, interests and culture are inadequately captured as key determinants of intra-state country ownership. Additionally, these assessments do not explicitly focus on UNFCCC mechanism-funded CCA where country ownership principles have been institutionalised.

Options for an empirical study would be projects funded by the GEF, AF or the GCF. Intra-state analyses would focus on how actors from different levels of governance are engaged in country owned projects, what cross-level outcomes emerge from these projects and whether and how this has an impact on local level vulnerability to climate change. This empirical evidence can contribute towards highlighting how existing gap on the implementation of public policies and climate change adaptation policies can be achieved (Barrett, 2004).

In summary, this section has presented two solutions to addressing the limitations in existing literature on country ownership. The first is an empirical framework for understanding intra-state equity in country ownership of climate change adaptation. The framework would adopt a power-based understanding of adaptation that is intended to be country owned.

## 2.6 Conclusion

This chapter has critically analysed literature on country ownership of climate change adaptation and development cooperation. It has identified several limitations in existing literature. It has mapped out the conceptual underpinnings of country ownership by linking it to effectiveness of development cooperation and climate finance, which are defined in the PDAE, AAA and the Busan Agreement. These principles are embedded in existing international development frameworks (such as the SDGs) and have informed understandings of country ownership of climate change.

Existing literature on country ownership of CCA exhibits conceptual and methodological limitations. Conceptually, there are weak linkages between conceptual understanding of country ownership in adaptation and the well-developed conceptual thinking on CCA. Existing literature on country ownership in adaptation is policy based and makes a case for consideration of country ownership in adaptation policy. However, the literature does not engage with the conceptual basis informing these policy debates. Consequently, there is limited clarity on country ownership of what and for whom.

A methodological limitation stems from a fixation on single levels and national government-based understanding country ownership. These ignore other levels of governance and the processes that emerge from these levels. The limited empirical evidence in literature presents country ownership as an end-goal as opposed to an enabling condition for local level vulnerability reduction. Due to these limitations, existing literature on country ownership overlooks the role of multi-scalar politics of climate change adaptation in determining country ownership. The contribution of intra-state adaptation processes in enabling or preventing country ownership is overlooked. Country ownership is depoliticised and devoid of power contestations and implications for local level groups who are vulnerable to climate change.

This review proposes that these limitations be addressed in two ways. The first is developing a conceptual framework for intra-state equity outcomes of county ownership, which would place emphasis on the role of multi-scalar politics of climate change adaptation in determining country ownership and climate justice and equity outcomes. Second, the review proposes an intra-state empirical assessment to generate evidence of the dynamics of country ownership within states. This would focus on processes that are facilitated under the UNFCCC climate finance mechanisms as these are intentionally designed to reflect country ownership principles. This thesis attempts to address these limitations in existing literature by conducting research on intra-state processes that are enabled by country ownership tools and approaches in multilateral CCA. Chapter 3 presents the conceptual framework for understanding intra-state equity in county owned climate change adaptation processes.

# 3 Conceptual framework

## 3.1 Introduction

This thesis seeks to understand the intra-state equity implications of country ownership of adaptation to climate change. This chapter presents a conceptual framework that will be used in this thesis to understand the intra-state equity implications of country ownership of climate change to adaptation. The framework combines concepts of power and influence, social exchange, local level participation and voice and a framings approach. Section 3.2 presents a working definition of equity that will be used in this chapter and applied to the rest of the thesis. Sections 3.3 and 3.4 introduce the concepts of power and influence and apply this to different aspects of multi-level adaptation. Structure and agency are presented as critical in determining influence in adaptation. Section 3.5 shows that normative power and influence are manifest through resource exchanges and participation and voice in decision making, which results in specific framings of risk being adopted in adaptation projects. Section 3.5 discusses how equitable adaptation emerges. Empowerment is presented as central to equitable adaptation, where structures and the agency of those who are vulnerable are shifted to enable vulnerable groups to influence adaptation decision making.

## 3.2 A working definition of equity

Equity relates to social justice and defined as 'the way that social and political institutions distribute both goods and bads among constituent members' (Vanderheiden, 2008, p. 47). 'Just' systems are expected to treat people equitably (McDermott et al., 2013). Equity highlights the social choices and trade-offs involved in determining the object of equity and who it should be shared amongst (Shrestha, 2005). Equity determines equivalence of process and outcomes. Equivalence of outcomes is based on distributive justice, which determines how benefits (and risks) associated with CCA are allocated (Fraser, 2009; Grasso, 2010). At the international and local levels, distributive justice involves allocations of mitigation burdens and climate finance between states and the allocation of benefits and adverse effects of climate change and action respectively (Graham et al., 2015; Meyer & Roser, 2006). Equivalence of process enables procedural justice through fair access to decision making by individuals or groups (Young, 1990). Recognition of actors and their interests, prioritisation of actors in decision making and awareness of patterns of power that determine access to decision-making processes contribute towards procedural justice (Paavola et al., 2006).

Equity can be understood through a political ecology lens. This highlights the factors that mediate between the costs and benefits of climate change impacts, the effects of adaptation actions and the extent to which actions contribute to vulnerability reduction (Robbins, 2011). Power is central to political ecology and is determined by socio-economic and political factors. The inequalities manifest through marginalisation and poverty, which produce differential vulnerabilities and capacities to respond to climate change (Azmanova, 2018; Bryant, 1998; Sheller & León, 2016). Addressing vulnerability requires transformations in social and political structures that cause power inequalities (Tschakert et al., 2013). Transformation, as a concept, however, only involves a certain amount of change in the social

and political systems but does not inform the pathways to and breadth of transformation (Pelling et al., 2015). A consideration of equity when engaging with inequalities can inform the whom, how and why of transformation in adaptation. These principles of justice will be used to conceptualise intra-state equity. Section 3.3 presents builds off this understanding of equitable understanding to develop a conceptualisation of power and influence.

## 3.3 Power and influence in understanding intra-state equity

Power underlies all multi-level CCA processes. Interactions between formal and informal institutions and state and non-state actors across different administrative and political boundaries characterise multi-level CCA processes (Pahl-Wostl, 2009; Vedeld et al., 2016). These processes are considered to be discourses, where 'analytical attention is turned to the webs of power underlying the practices of different actors in the policy process, as well as the invested practices in policy negotiation and contest' (Keeley & Scoones, 2014, p. 24). Power differences between actors determine the needs and priorities that get represented in and addressed by CCA (Adger et al., 2009a; Sova et al., 2015a). For example, at the local levels, power differences determine whose voice and needs are heard and addressed respectively (Naess, 2013). Understanding the characteristics of power in CCA processes contributes towards understanding the nature of relations between actors in CCA, thereby enabling a conceptualisation of the nature of equitable adaptation. This section presents power as a core element of CCA processes and highlights the characteristics and role of power in equitable adaptation processes.

Many definitions of power exist (see Barnett and Duvall (2005), Raven (1993) and Van Tatenhove et al. (2010)). This chapter defines power as the ability or potential to influence adaptation decision making and outcomes, achieved through the ability to constrain or expand the choices or resources available to actors. This definition combines the 'power to' and 'power over' concepts of power, where the former relates to the capacity to influence behaviour while the latter relates to the capacity to control resources and outcomes (Fiske & Berdahl, 2007). This definition emphasises the relational nature of power, emerging from inequalities in historical resource distribution and exclusion of some groups (Azmanova, 2018; Mosse, 2010). Power cannot be measured but is observable when exercised (Apkarian et al., 2013; Markovsky et al., 1988). It can be intentional or unintentional (Wrong, 2017). It varies across space and time, implying that an actor being less powerful in one relationship does not mean that they are entirely powerless as they may be powerful in another relationship (Wrong, 2017).

Influence is the outcome of the exercise of power (Thorelli, 1986). Powerful actors within CCA processes can modify/influence behaviour, interests or decisions of the less powerful, with or without the other parties' knowledge (Digeser, 2015; Thorelli, 1986). Actors who cooperate (e.g. through multilevel adaptation processes) seek to have their interests met (Andresen & Agrawala, 2002). Interests are linked to perceived or actual benefits (Krott, 2005; Van Schaik & Schunz, 2012). In CCA, examples of benefits can include addressing vulnerability and achieving adaptation co-benefits such as attracting donor and peer support. Interests are achieved through negotiations (Brockhaus et al., 2014). CCA processes create political arenas for the negotiation of political interests, where the most powerful have more influence on the outcomes of these processes (Schusser, 2013). The variety of interests represented

in these processes, the nature of negotiations and outcomes achieved are a factor of type and range of actors involved.

A power-based approach to influence is intrinsic to adaptation processes. As noted by Adger et al. (2005, p. 80) , 'the choice of how an environmental governance problem is handled within a jurisdiction reflects the strength of the interests and power of the actors who define the problem'. CCA processes inherently involve the exercise of power (Eriksen et al., 2015). Even technocratic adaptation actions are not power-neutral (cf. Ojha et al. (2016)). For example, actors supporting top-down managerial approaches believe that scientific knowledge possessed by governments and international actors is more important than lived experiences and contributions from local actors who experience climate change impacts. By implementing top-down adaptation actions, technocrats also exercise power over adaption decision making. Adopting these technocratic approaches legitimises the unequal power relations between local level communities and actors possessing technical knowledge (Kesby, 2005). Power also emerges from knowing how processes work.

Linked to power and influence are structure and agency. Agency encompasses the capacity of actors to influence decision-making processes, the rules governing these processes and their outcomes (Benecke, 2011; Biermann et al., 2010; Newell et al., 2012) and the capacity to promote some decisions and block others (Dingwerth et al., 2013). Structural factors, such as characteristics of physical spaces for interactions, allocation of rights and responsibilities, existing rules and norms and their enforcement determine the agency possessed by actors (Rydin & Pennington, 2000). Existing power relations determine which actors become agents. For instance, while actors propose actions and facilitate their implementation, agents shape the broader ideas, norms and values that are related to the issue (Biermann et al., 2009; Dellas et al., 2011). Structure and agency determine the distribution of differential vulnerability (McLaughlin & Dietz, 2008; O'Riordan & Jordan, 1999). For example, politically restrictive institutions can discourage dissent, thus leading to further marginalization of politically oppressed groups. the interaction between structure and agency determines the limits to adaptation by determining what actors can or cannot do (Adger et al., 2009b).

Normatively, those who are most powerful and less vulnerable to climate risks are more likely to influence adaptation processes (Nagoda & Nightingale, 2017). A positive feedback mechanism generates growing inequalities that further exacerbate vulnerability, making adaptation inequitable. Figure 1 strand (a) represents this process where power is an enabler for the influence, allowing those who are more powerful to have their interests represented in the adaptation process.

Equitable adaptation ensures that those who are most vulnerable to climate change can contribute towards decision making in adaptation. Equitable adaptation challenges the role of power as a determinant of actor influence (see figure 3-1 strand (b)). Power relations are not eliminated. Instead, equitable adaptation *circumvents or contests existing power relations*. This is through engaging with the agency of local level communities who are vulnerable to climate change and restructuring institutions that create or sustain power inequalities (dotted circles and lines in figure 3-2). Emerging shifts in power are in favour of those who have been historically marginalised and disadvantaged. This creates

opportunities for less powerful groups to influence decision-making processes. Contesting power structures enables adaptation processes to re-evaluate who is considered vulnerable and uses this knowledge to determine who contributes towards decision making and they type of knowledge that is used in adaptation decision-making (Eriksen et al., 2015). Section 3.4 closely looks at strand (b) by generating conceptual links between influence and equitable adaptation processes.

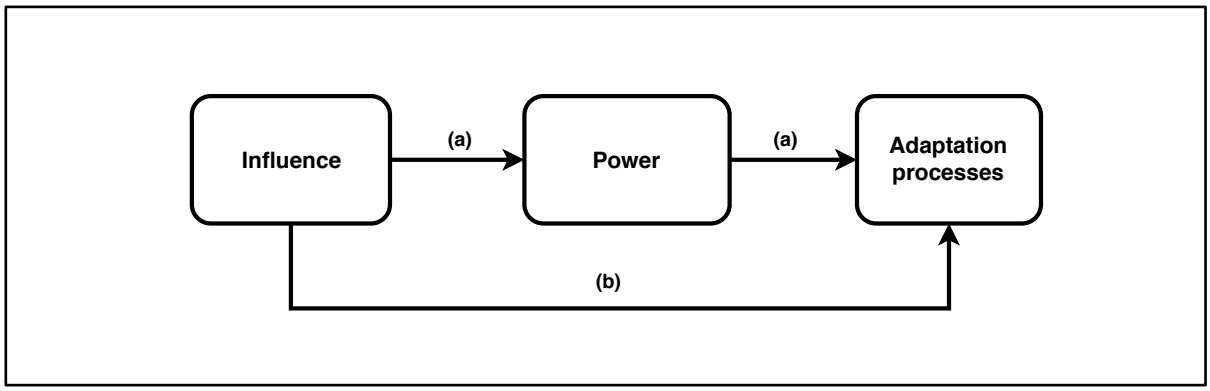


Figure 3-1: Influence in CCA processes.

(a) represents influence that is driven by dominant power structures, while (b) represents influence that circumvents and/or contests existing and dominant power structures and enables the least powerful to influence adaptation processes. Contesting power structures enables those who are more vulnerable to engage in adaptation processes, thus producing positive feedbacks through vulnerability reduction.

Source: Author

## 3.4 Influence through empowerment vulnerable groups

Enabling vulnerable groups to influence decision-making requires a transformation in social and political structures that mediate access to decision-making by groups. As people control institutions, empowerment is required to generate transformation. Empowerment emerges through behaviour change by those who are vulnerable and marginalise and by the gatekeepers to decision making (i.e. powerful and advantaged groups). While other behaviour change approaches can be used to achieve transformation (for example using economic incentives), empowerment is considered the most effective in addressing underlying vulnerabilities and enabling access to decision making as it involves choice as opposed to manipulation (Ferreira, 2013). Behaviour change can also generate empowerment and transformation.

Empowerment refers to a 'process by which those who have been denied the ability to make choices acquire such an ability' (Kabeer, 1999, p. 437). It is a factor of the capacity to act on one's own goals and the context in which an actor is operating, which allows disadvantaged groups to have a set of choices that they can act on to achieve their desired goals (Pratto, 2015). Capacity to act on one's goals is linked to an actor's agency. Agency is defined with a specific set of goals, meaning that one actor can have agency in one sphere and none in another (Pratto, 2015). Agency by itself does not produce empowerment (Drydyk, 2013; Pratto, 2015). Actors still require sets of choices through which to exercise agency. The exercise of agency occurs via resources through current allocations and future claims to choices (Kabeer, 1999). Rules and norms (representing structures) also determine the extent

to which actors have access to resources (Kabeer, 2005). This means that empowerment is achieved through the combined effects of changing agency and structures.

The links between empowerment and equity are not straightforward (Thomas & Twyman, 2005). Local level empowerment can result in active local level participation and organisation for the most vulnerable (Eriksen et al., 2011). However, in some instances, empowerment can reinforce elite control by creating opportunities for those who are least vulnerable and more powerful to seize (more) control of adaptation decision making, thus compromising equity principles (Thomas & Twyman, 2005). It is therefore essential to couple empowerment with principles of distributive and procedural justice, which create an awareness of who is vulnerable and most in need of support to adapt, thus contributing to empowerment. This can be achieved through a choice to pursue a relational or non-relational approach to empowerment. The relational and non-relational approaches to empowerment have different implications for equity.

Pratto proposes a non-relational understanding of empowerment, where power is defined relative to actors' individual goals or what an actor can do for themselves instead of what an actor can get other actors to do for them (Batliwala, 2007; Pratto, 2015). Pratto (2015, p. 12) notes that 'by specifying the implications of each kind of action for each party's well-being…we avoid the implicit presumption of whose point of view and well-being should get the most attention'. This non-relational view signifies an equal treatment of actors during the empowerment process, with disregard for historical inequalities. While the non-relational pathway to empowerment can result in transformation, it does so non-discriminatorily in the hope that those who are least powerful will be empowered. This favours those who are already advantaged. For example, actions that solely consider exposure to climate change risks as the primary determinant of whether individuals need climate change protection also fail to consider differential vulnerability within exposed groups and capacity to adapt, both of which are determined by historical patterns of inequalities (Graham et al., 2018; O'Brien et al., 2007).

A relational approach to empowerment proposed by Cornwall (2016) has better alignment with the definition of equitable adaptation presented in this chapter. It combines Pratto's non-relational approach with the need for addressing inequalities and the root causes of vulnerability to climate change. The relational approach addresses '*why* people are vulnerable and *what* mechanisms create and sustain their vulnerability' through 'seek[ing] to identify the underlying social, institutional, economic and political structures and processes that prolong inequality, prior to conceiving of the possible solutions' (Tschakert et al., 2013, p. 344) (emphasis in original text).

Social change, power and politics are at the core of a relational-based view of empowerment, where actors strive to achieve collective goals in a political and power-based environment (Batliwala, 2007). Empowerment involves building critical consciousness to powerlessness and engagement with 'culturally embedded normative beliefs' that relate to power (Cornwall, 2016, p. 245), thus linking empowerment to increased political power (Corbett & Keller, 2004). Increase in individual and collective political power contributes to an increase in agency (Hall et al., 2009). This type of empowerment challenges entrenched power structures while enabling long-term changes that create a redistribution of power (Kabeer, 2005). Transformation is initiated and driven by local actors who are

vulnerable to climate change (Chung Tiam Fook, 2017). By paying attention to inequalities and vulnerability, this pathway to empowerment avoids domination by those who are powerful and enables those who are most vulnerable to have their adaptation needs addressed by adaptation actions.

## 3.5 Capturing equity in intra-state adaptation processes

Power, influence and equitable adaptation can be studies by understanding the mechanisms through which power is exercised, influence exhibited and how influence is represented in adaptation processes. The following subsections presents components of the conceptual framework which builds on elements presented in the preceding sections of this chapter (see figure 3-2). Resources exchange and participation spaces represent the tools that actors can use to achieve influence while the framings of risk in adaptation actions represent the outcome of adaptation decision making which reflects patterns of influence.

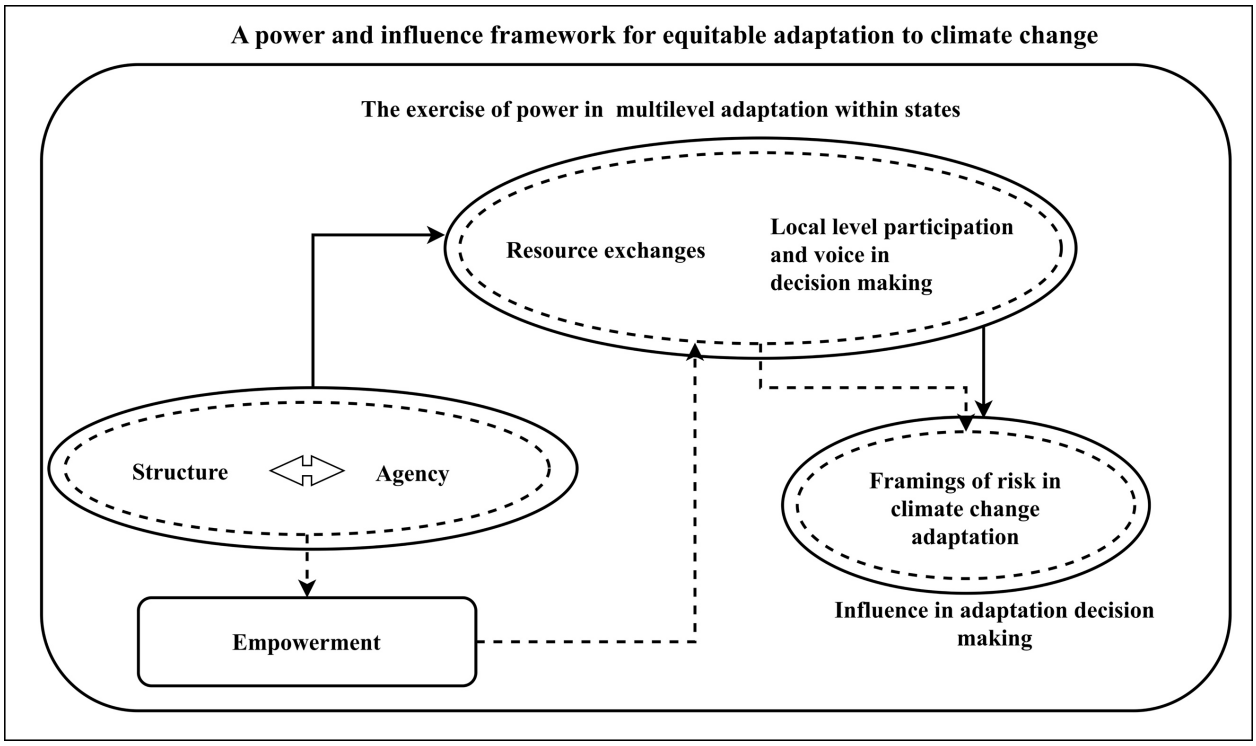


Figure 3-2: Power and influence in adaptation to climate change

Solid circles and lines represent the normative exercise of power and influence in adaptation processes. It emerges from strand (a) in figure 3-1. More powerful actors use resource exchanges and local level participation in decision making to enable their framings of climate risk management to be reflected in adaptation that intends to be country owned. Dotted circles and lines indicate an equity informed approach to influence and represent strand (b) of figure 3-1. Interventions generate empowerment for those who are most vulnerable to climate change by re-configuring power structures and the agency of those who are vulnerable to climate change.
Source: Author

### 3.5.1 Framings of risk in adaptation actions as an outcome of power and influence

Whether influence is achieved depends on the outcomes from adaptation decision making. This can be understood through a framings of climate risk management approach. Adaptation through CRM focuses on specific hazards and their impacts on development trajectories (McGray et al., 2007). Framing is defined as ways in which meanings are assembled and characterised by individuals to aid in understanding something (Fünfgeld & McEvoy, 2011). Framings of CRM are identified through

principles of justice that are reflected in CRM activities. Framings are constructed based on the principles of justice that they exhibit (de Boer et al., 2010). Some equity principles that are common in climate justice literature –the polluter pays principle, causality and ability to pay (see Dietz and Atkinson (2010) and Klinsky and Dowlatabadi (2009)) can be used to generate framings of adaptation. Other adaptation related equity principles include: equality, proportionality, priority and sufficiency (Stumpf et al., 2016; Young, 1995). These fall into two broad categories of framings –i) those that are concerned with the costs, and ii) those addressing the benefits of climate action (Klinsky et al., 2012). Framings adopted within a project are indicative of the power and influence that actors have within a project. Actors whose framings are reflected in the adaptation projects are thought as being more influential.

### 3.5.2 Resource exchanges and power

Power and influence can be understood through social exchange theory which emphasise the role of resources in generating power and influence (Arts & Van Tatenhove, 2004). Power emerges from the dependence that is generated from resource exchanges (Bonacich & Bienenstock, 2009). Power is defined as 'the organisational and discursive capacity of agencies, either in competition with one another or jointly, to achieve outcomes in social practices, a capacity which is however co-determined by the structural power of those social institutions in which these agencies are embedded' (Arts & Van Tatenhove, 2004). Power is dynamic, relational and linked to specific outcomes.

Three layers of power exist –relational power, dispositional and structural. Relational power emerges from social relationships. This involves 'actors, resources, outcomes and interactions' (Arts & Van Tatenhove, 2004, p. 350). Differences in actor influence on outcomes emerge from the unequal distribution of resources (Van Tatenhove et al., 2010). Dispositional power relates to how actors are positions in organisations in relation to each other 'and these positions co-determine what agents may achieve in terms of relational power' (Arts & Van Tatenhove, 2004, p. 350). Influence is determined by existing organisational rules and the unequal distribution of resources (Van Tatenhove et al., 2010). Structural power relates to 'the way macro-societal structures shape the nature and conduct of agents' (Arts & Van Tatenhove, 2004, p. 350). This relates to the 'orders of signification, domination and legitimization [which] shape specific rules' (Van Tatenhove et al., 2010, p. 613). The three layers of power apply during adaptation planning and implementation (Van Tatenhove et al., 2010).

This part of the conceptual framework has three important elements: resources and social exchanges, structures and outcomes. Resource include anything that flows between multi-stakeholder collaborating actors (Thorelli, 1986). Resource exchanges occur along needs/wants gradients motivated by rewards, costs, the value attached to costs and rewards, profits and perceptions of fairness of exchanges (Compston, 2009a; Redmond, 2015). Resources can include love, status, money, goods, services and information (Foa & Foa, 2012). Power and influence is determined by: the type of actor allocating the resource), actor and exchange partner needs/wants, and the type of available and valued resources within the MSCs (Compston, 2009b). Structures are depicted in institutional and organisational rules. Rules are 'the way the game should be played, which norms are legitimate, how issues may be raised; agendas set; interests articulated; policies formulated; decisions made, and measures implemented' (Arts & Van

Tatenhove, 2004, p. 342). Factors such as 'role perceptions of actors, attitudes,…personal interests,…and educational background' (van Bueren, 2009, p. 49). Rules define the nature of interactions and determine the (in)formality of actors and their actions (Brass et al., 2004).

Outcomes are achieved when actor preferences are reflected in either the decisions or the decision-making processes. In the latter, influence is through 'turning certain issues into a taboo, manipulating the norms, rules and procedures that regulate the agenda setting or forbidding certain participants from entering the decision-making arena' (Elbers & Schulpen, 2011, p. 798). Actors perceptions of procedural and distributive justice in decision making depend on whether their views have been incorporated (or excluded) from adaptation decision making processes and outcomes (Molm et al., 2003).

### 3.5.3 Participation and voice in adaptation decision making

Country ownership is expected to enhance local ownership by creating opportunities for local level populations to influence adaptation decision-making. This is achieved through representation and prioritisation of local voices in adaptation. Voice in adaptation facilitates procedural and distributive justice (Lind et al., 1990; Smith & McDonough, 2001). Participation in critical in facilitating achievement of voice in adaptation (Atela & Quinn, 2014; Nasiritousi et al., 2016). Voice relates to power over when and how decisions are made, their implementation and outcomes. A distinction is made between 'transformative participation' and standard participation, where the former generates influence and change in planning policies and outcomes (Aylett, 2010; Winkler, 2011, p. 258) while the latter creates an 'illusion of inclusion', where actors participate without actually influencing the outcomes of decisions (Few et al., 2007) (also see Bahauddin et al. (2016)). Voice also emerges from 'competence' which is achieved when 'stakeholders either have or are provided with the tools and knowledge necessary to participate meaningfully in both technical and non-technical negotiations' (Webber (1995), cited in Murdock et al. (2005, p. 224)). Voice of vulnerable groups in adaptation decision making enables co-production of adaptation decisions (Few et al., 2007), signifying that vulnerable communities' interests are taken into account (Bovaird, 2007).

The absence of meaningful participation or voice may result in the creation of 'legally entrenched rights to participate, coupled with limited opportunities to influence', which turns participatory processes into 'bureaucratic hurdle[s]' (Lee et al., 2013, p. 33) that are only met as minimum requirements for adaptation. Entrenched interests may dominate different types of participation spaces, generally at the expense of the interests of groups that are most vulnerable to climate change. This disempowers communities and commits injustices by validating inequalities (Bifulco, 2013). In equitable adaptation, local institutions supporting local adaptation facilitate participatory decision-making processes that are aware of power differences and inequalities within populations and that prioritise the voices of those who are most vulnerable to climate change. This chapter is part of a larger research project that investigates the intra-state equity implications from country ownership within projects that are funded by multilateral climate finance mechanisms of the UNFCCC. This section presents a framework that

links voice and influence in decision making to types of participation spaces and levels of participation in adaptation decision making.

Quality of participation is determined by the type/nature of participation spaces used in decision-making. This chapter defines participation spaces as physical spaces which enable interactions between individuals and groups (Massey, 2013). The nature of participation spaces determines the characteristics of participants and their power within the adaptation process, which affords participants different levels of voice in decision-making.

The level of participation achieved by vulnerable groups also determines their voice in adaptation decision-making. For analytical purposes, this chapter defines three levels of participation –informed, consulted and involved. These correspond to Pretty's passive, consulted and functional/interactive participation levels respectively (Pita et al., 2010; Pretty, 1995). Vulnerable local level populations have different extents of voice in these levels of participation. The three levels of participation have different patterns of *who* participates and *what* vulnerable groups derive from these processes. Informed participation mostly uses closed and invited participation spaces. The goal of adaptation decision making spaces is to enable meaningful participation. Vulnerable groups' voice is significant as meaningful participation, which recognises diverse actors' identities, values and norms is achieved (Wood et al., 2016). Meaningful participation requires action that challenges institutional norms, entrenched power relations and inequalities that restrict access to decision-making by the most vulnerable (Tschakert et al., 2016).

### 3.5.4 Roles of structure and agency in enabling influence

Adaptation and adaptation decision making is a political process (Eriksen & Lind, 2009). Actors can use adaptation structures to contest existing structures (Eriksen et al., 2015). However, actors can also use adaptation decision making to reinforce existing inequalities and achieve specific desirable outcomes. Social relations and politics in adaption are therefore important in determining the extent of adaptation by different groups (Bassett & Fogelman, 2013). Social relations enable or disable adaptation by 'produc[ing] and structure[ing] knowledge, perceptions, emotions and resource access' (Bee, 2016, p. 72). In this framework, structure and agency plays a key role in determining the social relations and politics of adaptation.

Structure and agency are (un)consciously manipulated by adaptation actors to enable influence by specific groups through use of resource exchanges and participation spaces. Existing structures generate and reinforce specific norms and rules which determine acceptable behaviour and determine the allocation, access to and exchange of resources. Structures also determine the nature of participation spaces and the criteria for access and use of these spaces. In these normative processes, socio-economic advantage generates greater agency and hence ability to retain or develop favourable structural conditions (Fernández-Ballesteros et al., 2002). Hence, resourced actors and those with greater access to adaptation decision making spaces are able to identify their needs and operate adaptation decision making to enable them to influence how risk is framed in adaptation projects. These structures are also

used to control the agency of those who are less resourced or those marginalized from participation in adaptation decision making.

However, equitable adaptation engages with the agency of those who are vulnerable and marginalized to generate structural changes that allow vulnerable groups to influence adaptation decision making. These groups are empowered to recognise the deficits in existing socio-political systems and capacity gaps to address adaptation needs and the required changes that are sufficient to generate structural changes. This involves the transformation from individual agency to collective agency through political capacity building. Collective agency is then able to trigger multi-level structural changes which are critical for equitable adaptation.

## 3.6 Conclusion

This chapter has presented the conceptual framework for understanding intra-state equity implications of country ownership. The chapter starts off by placing power and influence as core to adaptation processes, where influence emerges from the exercise of power. Influence is exhibited through the framings of risk management that are reflected in adaptation projects. Normative processes are those where resources and participation spaces are used by more powerful actors to influence adaptation decision making. Equitable adaptation processes employ relational approaches to empowerment to challenge or circumvent power structures that drive inequalities, thereby enabling particularly vulnerable groups to influence decision-making processes. The following chapters (5, 6 and 7) apply components of this framework to different aspects of multilevel adaptation.

# 4 Methods and data

## 4.1 Introduction

This research is broadly empirical. Empirical research engages with the world through 'observation' (Punch, 2013). Research methods used in this research therefore seek to understand the *'as is'* nature of adaption using both the researcher's and subject's perspectives. This means that the current state of adaptation and its drivers are studied. This chapter discusses the methods used in the research and the data collected. It starts by presenting the research methods, where justification for use of case studies is made and the case selection and choice of unit of analysis are discussed. In the following sub-sections, the qualitative and quantitative data collection tools and approaches to data analysis are discussed.

## 4.2 Research methods

Understanding adaptation processes involves seeking to gain insights into how countries, multilevel adaptation stakeholders and communities design and implement adaptation actions. Recent work on adaptation to climate change generally shows that the choice of adaptation actions and their outcomes on human and non-human populations vary based on contextual factors. Examples of these factors include the legal and institutional structures within which these policies are designed and implemented, and a country's or localities social, political and economic conditions (Goodrich et al., 2019; Koop et al., 2018; van den Berg & Coenen, 2012). For example, barriers to adaptation vary between developed and developing states, which explains the different adaptation approaches and capacities to adapt between these groups of states (Guy Peters, 1996).

This research seeks to develop an understanding of how contextual conditions contribute towards adaptation processes and their outcomes. It research adopts a social constructivist epistemological paradigm, where the focus is on how people's knowledge and experiences generate reality (Argent, 2019; Köpsel & Walsh, 2018). Reality i.e. the extent to which country owned adaptation interventions are equitable is subjective and dependent on knowledge of and power between stakeholders and communities who engage in climate change adaptation actions. The methodology used to generate the data is discussed below.

### 4.2.1 Qualitative and quantitative methods

Qualitative research is based on the belief that there is a multiplicity of realities where the researcher is part of the research while qualitative research seeks generate objective assessments of the truth which is assumed to be fixed and measurable (Erlingsson & Brysiewicz, 2013; Haase & Myers, 1988). Knowledge is based on people's experiences and the social structures within which they operate. Qualitative research is driven by the need to comprehend 'the way people experience events, places and processes differently as part of a fluid reality, constructed through multiple interactions and filtered through multiple frames of reference' (McGuirk & O'Neill, 2016, p. 246). The subjects of research and the society in which they exist is vital to qualitative research, where social meanings and their logics are investigated (Meier, 2010). Nuanced differences and their causes are well captured by qualitative methods to generate in-depth understandings of phenomena and their 'underlying processes, values,

dilemmas, emotions, conflicts and relationships which give rise to specific outcomes' thus allowing the findings to be applicable to other contexts (Drury et al., 2011, p. 19). Quantitative methods on the other hand rely on numbers and statistical measurements to create abstract understandings of the world (King et al., 1994). As opposed to qualitative methods which are prone to researcher's 'biases, assumptions, priorities and positionality' (Meier, 2010, p. 2324), quantitative approaches are considered to be more objective (King et al., 1994).

This research employed both qualitative and quantitative approaches to understand country-owned CCA. Findings informed by qualitative provide context, understanding and depth for each of the case studies (Tierney & Clemens, 2011) and also enable theoretical generalisation (Brown & Lloyd, 2001; Coast et al., 2004). They can therefore give insights into the underlying reasons why things happen the way they do at different levels in relation to the adaptation process. These findings can inform decision making in future adaptation by providing insights into the complexity of social systems and how they may react to specific types of polices or decisions (Rist et al., 1983). A combination of qualitative and quantitative research methods in climate change research enables the generation of findings that apply to other locations and scales as well as a deeper understanding of the context-specific factors that shape adaptation processes.

### 4.2.2 Case studies

Adaptation actions are evaluated based on their ability to support communities to protect themselves from climate change related risks. The success of these actions depends on different time and place-specific factors, including power dynamics between actors that contribute towards the adaptation process and institutional factors that exist across levels, from international to local. A comprehensive understanding of adaptation in these places requires that these factors and their effects be understood. A case study is appropriate for such research as it focuses on the links between context specific conditions and adaptation outcomes. A case study helps answer questions related to the 'how' and 'why' of phenomena, events or populations (Yin, 2013, p. 29). A case study is a research method that 'investigates a contemporary phenomenon…in depth and within its real-world context' (Yin, 2013, p. 16). Case studies are used in CCA research because they offer insights into how and why societies work the way they do under specific climatic changes. Case study approaches to CCA can also generate data and findings that can be used to advance different theories (Yin, 2013). Using case studies approach involves the selection of cases and choice of units their analysis as discussed below.

## 4.3 Case selection

The identification of cases and case study locations requires considerable background information on the areas where the research is being undertaken (King et al., 1994). Case selection can be done in two ways –randomly and purposefully. Random case selection involves choosing cases without regard to case characteristics while purposive selection is done based on a specific pre-selected criterion. While purposive case selection is criticised for its likelihood to introduce bias, especially in small-n studies, random case selection for small-n is also likely to produce case selections which are not representative of the general population from which the cases have been drawn from (Seawright & Gerring, 2008).

This research adopts a purposive case selection approach. The value of purposive case selection is in finding the right match. However, 'purposive methods cannot entirely overcome the inherent unreliability of generalising from small-N samples, but they can nonetheless make an important contribution to the inferential process by enabling researchers to choose the most appropriate case for a given research strategy' (Seawright & Gerring, 2008, pp. 295-296). Bias can be reduced by ensuring that a theoretically sound approach is used to inform sampling. The identification of purposefully selected cases therefore first requires a clear understanding what/why specific cases are desired.

This research sought to understand processes and outcomes of country owned adaptation interventions in LDCs. Desired cases were initiatives that were multilaterally funded via the UNFCCC as these climate finance mechanisms—specifically the GEF, AF and GCF—adopt funding instruments, policies and structures that support country-ownership. By aiming to be country owned, the selected cases would be be in alignment with the national adaptation and development priorities, designed and implemented with support from government institutions and involving multi-level stakeholders. However, select cases had to have advanced into implementation and nearing completion by the time of data collection. This was considered a long enough time for an adaptation project to begin generating 'observable' cross-level adaptation outcomes. Table 4-1 summarises the criteria used for case selection.

Table 4-1: Criteria used for selecting cases and the rationale

| Criteria for selection of cases | Rationale |
|---|---|
| (Co-)financed by a UNFCCC financial mechanism | - Country-driven by leveraging institutions within countries of operations<br>- Exhibits adoption of UNFCCC principles on country ownership<br>- Multi-stakeholder and multi-level approach through involvement of actors from different levels<br>- Implemented by government actors thereby demonstrating UNFCCC principles on country ownership of adaptation actions<br>- In alignment with national and/or local development plans |
| Project nearing completion | - Progress made in policy design and implementation so that project can be assessed against intended project outcomes |

Source: Author

Establishing whether cases fit these criteria required prior assessment of (country owned) adaptation initiatives in different countries. East Africa and Southern African countries were selected for further consideration due to the high climate risks and vulnerability (Collier et al., 2008). Preliminary assessments of countries in these regions were informed by publicly available documentary evidence on specific projects. Uganda, Kenya, Tanzania and Zambia were chosen for convenience, due to the logistical ease of conducting data collection in these countries i.e. researcher's language, research visa requirements and general understanding of context by the researcher.

Kenya, Uganda and Zambia were eliminated as country case studies. A review of academic literature indicated that academic had disproportionately favoured Kenya and policy research A large proportion of academic research on CCA had used Kenyan locations as case studies. The political economy of CCA in Kenya was well understood (as compared to Uganda, Tanzania and Zambia) and was eliminated as a potential case country. A 2-week scoping study in Uganda conducted by the researcher in August 2017 revealed that at that time, Uganda did not have adaptation interventions that fit the set criteria. While there were multilaterally funded projects, these were still in their initial phases and could not be evaluated. Zambia's PPCR project was eliminated because it was funded by World Bank's Climate Investment Fund, which is not a UNFCCC financial mechanism. A project in Tanzania, funded by the LDCF/GEF was more aligned with the criteria. Sections 4.2.4 to 4.2.6 present a summary of the political economy of adaptation in Tanzania and the LDCF project.

### 4.3.1 The Least Developed Countries Fund and the Global Environment Facility

The LDCF is one of the funds under the UNFCCC. It was created in 2001 at the 7$^{th}$ Conference of Parties (COP 7) in Marrakech, Morocco. The fund became operational in 2002. The fund was created to address the special needs of LDCs in adapting to climate change, as these countries lack both technical and financial capacity as well as the adequate institutional systems to enable them to adapt to climate change

(GEF, 2018c). The LDCF had 154 states as members at its inception, 49 of which were LDCs. The number of LDCs has reduced over the life of the fund, as the LDCF graduates countries from the LDC list. Graduated countries are not eligible to receive LDCF funding. Instead, they are considered to have some capacity to access funding form the GEF. Four countries have been graduated since the establishment of the LDCF (and as of 2018) –Cape Verde, Maldives, Samoa and Equatorial Guinea (GEF, 2018b).

The LDCF has three main objectives: a) '*Adaptation planning* to address resilience needs at various timescales', b) '*Resilience-building investments* in the diverse landscapes and sectors that constitute priorities for today's 47 LDCs', c) '*Capacity building* in-country, to better understand risks, vulnerability and adaptation to climate change, as well as to better access climate finance and responds to UNFCCC obligations' (GEF, 2019). Funding for the LDCF if provided by Annex II countries under the UNFCCCC (these are OECD and European Union countries as of 2010) (GEF, 2011). However, some Annex I (industrialised countries under the UNFCCC) and non-Annex I (developing countries under the UNFCCC) countries can voluntarily contribute towards the fund (GEF, 2011).

The LDCF mainly supports LDCs in the preparation of National Adaptation Plans of Action (NAPA) and implementation of NAPA projects (Sovacool et al., 2017a). It is administered by the GEF which is an operating entity of the UNFCCC while the World Bank acts as a trustee (Climate Funds Update, n.d). LDCF projects use GEF operating procedures including country ownership guidelines (Australian Aid, 2012; Climate Funds Update, n.d). Total funding by the LDCF (as of 2017) was $1.2 billion, directed towards vulnerability reduction, resilience and capacity building (GEF, 2019). By 2017, a total of 51 countries had been supported through LDCF funding to develop their NAPA, with over 280 NAPA projects funded by the LDCF (GEF, 2018c).

The GEF allocates climate finance in two ways –indirect and direct access. Indirect access involves working with international entities which engage with the GEF as implementing agencies like the UNEP and World Bank to access finance (Bowen et al., 2014). Direct access is where (sub-)national and regional 'entities…become accredited to receive finance directly from the…[GEF] without going through an [implementing agency]' (Masullo et al., 2015, p. 1).

The GEF's approach to country ownership is motivated by the need to make sure that that it actions funded by the GEF transition from donor-driven decision making to government and other country stakeholder-led adaptation. Country ownership at the GEF is achieved 'when the country initiates an outcomes- focused, multisector strategy with evidence-based plans'(GEF, 2014, p. 85). This is informed by country ownership principles for aid effectiveness that are outlined in the PDAE. Through use of sub-national, national or regional government or non-government institutions as executing entities and international development agencies (referred as 'GEF Agencies') as Implementing Agencies (IAs). IAs support national organisations (government and non-government) to 'develop, implement and execute their projects' (GEF, n.d). Reflection of country priorities and endorsement of projects by country focal points demonstrates country ownership. GEF focal points, who are government officials designated by LDC member countries are required to provide approval for project proposals submitted to the GEF as

evidence that these 'projects are country driven and are in alignment with national priorities' (GEF, 2011, p. 3).

### 4.3.2 The climate change adaptation context in Tanzania

Tanzania is union state, made up of Tanganyika (mainland) and Zanzibar (islands). This means that while the Government of the United Republic of Tanzania (GoT) represents the mainland and Zanzibar globally, the Revolutionary Government of Zanzibar (RGoZ) governs and represents on union matters. According to the 2012 national household census, Tanzania had a population of 44.9 million (GoT, 2013). Government records indicate a population of 54 million as of 2018 (GoT, 2019).

Policies adopted after independence from the British (in 1964) left Tanzania dependent on external aid (Arndt et al., 2015a). The amount of aid to Tanzania has increased over the last three decades with most aid received serving public expenditure (Jerve & Nissanke, 2008). ODA and foreign direct investments have provided a boost to economic growth but trade has lagged behind (Rotarou & Ueta, 2009). Tanzania's socialist political history also influences its approaches top development. The post-Nyerere period exhibited steady economic growth, attributed in part to governance reforms and external incentives by the international community and multi-lateral development banks through the structural reform programs. Economic and governance reforms sought to liberalise markets and improve governance mechanisms (Van Arkadie, 1995). While macro-level growth indicators have improved, there has been no improvement in micro-level indicators for welfare (Mwakasege, 1998). Economic indicators in Tanzania show a decoupling between economic growth and poverty reduction (Arndt et al., 2015a; Atkinson & Lugo, 2010). There are however large inequalities in economic growth. For example, agricultural growth is driven by large scale wealthy farmers and by food crops that are restricted to certain areas, which prevents the trickle-down effect (Pauw & Thurlow, 2011).

Governance in Tanzania is decentralised. This is indicated in Article 145 of the constitution of Tanzania, District Authorities Act of 1992 and the Local Government (Urban Authorities) Act of 1982, which give recognition to the local government (Unknown, 2006). Sub-national authorities are divided into urban and rural authorities. Urban authorities comprise of city municipal councils and town councils, while rural authorities comprise of district councils and village councils (Figure 4-1).

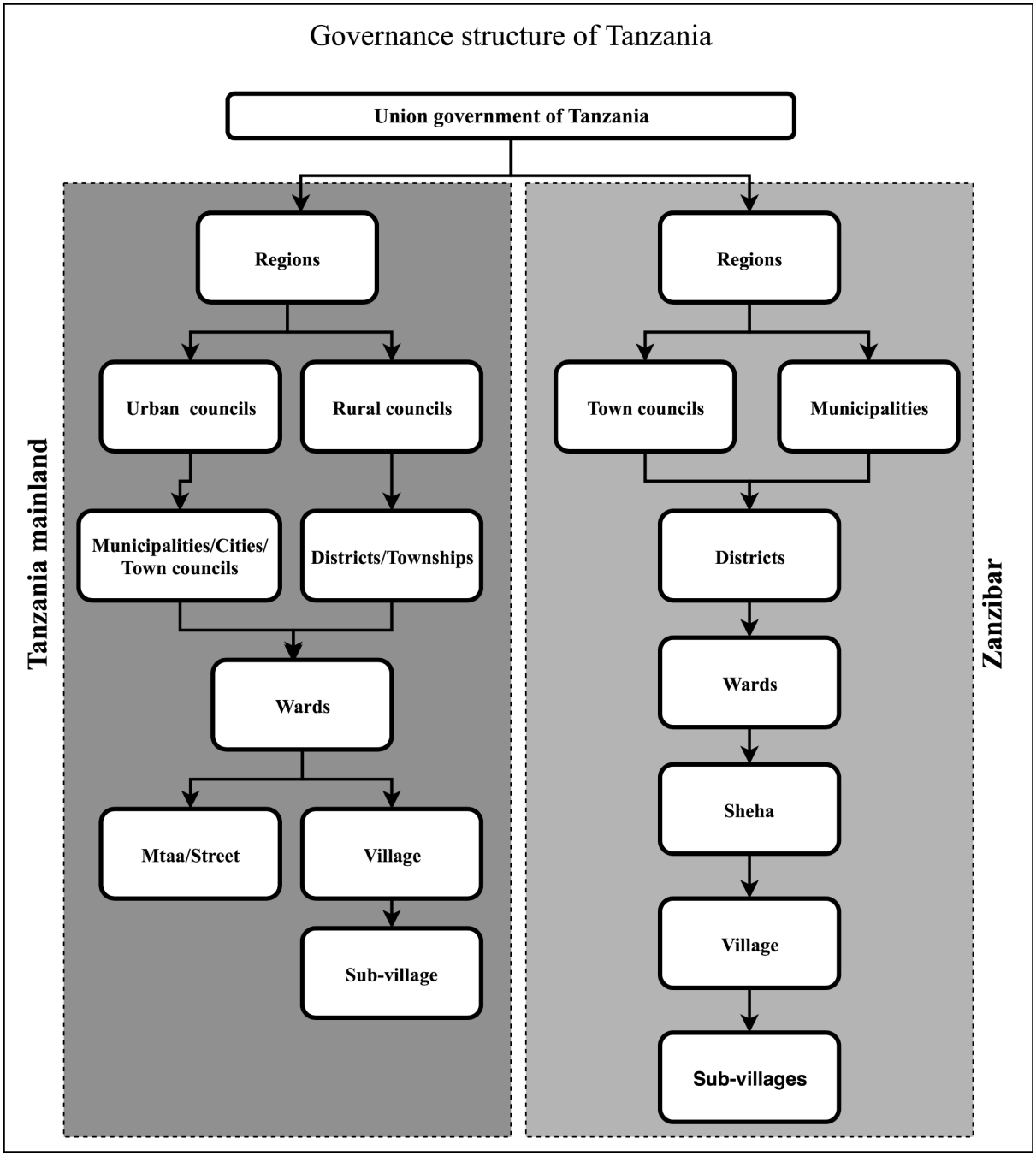


Figure 4-1: Governance structure of the United Republic of Tanzania

Source: Author.

Tanzania's economy is highly dependent on climate sensitive sectors, making it vulnerable to climate change. Projections show that the economy could suffer losses of as high as 2% of GDP/year due climate change, with climate sensitive regions and sectors being coastal areas, energy, infrastructure, water and ecosystem services (Watkiss et al., 2011). Models predict adverse impacts on food security (Arndt et al., 2012). Climate change and variability is projected to affect crop yields, where for example, a 2˚C rise in seasonal temperature by 2050 could decrease cereal yields by between 7.6% and 13% (Rowhani et al., 2011). Combined effects of climate change are expected to increase poverty levels in Tanzania, with projections of over 1.5 million/year becoming poor (Ahmed et al., 2011). Adaptation needs are also projected to rise by 2030, up to about $1 billion/year (Watkiss et al., 2011). As Tanzania is party to the conference of parties of the UNFCCC, it has made efforts to develop national climate change policies

and structures, such as the NAPA, National Climate Change Strategy, National Climate Change Action Plan, INDC and its national communications to the UNFCCCC (GoT, 2003, 2007b, 2012, 2018).

Sea level rise (SLR) and rainfall variability are the key climate change risks threatening Tanzania's coastal region. Sea level rise has already resulted in coastal flooding, with the low-lying areas being worst affected. For example, estimates show an increase in number of people exposed to a 100-year flood in Dar es Salaam from 30,000 in 2005 to 210,000 in 2070, and damages to assets increasing from $35 million in 2005 to $10 billion in 2070 (Kebede & Nicholls, 2012). Coastal flooding will also affect coastal ecosystems, such as mangroves and reefs through siltation and storm damage (Ellison, 2015). Rainfall variability is driven by ENSO cycles which results in some regions experiencing above average and below average rainfall seasons even though some regions experience more variability than others (Kijazi & Reason, 2005; Trærup & Mertz, 2011). Communities at the local level also perceive that rainfall has become more erratic over the past decades (Pauline et al., 2017). Impacts of climate change are expected to be severe the agricultural sector, which is critical for the country's economic growth (Chambwera & Macgregor, 2009).

SLR is a significant risk for Tanzania's coastal areas. This is because Tanzania has one of the longest coastlines in Africa, with a length of about 1424km, including Zanzibar and Pemba islands (Mngulwi, 2003). This results in coastal erosion, salination of inland waters and land and the destruction of coastal infrastructure and livelihoods inundation and reduction in availability of resources such as fish (Masalu, 2002; Sallema & Mtui, 2008). This is exacerbated by the high urbanization and population growth rate of coastal zones, resulting in coastal squeeze (Kebede & Nicholls, 2012). Even though vulnerability to these risks is high, existing national vulnerability profiles do not adequately reflect the situation of the coastal regions (Cinner et al., 2012). Coastal zone management is a suite of approaches used in Tanzania to protect coastal zones against SLR. This consists of marine and coastal resource management and construction of infrastructure. Tanzania is among the countries affected by deforestation. Statistics show that deforestation and land use changes accounts for more than 80% of Tanzania's greenhouse gas emissions (GoT, 2003). Coastal mangrove forests are significantly affected; with the total land area under mangroves has been on the decline in Tanzania (Mwansasu, 2016; Wagner & Sallema-Mtui, 2010; Wang et al., 2003). Assessments of mangrove cover for specific regions in Tanzania also find a decline (Wagner & Sallema-Mtui, 2010). However, other factors, such as over-exploitation by communities for commercial and domestic use and natural cycles such as reductions in salinity of coastal and delta waters have also contributed to the decline in mangrove cover Mwansasu (2016).

The threat to mangroves has led to the implementation of decentralised forest management, commonly termed as 'Participatory Forest Management' (Mbwambo et al., 2012). Legislations supporting this include the Forest Act (2002) and the Forest Policy (1998), the Local Government Authorities Act (1982), the National and Village Land Act and the National Environment Policy (1997) (Mshale et al., 2017). The legislation is however largely protectionist, characterised by prevention of access and use by communities living in and around the mangrove forests while the government retains the rights of use (Mshale et al., 2017). In some developing countries, protected areas have negative impacts to the

local communities, as they restrict access and use of resources that the communities depend on for their livelihoods (Bennett & Dearden, 2014). Conflicts between the government, communities and other actors are reported in different parts of Tanzania over the protection of mangroves (Beymer-Farris & Bassett, 2012, 2013; Burgess et al., 2013; Mwansasu, 2016). In general, protection of coastal zones in Tanzania is reported to result in the emergence of 'policy misfits', where policy initiatives targeting coastal areas are perceived to result in the increase in vulnerability of local communities for failing to consider interactions between these initiatives and longer-term socio-economic and biophysical changes (Bunce et al., 2010a, p. 485).

### 4.3.3 The LDCF project in Tanzania

The *Developing core capacity to address adaptation to climate change in productive coastal zones of Tanzania* project (GEF ID: 4141) is a coastal adaptation project implemented in coastal zones of Tanzania on the mainland and in Zanzibar. The project was implemented between 2012 and 2019 by the Government of Tanzania with the Vice President's Office- Division of Environment as the executing agency with funding from the Government of the Republic of Tanzania and the UNFCCC's Least Developed Countries Fund (LDCF). Project design begun in 2010 and was expected to close in April 2019 (based on information received from project coordinators at time of data collection in 2018). The project sought to 'address urgent and immediate adaptation needs in four targeted vulnerable coastal sites' with outcomes relating to improved local and government capacities and knowledge to engage in climate risk management and a reduction in the vulnerability of coastal zones to climate change related risks, specifically sea level rise and erratic rainfall (C4 Ecosolutions, 2014, p. 11; UNEP, n.d). Project locations included Pangani District, Bagamoyo District, Kibiti District (formerly Rufiji District) and other locations in Unguja and Pemba islands of Zanzibar (C4 Ecosolutions, 2014). In line with the priority sector interventions outlined in Tanzania's NAPA, the project sought to rehabilitate coastal ecosystems through restoration of mangroves and coastal vegetation and through construction of coastal infrastructure, specifically sea walls. Other crosscutting activities under the project were strengthening of institutional capacities of government and non-government agencies in the target regions to support adaptation to climate change through trainings and capacity building.

The project was governed through a hierarchical structure, which went through a national level Project Steering Committee (PSC). The PSC, which provided oversight of the project was composed of national and sub-national government, community and non-government civil society representatives (GEF, 2009). The PSC reported to the National Technical Committee and the National Climate Change Steering Committee (GEF, 2009). Focal points coordinated project activities in the project locations and reported to the PSC.

Case study location selection for this thesis was done based on the type of project activities conducted in the project sites, the geographic location in which these activities were based, and the structural model adopted in activity implantation. These are discussed in the paragraphs below.

**a) Type of project activities**

The LDCF project had three main activities –institutional strengthening which targeted government and civil society institutions that support adaptation in Tanzania, mangrove restoration, rehabilitation of boreholes and construction of sea walls in select areas. Mangrove rehabilitation was chosen the key activity that would be used to select cases. This is due to the current and potential future use of mangroves to protect coastal areas from climate change shocks and stresses related to sea level rise in LDCs. (Alongi, 2008; Blankespoor et al., 2016; Chow, 2018; Das & Crépin, 2013). Mangroves provide the co-benefits of protection against sea level rise as well as the provision of ecosystem services for communities. The success of mangrove protection and restoration actions depends on factors such as supportive institutional structures and the involvement of multiple stakeholders which is essential due to the different and sometimes conflicting actor interests in forest resources and their conservation (Schusser, 2013). Community interests in mangrove conservation are also high due to the utility of mangroves on community livelihoods and wellbeing (Feka & Ajonina, 2011). An analysis of mangrove restoration actions would therefore provide insights into how these interests were navigated and the resultant patterns of equity in the project.

**b) Geographic location of project activities in relation to project communities**

Selection of case locations was done purposefully to get a geographical representation from the mainland of Tanzania and islands of Zanzibar. The intention was to get four case locations –two on the mainland and two on the islands. Sites with a pre-exiting mangrove forest, comparatively higher mangrove forest acreage and those that had settlements closer to the mangrove forest were selected. This is because size of forest, proximity of communities to forests as well as quality of forests determine communities' or households' dependence on these resources (Angelsen & Kaimowitz, 1999). Closer proximity to and higher forest acreage of mangrove forests by communities results in increased entitlement by the communities who are dependent on these forests, hence higher rates of forest resource extraction due to reduced transportation and labour costs (Mamo et al., 2007). The pre-existence of a mangrove forest (even if degraded) was required to ensure that some minimum level of mangrove dependence was established before the project was implemented. The use of mangrove resources in such cases has higher equity implications as compared to places where there is a smaller mangrove forest acreage or where the forests are further away or a newly planted mangrove forest.

**c) Implementation structure**

This related to the legal structures governing the mangrove restoration activities and included the types of actors involved and the institutions overseeing these activities and processes within the mangrove restoration element of the project. Tanzania mainland and Zanzibar each govern their environmental and climate issues separately as these are considered a non-union matter. Each of these states therefore had separate CCA policies, institutions and structures. This selection criterion was used to obtain a balance between the different approaches to implementation of project activities.

The project implementation approach adopted differed between the two states. On the mainland, village-based Beach Management Units (BMUs), which are part of the local level legal institutions for coastal

resource management, were the lowest implementation partners to restore and protect the forests under the supervision of a district government focal point. These were supervised by district government level representatives who reported back to the national coordinator. In Zanzibar, Community Based Organisations (CBOs) and/or Non-Government Organisations (NGOs) worked under guidance from the Government of Zanzibar's Department of Environment (DoE) to restore and protect the forests. Figure 4-2 shows the general implementation structure for the project. The selection of case locations made this research a comparative embedded case study (Yin, 2013).

The criteria presented above (in a, b and c) was applied to identify case locations. In Tanganyika, the two most relevant study locations were Pangani and Kibiti districts. Pangani town and Kibiti were initially chosen as case locations, but security prohibitions restricted field visits. In Zanzibar, every study location qualified. To narrow down the list, a location with a purposive selection of locations with and without a local forest management plan/agreement was done. A forest management plan outlines the rules that communities adopt in order to manage a forest. This is a provision in the national forestry policies, where local units can develop.

This distinction was essential because the researcher believed that this would be a significant determinant of mangrove use and the relationship between the project activities and the communities in which these activities were implemented. Two locations in Zanzibar were chosen –Kisakasaka and Kisiwa Panza. Kisiwa Panza had a local forest management plan while kisakasaka did not. The two locations were representative of coastal areas in Zanzibar where some had formal community forest management plans while others did not. Figure 4-3 and Figure 4-4 shows the case study locations while Table 4-2 presents the characteristics of the project locations.

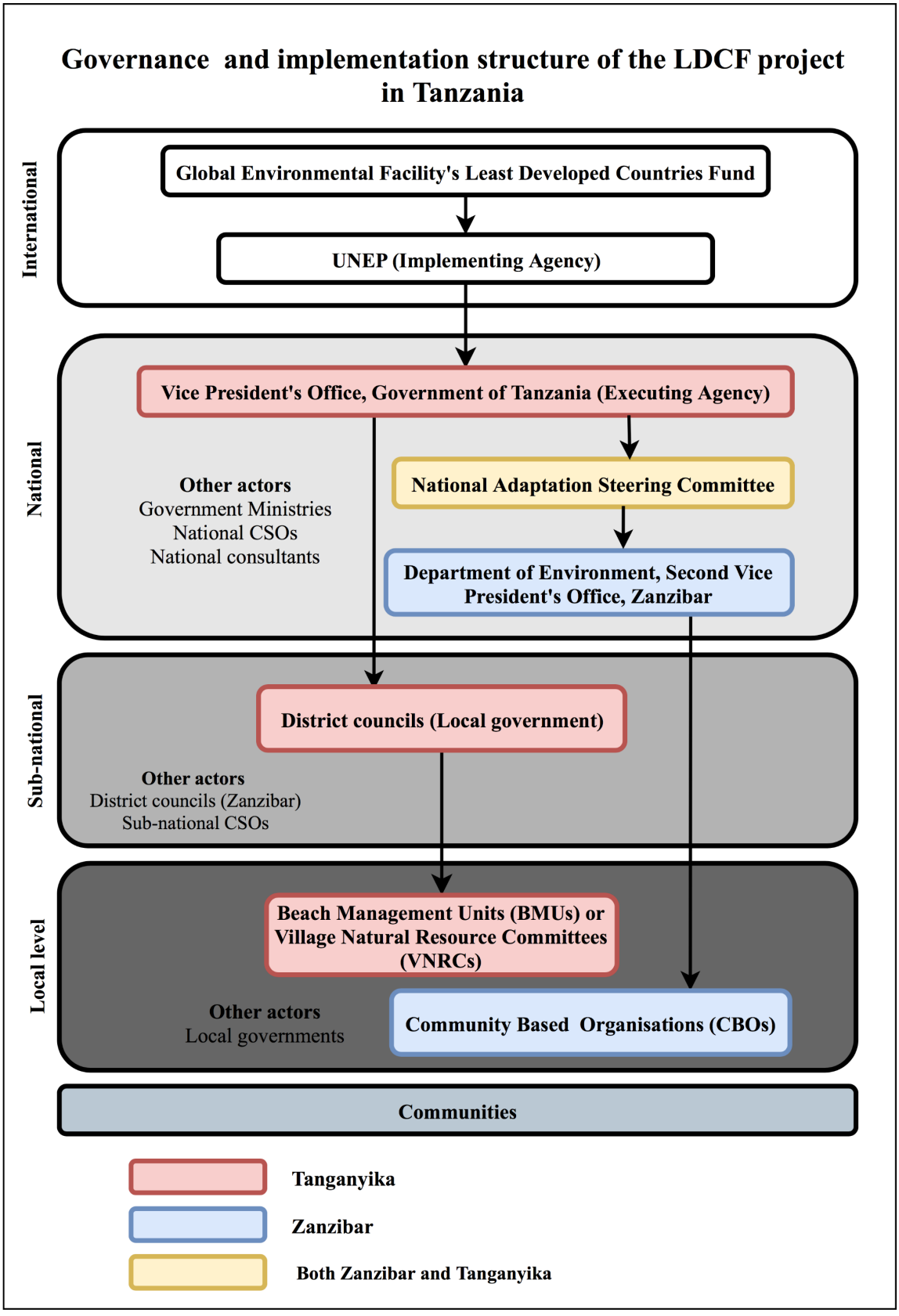


Figure 4-2: The LDCF's implementation structure.

Arrows represent path of formal decision making for the mangrove restoration component of the project.

Source: Author.

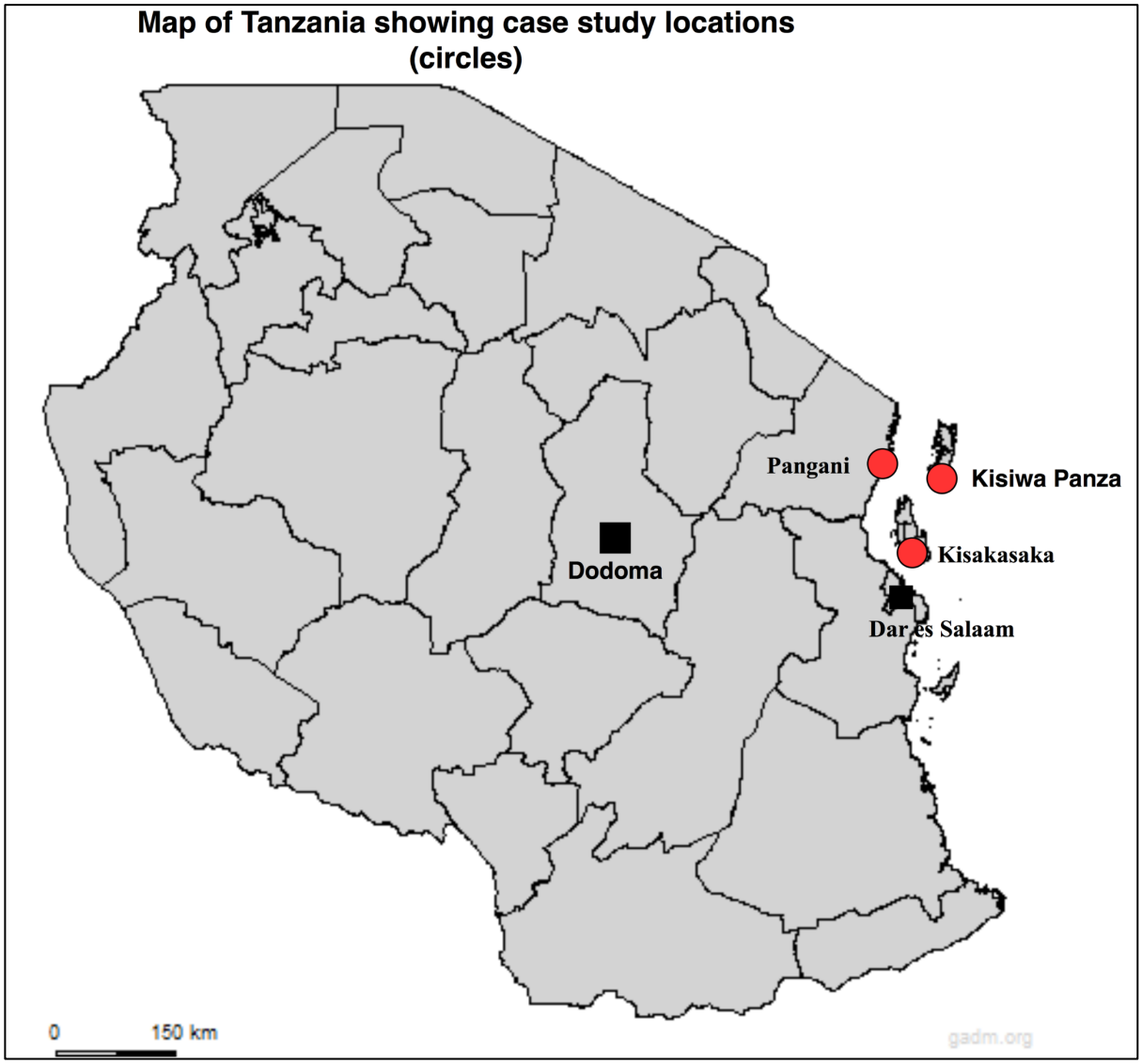


Figure 4-3: Case study locations (Tanzania whole)

Source: Author.

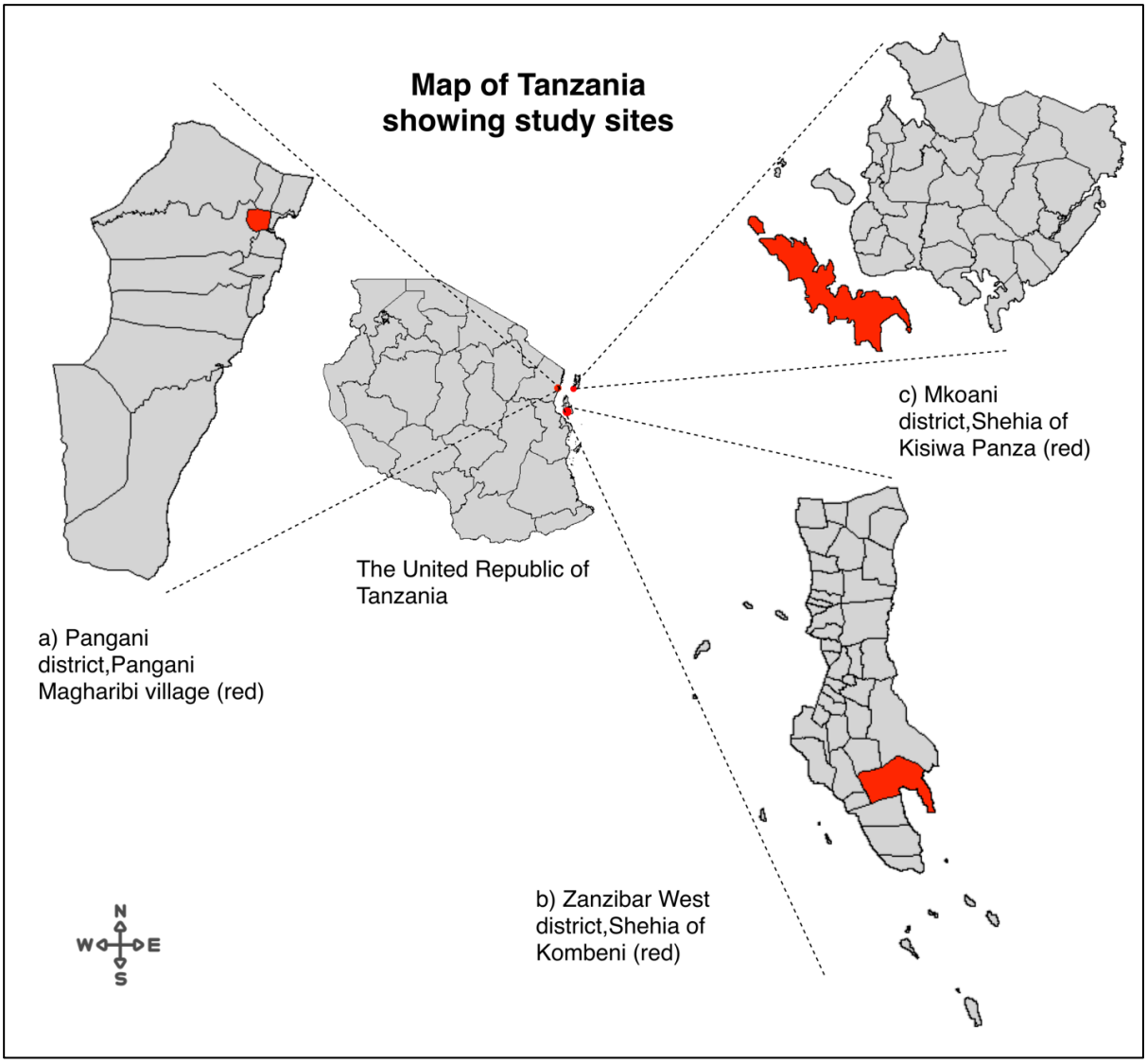


Figure 4-4: Case study locations in Tanzania.

Source: Author

Table 4-2: LDCF project locations.

| **Locations** | **Tanzania mainland** | | | **Unguja- Zanzibar** | | **Pemba- Zanzibar** | |
|---|---|---|---|---|---|---|---|
| | Bagamoyo District | Pangani District, Pangani town | Kibiti District, Nyamisati village | Maghatibi A Distict, Kilimani village | Magharibi B District, Kisakasaka village | Tumbe, Uvuni & Ukele | Mkoani District, Kisiwa Panza village |
| Sea wall constructed? | Unclear | Yes | No | Yes | No | Yes | Yes |
| Water points rehabilitated? | Yes | No | No | No | No | No | No |
| Mangroves planted? | No | Yes | Yes | Yes | Yes | Yes | Yes |
| Mangrove acreage replanted | N/A | Unknown | >700ha | 4ha | 8ha | ~10ha | 200ha[a] |
| Subjective estimation of acreage replanted [b] | Small | Large | Not observed | Small | Large | Small | Large |
| Size of pre-existing mangrove forest (degraded or not) | N/A | Unknown | >5000ha[c] | None | 300ha | Unknown | 200ha |
| Type of location | Urban | Rural | Rural | Urban | Rural | Rural | Rural |
| Implementation approach | N/A | District office and BMUs | District office and BMUs | Community groups | Community groups | Community groups | Community groups |
| Pre-existing formal mangrove forest management plan (for Zanzibar sites) and by-laws (for mainland sites) | N/A | Yes | Unclear [d] | No | No | No | Yes |

Note: Shaded columns show local level locations used for this case-study. Local level data was collected for these locations. Non-shaded columns are project locations not used as case studies. Local level data was not collected for these locations.

[a] Mangroves covered over 200ha area in Kisiwa Panza. The project restored mangroves in degraded patches across the 200ha

[b] Observation by researcher

[c] This is an estimation of mangrove acreage in Rufiji district before the split into Kibiti and Rufiji districts

[d] Existence of a local mangrove management plan could not be established.

Source: Author

### 4.3.4 Units of analysis and sampling

The unit of analysis was the country owned adaptation intervention. The project's adaptation stakeholders were the units of sampling. Adaptation stakeholders can be defined based on their roles in the adaptation processes. These can include, for example, political-administrative actors, target actors, beneficiaries and third-party actors (Metz, 2017). Political-administrative actors are 'public authorities responsible for drafting and implementing public policies' while target groups are actors considered to cause the issue being addressed by the adaptation process (Metz, 2017, p. 120). Beneficiaries are expected to generate social and economic returns from policy interventions while third party actors are those not targeted by adaptation processes but are likely to gain or suffer due to the adaptation process (Metz, 2017).

Adaptation stakeholders were divided into two groups –communities/project beneficiaries and non-community stakeholders (included local actors who represented the beneficiary communities). The former were individuals or groups of individuals who were located in the project locations who had primary or secondary dependence on mangroves and were considered to be economically and socially impacted by the project activities. For the latter group of adaptation stakeholders, this research considered both individuals and organisations as adaptation stakeholders (Schusser, 2013). Individual actors are people not affiliated to any organisation and believed to be acting on their own overt interests. The two sub-groups of adaptation stakeholders formed the two units of sampling used in this research. Different sampling approaches were used for each sub-category of adaptation stakeholders. This was due to the specific characteristics of the populations from which the samples were derived, they type of questions that each sample would be used to answer and the conceptual framework informing the analysis of each question. Sampling was done purposively and randomly. The sampling approaches for each unit of analysis is discussed below.

**a) Non-community adaptation stakeholders**

These adaptation stakeholders are individuals or organisational actors who contribute to adaptation project design and implementation. Information generated from this sample was expected to answer questions 1-4 (sections 1.4.1 and 1.4.2) which are discussed in Chapters 5 and 1.

The framework in chapter 3 considers adaptation stakeholders engaged in adaptation design and implementation to operate within a network of actors (nodes). These stakeholders are linked through resource exchanges (Ingold, 2011; Stein et al., 2011). Sampling of network actors considers specific adaptation actors and the other actors with whom they exchange resources. This principle was applied to the sampling approach of this unit of analysis.

For this unit of analysis, a combination of purposive and snowball sampling techniques was used. Purposive sampling involves 'selecting information-rich cases…which one can learn a great deal about issues of central importance to the purpose of the research' (Patton, 1990, p. 169). The research sought to obtain data relating to stakeholders' involvement in a specific adaptation process. Stakeholders who had been directly involved in the adaptation process were purposefully selected. This was combined

with snowball sampling, where sampled stakeholders were asked to identify other stakeholders who they believed had been involved in or were knowledgeable about the project (Patton, 1990). This results in a larger sample that has a higher chance of knowing about or understanding the research topic.

Sampled adaptation stakeholders needed to be elites. Elites are 'individuals in positions of power and influence' in an organisation that is considered to be an adaptation project actor and who also have knowledge about the organisation's involvement in the adaptation process (Marshall & Rossman, 2014, p. 155). Elites included elected political representatives, heads of government agencies or departments and representatives of other non-government agencies. Elites demonstrate very good understanding of an organisation's behaviour and policies (Marshall & Rossman, 2014). Elites were identified as actors who were involved in either the design and or implementation of the LDCF project for each study location and represented either himself or herself or an organisation.

To ensure that only the most important actors in the adaptation project were sampled, where importance was characterized by actors' contribution to the process, network boundaries had to be identified (Ibarra & Andrews, 1993). Determination of network boundaries involves deciding the type of individuals or organisations are considered adaptation-project actors. This is because many adaptation project actors increase the number of nodes, making data collection and analysis bulky. Following Metz (2017), the network boundary for this research was defined using the LDCF project in Tanzania and the three case study locations. Three approaches can be used to define a network boundary, with the choice of approach depending on the core starting point. Starting points can be actors, the existing relationships between these actors or particular sets of events (Laumann et al., 1989).

An event/activity-based approach (also called decisional approach) has participation in the adaptation project considered to be the determinant of the boundary and only actors that participate in this adaptation project are considered (Metz, 2017). The relational approach is based on the relationships between actors in the network and starts by identifying key actors (a small list) in an adaptation project and then finding other actors who have close ties with these key actors (Metz, 2017). This is also referred to as an egocentric approach to defining network boundaries. The positional approach is actor-based and identifies actors who have central roles in a network and draws the boundary around them (Metz, 2017). These approaches to defining network boundaries can be applied in isolation or in combination. The identification of network boundaries is only useful for research design purposes, as it is arbitrary and does not apply in reality (Kossinets, 2006). This is due to the fluidity of network boundaries in reality.

This research adopted a mix of event-based and relational approaches to defining network boundaries. Using two or more approaches to boundary identification is common in network analyses (Marin & Wellman, 2011). To do this, the researcher acquired an in depth understanding of the adaptation project and the climate change adaptation legal structures in Tanzania. Considering that the adaptation project was implemented between 2010 and 2019 (even though project design started as early as 2009), the event-based and relation-based approaches to network boundary specification were applied to this period. The 2010-2019 period was used to draw the temporal network boundary. Purposive sampling principles were applied. The event-based approach as used before data collection. Actors who

participated in the LDCF project design and implementation were first identified from project document reviews. A list of actors was drawn. Consultations were held with project focal points to review the list of actors. The final list, called the primary network list, had a sample of actors who contributed to policy design and implementation for the three selected case locations –Kisakasaka, Kumba and Kisiwa Panza. The use of the case-locations for drawing spatial boundaries assumed that actors in locations outside of these case study locations did not engage in project activities or influence decisions in any way. This may not be the case as collective transboundary decision-making may have occurred at any point during project design or implementation. However, the spatial delineation was necessary for the creation of a more specific list of actors.

The relational approach was applied during the data collection phase and contributed towards the creation of a secondary list of adaptation project actors. Snowball sampling approach principles were applied here. During data collection, stakeholders in the primary list identified their 10 priority exchange partners (5 of whom resources were given to, and 5 from whom they received resources). Following Ibarra and Andrews (1993), secondary actors who were nominated by two other primary network members were added to a secondary policy actor list. See Appendix 1 for the primary and secondary list of actors. Those with less than three nominations were considered marginal to the network and therefore excluded. Actors in this list were considered to contribute towards the adaptation project indirectly through the primary actors. The list of primary and secondary adaptation project actors was considered to represent a sample of the adaptation project actors. This thesis acknowledges that it is impossible to fully sample networks of actors (Ibarra & Andrews, 1993).

**b) Community members (target population and beneficiaries)**

The second unit of analysis considered in this research are the communities who were the project's target populations and beneficiaries in the three case study locations. Resource users from these communities were the target and beneficiaries from the adaptation project. This sample was used to generate data that was used to answer questions 3-6 (sections 1.4.2 and 1.4.3 in chapters 1 and 7). The consideration of communities as a separate unit of analysis is informed by current efforts in development to ensure that communities in LDCs contribute towards decision-making, especially on issues relating to adaptation to climate change (Narayanan et al., 2015). However, their contributions have remained minimal where these communities have only played instrumental roles in development and climate action (Chirenje et al., 2013). Community participation in decision making is important in the UNFCCC operational principles (e.g. the UNFCCC created the Local Communities and Indigenous People's Platform (LCIPP) to enhance integration of local knowledge into national and international climate change policies (UNFCCC, 2019b)). The LDCF project sought to restore and build capacity of institutions to adapt to climate change, with communities and community institutions also targeted. A sole focus on non-community-level adaptation stakeholder as unit of analysis would overlook the gaps or achievements by the adaptation intervention at the local level.

Stratified and random sampling approaches were used. The two case communities in Zanzibar were chosen based on the existence of a community mangrove management plan. Kisiwa Panza had one while

Kisakasaka had none. The presence of a community forest management plan has been found to be a key factor in determining the success of resource conservation (Ostrom, 2009). The researcher chose to sample individuals as resource users (as opposed to households). Most existing research on natural and forest resource management does not specify the resource users. Instead, these research gravitate towards resource user groups and/or households as the core resource users (e.g. Adhikari and Lovett (2006)). However, resource access and use is individual-based while benefits from resource-use may (but not always guaranteed) extend to the household level (Moktan et al., 2016). Challenges to resource access and use are experienced individually. Additionally, forest resource access and use in LDCs exhibits inequalities (Pandit & Bevilacqua, 2011; Rocheleau & Edmunds, 1997). The use of households as a unit of analysis for resource use hides these inequalities as most household-based research targets one member of the household and overlooks others. This research targeted individuals as resource users and beneficiaries of mangrove protection project activities.

Within each of the selected communities, stratified sampling was used. The communities were first divided into geographical sub-locations following administrative spatial boundaries. For example, Kisakasaka village was split into Bondeni and Kilimani sub-villages. Individuals were then randomly sampled from these sub-villages. Data was collected along transects which ran across each of the sub-villages. Sample sizes for each case study location were based on the 2012 national census data obtained from local governments in each of the case study locations. Resource users were defined as anyone who was 18 years (legal adult age) and older. The sample size was calculated at 96% confidence level and 6% confidence interval. The sample sizes are shown in Table 4-3.

In summary, this section has presented the research methodology by introducing the case, case selection and the unit and sampling approach. Section 4.3 will present the data collection tools.

Table 4-3: Case study locations sample sizes (96% confidence level and 6% confidence interval)

| **Study location** | **Total population (based on 2012 national census values)** | **Population ≥18 years (value in brackets represent percentage of population aged ≥18 years)** | **Sample size** |
|---|---|---|---|
| Kisakasaka | 772 | 394 (51%) | 159 |
| Kisiwa Panza | 3000 | 1608 (51%) | 229 |
| Kumba | 2422 | 1186 (49%) | 218 |

Source: Author

## 4.4 Data collection tools

The research collected qualitative and quantitative data (see 4.2.1). A combination of tools was used to collect these data. This was to increase construct validity of the research (Yin, 2013). The tools were first designed in English and later translated into Swahili by the researcher. The translated tools underwent several rounds of reviews by two research assistants and a local contact for clarity, grammar and cultural fitness. Semi-structured interviews, focus group discussions and structured questionnaires

were administered in Swahili by the researcher and research assistants. The tools used are discussed in the following sub-sections.

### 4.4.1 Policy and project document review

Project document and policy analysis were used before and during data collection. Information regarding the national and sub-national adaptation legal structures and the LDCF project were reviewed to generate a background understanding of the project. Information gathered through these reviews informed the revision of the research design. Table 4-4 highlights the main policy and project documents reviewed.

Table 4-4: List of documents reviewed.

| Document analysed | Author/Publisher | Date published | Type (policy or project document) |
|---|---|---|---|
| Tanzania National Climate Change Strategy | GoT[a] | 2012 | Policy document |
| Tanzania National Climate Change Communication Strategy | GoT | 2012 | Policy document |
| Tanzania National Adaptation Plans of Action | GoT | 2007 | Policy document |
| Tanzania INDCs | GoT | 2015 | Policy document |
| Zanzibar Climate Change Strategy | RGoZ[b] | 2012 | Policy document |
| Zanzibar National Forest Policy | RGoZ | 1998 | Policy document |
| Zanzibar Environmental Management Act | RGoZ | 2015 | Policy document |
| Zanzibar Environmental Policy | RGoZ | 2013 | Policy document |
| Zanzibar National Forest Act | RGoZ | 1996 | Policy document |
| LDCF project proposal | UNEP | n.d. | LDCF project document |
| LDCF baseline survey report | C4 Ecosolutions | 2014 | LDCF project document |
| LDCF midline assessment report | Baastel | n.d. | LDCF project document |

[a] Government of the United Republic of Tanzania

[b] Revolutionary Government of Zanzibar

Source: Author

### 4.4.2 Interviews, focus group discussions and questionnaires

Semi-Structured Interviews (SII) of key informants and Focus Group Discussions (FGDs) are commonly used data collection tools in research. Semi-structured interviews adopt principles from structured and unstructured interviews. Structured interviews involve sets of already established questions about a topic where all questions are standardised for each interviewee (Punch, 2013). Unstructured interviews are 'non-standardized, open-ended [and] in-depth' (Punch, 2013, p. 147). Semi-structured interviews are semi-flexible to ensure that certain key topics are discussed while keeping the focus broad enough to obtain any other information that may come up during the interview. FGDs are also referred to as group interviews and involve interviewing several people concurrently (Punch, 2013). The standard number of interviewees in an FGD varies between 7 and 12 people (Marshall & Rossman, 2014). FGDs have the ability to generate 'explicit…views, perceptions, motives and reasons' from the group participants (Punch, 2013, p. 147). FDGs and SIIs do not impose limitations of discussion topics to the researchers and respondents and information obtained can be broad and specific depending on the direction taken by the discussion, the types of individuals present to offer their opinions and the

facilitation skills of the interviewer (Marshall & Rossman, 2014). Due to their design, semi-structured interviews and FGDs offer the researcher an opportunity to clarify issues during data collection (Marshall & Rossman, 2014). Their ability to produce quality data is however dependent on trust between the interviewer and interviewee, and availability of time (Marshall & Rossman, 2014).

In preparation for data collection, the researcher conducted an assessment to establish the feasibility of using these tools for data collection. These tools are prone to subjectivity, as recording, interpretation and analysis of data are based on what the interviewer and researcher capture and record. To mitigate this bias, all KIIs and FGDs were digitally recorded, transcribed and translated by the researcher and a professional translator. Interview and group discussion guides were also used during data collection to ensure that the discussions did not veer far off course. Facilitation and interview skills are also critical for FGDs and KIIs respectively, as they determine the dynamics between the moderator/interviewer and the group/interviewee respectively, further affecting the quality of data collected. The researcher took online interview group facilitation and interview training courses, conducted pre-tests of interviews and group discussions in non-case study communities and trained the research assistants on data collection protocols. The protocol followed in the administration of the interviews and FGDs is discussed below.

**a) Semi-structured KIIs**

These were administered to single individuals or a group of 2-3 individuals representing an organisation, which had been identified as non-community level adaptation stakeholders. These were identified through the procedure discussed in section 1.1.1. Requests for interviews were made by the researcher via email, phone calls or in person at least 24 hours in advance of the interviews.

48 interviews were conducted with actors at all 4 levels of governance –the international, national, sub-national and local levels between March and October 2018 (see Table 4-5). Some interviews were done over one session while others were done over several meetings spread across more than a day. Inquiries were made about understanding of climate change risks and SLR in the specific case locations, involvement in the adaptation project, resources exchanged between organisation and adaptation project and other policy actors and perceived level of influence in decision-making during adaptation project and informal rules applicable to the adaptation project. See Appendix 2 and 3 for the interview and group discussion guides respectively.

Table 4-5: Summary of actors interviewed.

| Type of actor | | Government | Non-government | Private sector |
|---|---|---|---|---|
| International | | | 01 | |
| National | | 11 | 04 | 01 |
| Sub-national | Magharibi B district (Kisakasaka) | 05 | - | - |
| | Mkoani Disstrict (Kisiwa Panza) | 01 | - | - |
| | Pangani District (Kumba | 06 | 02 | - |
| Local | Kisakasaka | 03 | 02 | - |
| | Kisiwa Panza | 02 | 03 | - |
| | Kumba | 04 | 03 | - |
| **Total** | | **32** | **15** | **01** |

Source: Author

The interviews lasted 15-120 mins. The length varied depending on the actors' level of involvement in the adaptation project and the respondents' knowledge of the actors' involvement. The general themes discussed in the interviews are summarized in table 4-6. The use of individuals to respond to the organisation's adaptation project activities was a potential source of error due to the presence of hierarchies and specialization within organisations hence actors may not be aware of the other activities that the organisation or other actors in the organisation engage in (Marsden, 1990). To mitigate this, the researcher sought to interview senior members of organisations who were likely to know more about their organisations' involvement in the adaptation project. This meant that potentially important links between organisations and with the adaptation project that may have been created and maintained by junior members of organisations might not have been captured.

Research on network analysis suggests that recalls of interactions for short and specific timeframes can have inaccuracies (Marsden, 1990). An 11-year timeframe (2008-2018), corresponding to the temporal network boundary, was used to bound recalls of exchanges and interactions. This longer time-frame increased chances of capturing routine as opposed to one-off interactions. However, responses were prone to bias, as individuals are likely to inflate the frequency and nature of relations (Bernard et al., 1984). Bias emerges from the relationship between cognition and reality, where respondents infer to their perceptions of networks rather than the networks (Kossinets, 2006). Interviewees were presented with a pre-developed list of stakeholders (from document reviews and focal consultations) to aid recall and reduce bias. However, they were also asked to mention other actors not mentioned on the list.

Table 4-6: Description of sub-themes discussed during the semi-structured interviews

| Sub-theme discussed | Explanation |
|---|---|
| Actor understanding climate change risks and impacts of SLR in the case study locations | Questions related to a) general perception of climate risks b) perception of SLR and c) reflection of approach taken by project to manage SLR i.e.<br>- What the respondents believed to be the main risks resulting from climate change, the causes/drivers of these risks, vulnerability patters and possible solutions/means to address these risks/issues<br>- What the respondents perceived to be the causes and drivers of SLR, its impacts adaptation options and a reflection of the project's approach to coastal adaptation to SLR |
| Actor engagement in the adaptation project | Involved questions relating to review of the actors' past and current involvement and role in the adaptation project |
| Resource exchanges during adaptation project | Questions sought to capture the types (and quantity) of resources exchanged between the actor and other actors and between the actor and the adaptation project. |
| Informal rules and influence in the adaptation project | This related to what the actors considered the informal rules within the adaptation project that allowed some actors to have more influence in decision-making than others. |

Source: Author

**b) Questionnaires**

Questionnaires involve standardised questions administered to people intended to capture information about specific aspects of their lives. Types of questionnaires vary based on the structure and type of data being collected. Structured questionnaires involve closed or open-ended questions that focus on specific pre-determined questions while unstructured questionnaires follow the direction of the conversation where each following question depends on the answer given to the previous question. This thesis used structured questionnaires. These types of questionnaires offered more resource and time efficiency as compared to administering semi-structured interviews to individuals (Jones et al., 2013). This was essential due to the large sample size that was required and financial resource constraints. A combination of closed and open-ended questions was asked.

The questionnaires were administered to individuals in the case study communities by the researcher and the research assistants. The questionnaire was pretested in Kisakasaka, Kumba and Kisiwa Panza (11, 5 and 5 questionnaire pre-tests respectively) to check for grammar, length of questionnaire, specificity and simplicity of questions, structure and order of the questions and cultural desirability (Lietz, 2010). Pre-test feedback informed the revision of the questionnaires. The questionnaires were designed to be short to take less time. This was specifically intended to avoid non-observation errors resulting from non-responses such as refusals or non-completion of the questionnaires (Lepkowski, 2005). Consequently, all questionnaires were completed. Non-response from refusals occurred in

Kisiwa Panza where respondents insisted that they receive payment for completing questionnaires. The researcher conducted re-visits and convinced some non-responders to complete the questionnaire.

Collectively, 629 questionnaires were completed for the 3 study locations (Table 4-7). Questionnaires were completed within 8-20 minutes. Before the administration of each questionnaire, respondents were given a description of the research, which highlighted to goal of the research and the questionnaire and ethical considerations taken for the research. Respondents' verbal consent was sought before administration. Response time varied between 7 and 30 minutes. A sample of the questionnaire is presented in Appendix 4.

Table 4-7: Questionnaires administered to individuals.

| **Location** | **Women** | **Men** | **Total** |
|---|---|---|---|
| Kisakasaka | 74 | 87 | 161 |
| Kisiwa Panza | 123 | 118 | 241 |
| Kumba | 122 | 105 | 227 |

Source: Author

The questionnaire captured individuals' demographic information, their understanding of the adaptation project , impacts of climate change to them, reliance on mangrove forest resources, access to participation spaces created during the adaptation project , level of participation attained and knowledge about laws relating to access and use of mangrove forest resources. These are summarised in Table 4-8.

Table 4-8: Sub-themes in the individual questionnaires and their explanations

| Sub-theme | Explanation |
|---|---|
| Demographic characteristics | These questions captured respondents' demographic characteristics. |
| Understanding of the adaptation project | Respondents' knowledge about why the project was implemented in the community. |
| Impacts of climate change | Respondents were asked to state the ways in which they had been impacted by sea level rise and associated impacts |
| Reliance on mangrove forest resources | This related to an individual's reliance on mangroves where different options were |
| Access to participation spaces during the adaptation project | Questions sought to find out whether respondents had had any access to any of the different participation spaces during the adaptation project. |
| Level of participation attained during adaptation project | This related to the individuals' perceptions of the level of participation achieved (based on a 4-level ladder of participation) during the adaptation project. |
| Knowledge about laws relating to access and use of mangrove forest resources. | This related to whether individuals felt that they understood and/or supported the laws/rules of access and use of mangrove forests and resources in their communities |

Source: Author

**c) Focus Group Discussions**

FGDs were conducted with community members in the case study locations. These were held after the conclusion of the administration of questionnaires to individuals within the same community. The FGDs were therefore informed by the information gathered from the surveys thus provided detail and clarifications to some of the issues captured from the questionnaires (Nyumba et al., 2018). Thirteen FGDs were done with 131 individuals selected from the three case study locations (see Table 4-9). Participants were stratified by location and gender. By location, participants were drawn from each of the sub-villages (within which transects were drawn for random sampling). Stratification by gender was necessary the FGDs due to the existing cultural norms in the study locations which mostly restricted (young) women from speaking in mixed gender groups and in the presence of elders. One group discussion was not stratified by gender because there were few participants available for each gender group and the researcher did not perceive gender norms to be a major restriction to the participation of women in a mixed gender setting.

Table 4-9: Summary of number of FGDs conducted in each study location

| FGDs | Kisakasaka | Kumba | Kisiwa Panza |
|---|---|---|---|
| Number of FGDs conducted | 05 | 04 | 04 |
| Number of men-only FGDs | 02 | 02 | 02 |
| Number of women-only FGDs | 02 | 02 | 02 |
| Mixed gender FGD | 01 | - | - |
| Total number of FGD participants | 45 | 37 | 49 |

Source: Author

FGDs generally have higher probabilities for bias, originating from participant selection and from the discussion. Bias also emerges from free-riding/social loafing, group think, information cascade, shared information bias and the dominance effect (Mukherjee et al., 2018). To avoid selection bias, FGD participants were selected by the researcher (with support from the research assistants and a local informant) where thirteen individuals were randomly selected from transects across the case study locations and invited to attend the FGD discussions. To qualify as a participant, individuals had to have resided in the case study communities for at least 6 months and had to be at least 18 years of age. During the discussions, bias was reduced by encouraging and nudging participants to contribute towards the discussion. The researcher made efforts to create a safe space for each participant by encouraging them to be respectful of each other and speak freely. Less vocal participants were given special opportunities to speak. The questions were pre-tested in a non-study community and revised based on feedback from the participants.

Where possible, meetings were conducted in locations that were identified by local informants as being easily accessible by the FGD participants. Issues discussed related to impacts of climate change risks in the case study locations and sub-locations, their perceptions of SLR and the project's approach towards coastal adaptation, the groups' participation in the project design and implementation and their understanding of laws pertaining to access and use of mangrove forests (see Table 4-10). The FGDs lasted about 45-120 mins. The ages of the participants ranged from 19 to 65 years. The researcher regulated the discussions while two research assistants took notes and asked clarification questions. The discussion was also digitally voice recorded and later transcribed by the researcher. In summation, this section has presented the tools used for data collection. Section 4.4 presents the data analysis approach used in this thesis.

Table 4-10: Description of themes discussed during the FGDs.

| Sub-theme discussed | Explanation |
|---|---|
| Understanding of climate change impacts and vulnerability in the case-study location | Discussions on the effects of climate change, specifically sea level rise, vulnerability patterns in the communities and potential adaptation options |
| Participation in the project | Discussion on how community members had been involved in the adaptation project design and implementation, the types of participation spaces created, accessed by the community members and their effectiveness in ensuring that community members' voices were heard. |
| Understanding of rules/laws of access and use of mangrove forests | Discussion on the presence/absence of (by)laws on the access and use of mangrove forests and the implications of this on the future of coastal adaptation in the communities of interest. |

Source: Author.

## 4.5 Data analysis

As the data is qualitative and quantitative in nature, qualitative and quantitative data analysis approaches were used. The following sub-sections present the data analysis approaches used in this thesis.

### 4.5.1 Quantitative data analysis

Quantitative data was generated from the questionnaire surveys. The survey data was digitized in Microsoft Excel. Missing data was identified and addressed. This was done alongside the data collection and so it was possible to conduct re-visits to address the missing data or to disregard the questionnaire if the missing data was substantial.

Next, numerical codes were assigned to categories. This made it possible for the data to be analysed quantitatively. The data was then exported to Stata statistical software (STATA SE 15) for analysis. The analysis generated descriptive statistics of the sample (e.g. frequencies) and graphical representations of the different categories of data that was collected e.g. proportions of individuals who reported being affected by sea level rise, were dependent on mangroves and had access to the specific participation spaces.

### 4.5.2 Qualitative data analysis

Qualitative data was obtained from key stakeholder semi-structured interviews and FGDs. These were transcribed and translated by the researcher (with help from a professional transcription service) and catalogued. Thematic analysis, which is useful 'for identifying, analysing and reporting patterns (theories) within data' and 'provides a flexible and useful research tool which can potentially provide a rich and detailed, yet complex account of data' was used (Braun & Clarke, 2006, p. 6). A retroductive thematic analysis was used, where information and meaning were triangulated from specific claims in the data and from theory. Themes were identified from theory on influence and power. Latent meanings from the interviews and group discussions were extracted and classified into appropriate themes.

A conceptual framework based on influence in adaptation processes generally guided the research. In this framework, influence was assessed using different parameters which were based on actors' perceptions. An actor's influence is perceived by the actor and others. These perceptions are a factor of the social structures in which these actors operate. However, despite these perceptions, influence is in reality attributed to a single or several actors. The following section reflects on the researcher's positionality in the research.

## 4.6 Ethics, reflexivity and positionality

### 4.6.1 Ethics

The research was granted ethical approval by the School of Agriculture, Policy and Development ethics committee. This research was also granted research permits by the GoT and the RGoZ (Appendix 6). Research assistants were also trained on ethics and code of conduct while conducting data collection. Based on the researcher's knowledge, ethics standards were adhered to during data collection. Verbal consent was sought from the respondents and participants at the beginning of and during interview, FGD and questionnaire. A verbal consent (as opposed to written consent) was preferred due to the cultural context in which the research was conducted as most women could read and/or write and community members were generally suspicious of anyone who asked them to sign documents. The interview respondents were also requested for a verbal consent as the research was conducted during a politically sensitive time and verbal consents were used to assure the respondents of confidentiality. Participants in the research were assured of their anonymity and confidentiality. To maintain confidentiality, the analysis in this thesis only mentions the type of adaptation actors interviewed (i.e. national, sub-national and local, government and non-government). The individuals that participated in the FGDs and contributed towards the questionnaires will also remain anonymous. Their demographic details were used to identify them.

### 4.6.2 Reflexivity and positionality

Researchers always occupy special positions in the locations in which they conduct their social science research. Researchers' demographic characteristics like age, sex and race can influence their engagement with the research subjects thereby affecting the data (Yin, 2013). This is due to their (assumed) knowledge about the specific topic of inquiry. The researcher's position is more pronounced when researchers are not locals of the locality under study.

When conducting data collection in Tanzania, the researcher was constantly aware of the biases that her presence introduced into the research. Even though the researcher spoke the local language, (Swahili) which enabled her to (fairly) easily engage with different individuals during data collection, her foreign accent unintentionally generated biases in responses by interviewees and survey respondents. To mitigate this, local research assistants who spoke the local language in local dialects conducted most of the surveys (except re-visits to individuals who refused to complete the questionnaires, which were undertaken by the researcher). The researcher also introduced herself to FGD participants and interviewees to develop a rapport before data collection begun.

The political environment in Tanzania at the time of data collection also led some respondents to withhold some information. Some respondents assumed that the researcher worked for an international development organisation and so altered their responses to suit different personal expectations. This led some respondents to either over- or under-state their responses. To mitigate this bias, research assistants were trained on how to address questions relating to expectations from participating in the research.

Being a woman also caused bias in responses, especially from men. The researcher adhered to cultural requirements and expectations such as dress code (e.g. cover head) and social interaction requirements (e.g. gender segregated sitting arrangements). The researcher also adhered to the field security protocol developed by the University of Reading.

In summary, this chapter has discussed the methods and data for this research. It has presented a description of the research methods, which are based on a case study of a coastal adaptation project in Tanzania. The case selection approach is also presented. Lastly, this chapter has presented the data collection tools and analysis approaches that are applied to this thesis. The following chapter presents the first empirical chapter of this research.

# 5 Country ownership: Stakeholder influence or government control?

A version of this chapter was revised and re-submitted to *Geoforum* on 12 December 2019


## Abstract

Principles for country ownership of adaption within the UNFCCCC and its mechanisms emphasise on intra-state multilevel stakeholder engagement. This is operationalised through multilaterally-funded projects embedding multi-level stakeholder collaborations (MSC) into their approaches. MSCs enable the integration of diverse stakeholder voices into adaptation decision making within states. This enables equitable adaptation as these can stakeholders bring attention to local level adaptation needs and vulnerabilities. Yet, little is known about the extent to which stakeholder engagement occurs or whether these stakeholders influence adaptation decision making in these processes. This research addresses this knowledge gap through a case study of a Least Developed Countries Fund-funded coastal adaptation project in Tanzania. Social exchange theory is used to understand power in multi-stakeholder adaptation decision-making. Influence is framed as a factor of resources exchanged, the organisational and institutional structures and rules. Results from adaptation stakeholder interviews (n=47) show that most stakeholders perceived government's control of adaptation finance as enabling government influence in adaptation decision making within the project. These are enabled by the project's structures (national level) and the country ownership structures (international level) which limit the engagement of non-government and local actors in project decision making design. These findings necessitate a reconsideration of whether international climate governance structures may be reproducing injustices by creating structures that reinforce adaptation actor exclusion at the national and local levels. The research recommends an exploration of ways through which allocation of climate finance can be channelled to the local level through other non-government actors.


## 5.1 Introduction

Vulnerability reduction is essential to achieve adaptation in LDCs. one reason why vulnerability reduction has been slow in LDCs is the gaps and conflicts between climate change policies and actions (Magnan et al., 2016; Ojha et al., 2016). There is an exclusion of local level community and civil society actors from adaptation planning, with processes dominated by international and national government actors (Ford et al., 2015). Multi-stakeholder collaborations (MSCs) are considered good practice in adaptation literature (Ford & King, 2015; Ivey et al., 2004). Multi-stakeholder engagement through MSCs also increase country ownership (Ballesteros et al., 2010) by generating shared visions and priorities for addressing local level vulnerabilities and adaptation needs (Adger et al., 2005; Pinkse & Kolk, 2011; Stringer et al., 2014). However, it is important to understand the patterns of power and influence in multi-stakeholder processes, as this provides an indication whether adaptation is equitable (Ryder, 2018). This research investigates whether MSCs enable equitable intra-state adaptation

MSCs are informed by the knowledge that collective action is required to address climate change by 'facilitating and operati[onalising] multiorganizational arrangements for solving [climate change] problems that cannot be achieved or achieved easily, by single organisations' (McGuire, 2000, p. 278).

They involve different actors who work collectively to address shared problems (Wood & Gray, 1991). Normatively, MSCs in climate change adaptation source actors from different levels of governance (Daniell et al., 2011). The diversity of interest and the interactions between actors from different levels of governance generate contestations for power and recognition which make MSCs are inherently political and are characterised by (Bulkeley & Betsill, 2013; Dentoni et al., 2018; Sova et al., 2015a). Equitable MSCs enable stakeholders, especially those that represent local level priorities to influence decision making (Faysse, 2006). This goal overlaps with that of country ownership.

Country ownership is driven by the need for climate justice and equitable adaptation, through enabling actions which reduce local level vulnerabilities and address adaptation needs (Norrington-Davies & Thornton, 2011). Country ownership principles adopted by UNFCCC finance mechanisms emphasise on the need to leverage country institution and actors in adaption planning and implementation (ADB & CIF, 2013; GCF, 2017; Kim et al., 2017; UNFCCC, 2012a, 2017, 2018b). These recognise the role of domestic adaptation actors in improving adaptation effectiveness (Cammack, 2007) i.e. adaptation that meets its normative goal of addressing local level vulnerabilities (Faust, 2010). Intra-state stakeholders are important to country ownership (Biekart & Fowler, 2018; Kjær & Joughin, 2012). Their engagement in adaptation ensures that multi-stakeholder voices are integrated into adaptation decision making, which contributes to equitable adaptation (Grasso & Sacchi, 2015). Stakeholders are assumed to possess knowledge of patterns of local level vulnerability and adaption needs.

Yet, existing adaptation literature questions the framing of MSCs in enabling climate change adaptation and development (Fadeeva, 2005; Melhus & Paton, 2012). Even though multi-stakeholder processes may be characterised by diversity in stakeholder interests (Smith et al., 2013), these maintain a risk of elite control which compromises the ability of adaptation to address local level priorities (Few et al., 2007; Kjær & Joughin, 2012; Lebel et al., 2012; Tanner & Allouche, 2011). This research questions the links MSCs and country ownership to intra-state stakeholder influence. It investigates a) the approaches to stakeholder collaboration are used in projects that intend to be country owned b) whether stakeholder collaboration as a principle of country ownership enables intra-state adaptation stakeholder to influence adaptation decision making.

This research makes a theoretical and empirical contribution to existing research. Theoretically, it develops and uses a framework informed by social exchange theory to assess influence in multi-stakeholder collaborations (MSC). This addresses gaps in existing frameworks which inadequately link inter-stakeholder interactions, resource exchanges and influence in MSCs. Empirically, the research adds to existing literature on the why and how of stakeholder collaborations in CCA (e.g. Desportes et al. (2016)). Unlike existing research focusing on the international level (e.g. Sherman and Ford (2014)), this research generates new evidence on intra-state processes and outcomes from country ownership of adaptation. Findings indicate that the extent of stakeholder engagement for country ownership is dependent on institutional structures, which direct adaptation finance through government institutions and enable government control.

This research has six sections. Section 5.2 lays out the theoretical approach for analysing influence in MSCs. Section 5.3 presents a discussion of the context and methods. Section 5.4 presents the key findings relating to rules of engagement within MSCs, actor interests and strategies used in achieving these interests, resource exchanges and actor perceptions of problems and solutions. Section 5.5 discusses these findings within country ownership and stakeholder influence in MSCs. Section 5.6 presents the conclusion.

## 5.2 Power and influence in Multi-stakeholder Collaborations

### 5.2.1 Influence in multi-stakeholder collaborations

MSCs have varied classifications –a) by types of actors involved e.g. public-private partnerships (Chen et al., 2013), b) the scales of governance that stakeholders emerge from e.g. transnational collaborations (Andonova & Levy, 2003) c) sectoral focus e.g. cross-sectoral collaborations (Andrews & Entwistle, 2010) and d) ownership-based classifications which recognise the role of power and stakeholder desire to influence decision making (Clarke & MacDonald, 2016). Influence is used as a proxy for ownership (Schiffer et al., 2010). Different frameworks have been used to understand influence in MSCs (Table 5-1). In these frameworks, collaborations involve consensus-building and are devoid of politics, interests and power (Dredge, 2006). Links between politics, power and influence are poorly captured. The following sub-section builds on these principles and presents a power-based framework for influence in MSCs.

Table 5-1: Existing frameworks for analysis of influence in MSCs.

Table shows that existing frameworks to the analysis of influence in MSCs exhibit weakness through how their understanding of inter-stakeholder relations and the role of resources and resource exchanges within MSCs.

| **Frameworks** | **Underlying concept** | **The focus of analysis for understanding influence** | **Strengths (+) and weaknesses (-) concerning understanding influence in MSCs** |
|---|---|---|---|
| Stakeholder management frameworks | Level of influence is a factor of the position of an actor relative to the decision-making body; primary actors have more intrinsic value, and so have more influence Identifies primary and secondary stakeholders (Amaral & Magalhaes, 2002; Matlay, 2011; Nejati et al., 2014; Park et al., 2014).<br>Stakeholders in each group have different levels of influence* | Interests of stakeholders and their influence on organisational behaviour* | (-) Places more emphasis on organisation-stakeholder relationships while overlooking stakeholder-stakeholder interactions (Rowley, 1997)<br>(-) Assume that organisations respond to single stakeholders* |
| Advocacy coalition frameworks (ACF) | Multi-stakeholder collaborations as coalitions between actors*<br>Coagulation between actors forms groups that are based on shared policy beliefs and preferences (Weible, 2005)<br>Analyses focus on the influence achieved by groups as opposed to individual influence* | Groups of actors/stakeholders, their interests/belief system and means of achieving influence (Carter et al., 2016) | (+) Enables the study of policy processes as a whole, thus capturing major and minor policy changes*<br>(-) Assumes rationally-driven actors seeking to join coalitions to achieve shared coalition beliefs and use legally provided tools to achieve influence (Kübler, 2001; Winkel et al., 2011). This assumption may not be valid.<br>(-) The role resources and their contribution towards actor and coalition power and influence are conceptually well understood but remain limited in empirical integration (Sabatier & Weible, 2007; Sewell, 2005) |
| Social and policy network analyses | Multi-stakeholder collaborations as networks (e.g. Farrell (2016) and Zedan and Miller (2017))<br>Actors and the relationships between them are a crucial feature of the MSCs * | Network measures to understand network structure and influence of actors (e.g. Farrell (2016)) | (-) Insufficient attention paid to resource exchanges between network actors* |
| Dependence and exchange theories | Collaborations as composed of dependencies and resource exchanges (Frooman, 1999)<br>Acquisition of resources and their exchanges considered a means through which influence is acquired (Weible, 2005). For example, see Ruggiero et al. (2014) | Resource exchanges between actors* | (-) Overly focused on resources, with little attention paid to how exchanges occur or what the characteristics of actors who engage in resource exchanges are* |

*Derived from author's critical review of existing literature. Source: Author

### 5.2.2 Power and influence in MSCs

Existing frameworks for influence in MSCs have limited engagement with contestations for control. This research considers MSCs as characterised by power, politics and interests which generate 'struggles over authority and recognition' (Henry, 2011, p. 12; Nightingale, 2017). Influence emerges from the exercise of power (Van Tatenhove et al., 2010). Different frameworks of power exist (Svarstad et al., 2018). The choice of frameworks for understanding power and influence is informed by what this research considers an important element of the adaption process. Knowledge from multi-level stakeholders is critical in informing an understanding of adaptation priorities, which in turn determines how adaptation finance is spent within states. (Mitchell et al., 2008). This means that information and adaptation financial resources are central to multi-stakeholder engagement as criteria for country ownership. The choice of a resource-based framing of power (Booher & Innes, 2002; Purdy, 2012) is adopted for this research.

A framework for power informed by social exchange theory which emphasise the roles of resources in generating power and influence is adopted (Arts & Van Tatenhove, 2004). Power emerges from the dependence that is generated from resource exchanges (Bonacich & Bienenstock, 2009). Power is defined as 'the organisational and discursive capacity of agencies, either in competition with one another or jointly, to achieve outcomes in social practices, a capacity which is however co-determined by the structural power of those social institutions in which these agencies are embedded' (Arts & Van Tatenhove, 2004). Power is dynamic, relational and linked to specific outcomes.

Three layers of power exist –relational power, dispositional and structural. Relational power emerges from social relationships. This involves 'actors, resources, outcomes and interactions' (Arts & Van Tatenhove, 2004, p. 350). Differences in actor influence on outcomes emerge from the unequal distribution of resources (Van Tatenhove et al., 2010). Dispositional power relates to how actors are positions in organisations in relation to each other 'and these positions co-determine what agents may achieve in terms of relational power' (Arts & Van Tatenhove, 2004, p. 350). Influence is determined by existing organisational rules and the unequal distribution of resources (Van Tatenhove et al., 2010). Structural power relates to 'the way macro-societal structures shape the nature and conduct of agents' (Arts & Van Tatenhove, 2004, p. 350). This relates to the 'orders of signification, domination and legitimization [which] shape specific rules' (Van Tatenhove et al., 2010, p. 613). The three layers of power apply during adaptation planning and implementation (Van Tatenhove et al., 2010).

This framework has three important elements: resources and social exchanges, structures and outcomes. Resource include anything that flows between MSC actors (Thorelli, 1986). Resource exchanges occur along needs/wants gradients motivated by rewards, costs, the value attached to costs and rewards, profits and perceptions of fairness of exchanges (Compston, 2009a; Redmond, 2015). Resources can include love, status, money, goods, services and information (Foa & Foa, 2012). Power and influence is determined by: the type of actor allocating the resource), actor and exchange partner needs/wants, and the type of available and valued resources within the MSCs (Compston, 2009b). Structures are depicted in institutional and organisational rules. Rules are 'the way the game should be played, which norms are

legitimate, how issues may be raised; agendas set; interests articulated; policies formulated; decisions made, and measures implemented' (Arts & Van Tatenhove, 2004, p. 342). Factors such as 'role perceptions of actors, attitudes,…personal interests,…and educational background' (van Bueren, 2009, p. 49). Rules define the nature of interactions and determine the (in)formality of actors and their actions (Brass et al., 2004).

Outcomes are achieved when actor preferences are reflected in either the decisions or the decision-making processes. In the latter, influence is through 'turning certain issues into a taboo, manipulating the norms, rules and procedures that regulate the agenda setting or forbidding certain participants from entering the decision-making arena' (Elbers & Schulpen, 2011, p. 798). Actors perceptions of procedural and distributive justice in decision making depend on whether their views have been incorporated (or excluded) from adaptation decision making processes and outcomes (Molm et al., 2003). Equitable processes engage actors who have knowledge of local level adaptation needs and enable these actors to influence decision making in favour of addressing these needs.

This framework is applied in this research. It recognises agency in power and influence. Power and influence are also discursive, where influence can occur through persuasion and arguments even without resource exchanges. Influence can be zero-sum (at the expense of others) or collaborative. The following section presents the context and methods used in this research.

## 5.3 Context and methods

Most developing countries that are also party to the UNFCCC are identified as being highly vulnerable to climate change. Tanzania presents a good case example of this and was chosen as country case study. Tanzania is already losing 1% of its annual Gross Domestic Product to climate change risks, which could increase to 2%/year by 2030 (Watkiss et al., 2011). Over 0.5 million people in Tanzania are likely to become poor due to decreases in grain yields resulting from droughts (Ahmed et al., 2011). Tanzania has one of the longest coastlines in Africa, with a length of about 1424 kilometres, including Zanzibar and Pemba islands (Mngulwi, 2003). Urbanisation and coastal population growth exacerbate Sea Level Rise (SLR) impacts (Kebede & Nicholls, 2012). Estimates indicate an increase in the number of people exposed to a 100-year flood in Dar es Salaam from 30,000 in 2005 to 210,000 in 2070, and damages to assets increasing from $35million in 2005 to $10billion in 2070 (Kebede & Nicholls, 2012). Coastal ecosystems such as mangroves and availability of fish are expected to be impacted (Ellison, 2015; Masalu, 2002; Sallema & Mtui, 2008). Coastal vulnerability could be higher than indicated by existing assessments (Cinner et al., 2012).

A Least Developed Countries Fund (LDCF)-funded and Global Environment Facility (GEF)-administered project was used as a case study (GEF ID: 4141). The project aimed to support coastal adaptation through multi-level stakeholder capacity building, construction of sea walls and regeneration of coastal vegetation (GEF, 2009). Being GEF-administered, the project had an Implementing-Executing agency structure, with the Government of Tanzania (GoT) acting as the executing agency and the United Nations Environment Program acting as the GEF implementing agency (UNEP, n.d). These structures were expected to support GEF projects to be country-owned. The project was also designed

to address adaptation to rising sea levels and climate change induced degradation of coastal ecosystems, which was in alignment with national adaptation priorities identified in Tanzania's National Adaptation Plans of Action (GEF, 1998; GoT, 2007a, 2007b). The project was near completion at the time of data collection, which made it possible to conduct an ex-post evaluation of country ownership.

Three project locations –Kumba in Pangani District (Tanzania mainland), Kisakasaka in Magharibi B district (Zanzibar) and Kisiwa Panza in Mkoani District (Zanzibar) were the case study locations (figures 4-3 and 4-4). These locations were selected because they were all engaged in project-funded mangrove restoration activities, which was the common factor. Kisiwa Panza and Kumba had project-funded sea wall construction in addition to mangrove protection and restoration. Local community groups were used to replant mangroves and patrol the forests to prevent deforestation. In Kumba, a Beach Management Unit (BMU) was created at the beginning of project implementation. In Kisakasaka and Kisiwa Panza, existing Community Based Organisations (CBO) were selected to support the project. Local, sub-national and national government departments and representatives were involved in supervising this work. A Project Steering Committee (PSC), composed of national and sub-national government, community and non-government civil society representatives coordinated the project (GEF, 2009). PSC reported to the National Technical Committee and the National Climate Change Steering Committee (GEF, 2009). Focal points coordinated project activities in the project locations and reported to the PSC. Kumba's focal point was a sub-national government representative (from the division of environment and forestry in Pangani District) while Kisiwa Panza's and Kisakasaka's focal point was a national government representative (the Division of Environment in the second Vice President's Office).

Data collection was through project document review (to understand the project) and semi-structured interviews with project stakeholders (n=47). Organisations were the sampling unit. Review of relevant climate change and environment policies and project documents contributed towards generating an understanding of the project context. Stakeholders that were considered as having been involved in the project were sampled from each project location. These were identified through project document review (e.g. project reports) and consultation with project focal points and other project stakeholders. Stakeholders were classified into six groups based on level and type of operation (figure 2). National Government (NG) actors were representatives from national government ministries and departments. National Non-Government (NNG) actors were private sector and national civil society actors. Sub-national Government (SNG) were representatives from district or regional government departments. Sub-National Non-Government (SNNG) actors were representatives from district- or regional-based civil society organisations. Local Government (LG) actors were village and sub-village government representatives while Local Non-Government (LNG) were the BMUs and CBOs that conducted the mangrove restoration activities at the local level.

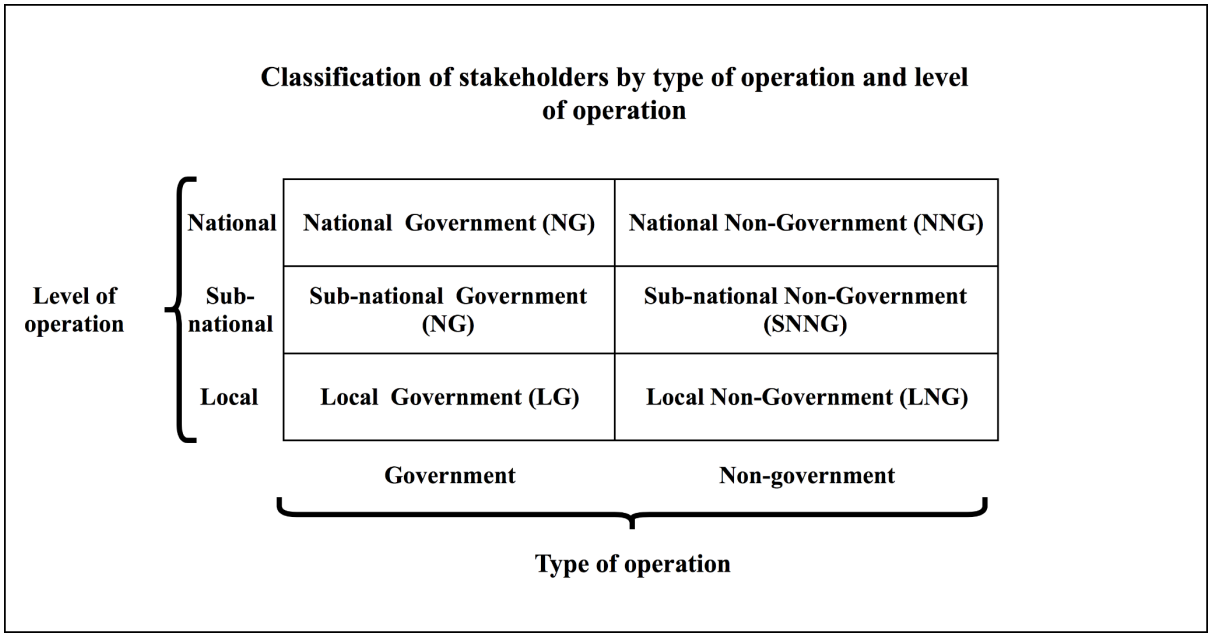


Figure 5-1: Classification of stakeholders

Source: Author

Interviewees were chosen from within the organisations that represented project stakeholders. These were 'individuals in positions of power and influence' within organisations who possessed understanding of the organisations' structure, behaviour and policies and who also had knowledge about the organisation's involvement in the adaptation process (Marshall & Rossman, 2014, p. 155). These individuals were identified through document and policy reviews to identify the names of individuals who represented organisations in meetings, consultation with project focal points and recommendations from other interviewees where specific people were recommended for interviews. The researcher made requests for meetings via email, phone call or in person at least 24 hours in advance of the interviews. Forty-seven interviews were conducted between February and September 2018. The breakdown of interviews by region and type of actor is shown in Table 5-2.

Table 5-2: Summary of actors interviewed.

| Type of actor | | Government | Non-government |
|---|---|---|---|
| National | | 11 | 05 |
| Sub-national | Magharibi B district (Kisakasaka) | 05 | - |
| | Mkoani District (Kisiwa Panza) | 01 | - |
| | Pangani District (Kumba) | 06 | 02 |
| Local | Kisakasaka | 03 | 02 |
| | Kisiwa Panza | 02 | 03 |
| | Kumba | 04 | 03 |
| **Total** | | **32** | **15** |

Source: Author

Interviews focused on: a) understanding of climate change concerning the specific case locations, b) involvement in the adaptation process, resources exchanged between organisations towards the adaptation project (e.g. monetary contributions as co-financing for the project) and exchanges between an organisation and other policy actors and perceived level of influence in decision-making during adaptation process and informal rules applicable to the adaptation process (Table 5-3). Research on network analysis suggests that recalls of interactions for short and specific timeframes can have inaccuracies (Marsden, 1990). A 11-year timeframe (2008-2018), corresponding to the period of project design and implementation represented the temporal network boundary, which was used to bound recalls of exchanges and interactions. This longer time frame increased chances of capturing routine as opposed to one-off interactions. However, responses were prone to bias, as individuals are likely to inflate the frequency and nature of relations (Bernard et al., 1984). Bias emerges from the relationship between cognition and reality, where respondents infer to their perceptions of networks rather than the networks (Kossinets, 2006). Interviewees were presented with a pre-developed list of stakeholders (from document reviews and focal consultations) to aid recall and reduce bias. Interviewees were also asked to mention other actors not mentioned on the list.

The use of individuals to respond to an organisation's activities presented potential source of bias. Organisations have hierarchies and specialisation in roles, which prevents individuals from having complete knowledge about organisations (Marsden, 1990). To limit this, the research sought information from interviewees who were senior in their respective organisations. Approximately 80% of the interviewees were senior members of staff in their organisations and were likely to have knowledge about the organisation's activities. By targeting senior staff, this research may have missed potentially vital links between organisations and within the project that may have been created and maintained by junior members of the organisation and considered insignificant by the chosen interviewees (Law & Du-Babcock, 2017). Interviews lasted for 15-120 minutes. Data analysis was through thematic analysis, focusing on the interactions within the project to understand actor strategies and interests, their

perception of the problem and solutions and the rules governing interactions. Transcripts were manually reviewed, with themes and sub-themes highlighted, clustered and linked.

Table 5-3: Description of sub-themes discussed during the semi-structured interviews.

| Sub-theme discussed | Explanation |
|---|---|
| Actor understanding of impacts of climate change in the case-study locations | Questions related to what the respondents believed to be the main risks resulting from climate change, the causes/drivers of these risks, vulnerability patterns and possible solutions/means to address these risks/issues. |
| Actor engagement in the adaptation process | Involved questions relating to actors' past and current involvement and role in the adaptation process |
| Resource exchanges during the adaptation process | Questions sought to capture the types (and quantity) of resources exchanged between the actor and other actors and between the actor and the adaptation process. |
| Informal rules and influence in the adaptation process | This related to what the actors considered the informal rules within the adaptation process that allowed some actors to have more influence in decision-making than others. |

Source: Author

## 5.4 Results

The coastal adaptation process that emerged from the project involved multiple stakeholders from all intra-state levels of governance. Actors at the sub-national and local levels had comparatively higher representation in the project as each sub-national and local unit in the case study locations was represented in the project. Government representation in the project was higher than non-government representation, especially at the national and sub-national levels. Most stakeholders perceived themselves as having influenced different aspects of the project despite the project reflecting NG actors' perceptions of problems and solutions. Government's control of the project's financial resources within the project was perceived to enable government influence. Formal rules developed by the country-ownership structures created during project design restricted the engagement of some stakeholders in the project, resulting in marginal involvement for some stakeholders. The following sub-sections present these findings in detail. Interview excerpts are translations by the researcher.

### 5.4.1 Actor perceptions of problems and solutions and their interests

A consensus amongst all interviewed stakeholders was the SLR-driven coastal erosion, coastal flooding and saltwater intrusion into farms and water points. Actors identified local human activities, such as deforestation, as SLR drivers. Some added that besides localised human activities, other global drivers such as global warming and melting glacier could be attributed to the observed SLR and SLR impacts. Most LG and LNG actors framed solutions as local-based by suggesting that appropriate solutions should be a mix of both mangrove restoration, strengthening of mangrove protection by-laws and the introduction of economic measures to protect livelihoods and reduce dependence on mangroves. SNG recommended technocratic solutions to biophysical changes e.g. mangroves and sea walls in response

to seawater intrusion. NNG recommended system-based solutions by emphasising the need for supportive policies, adequate climate finance and appropriate scaling of interventions was essential in ensuring that local level adaptation to SLR. NG actors recommended a mix of local technocratic and social-based solutions like mangrove restoration and alternative livelihoods for mangrove dependent households.

Links emerged between actors' understandings of the drivers of SLR and appropriate solutions to SLR impacts. Local actors identified SLR locally driven by human activities. This informed their perception that human targeted interventions would slow/prevent mangrove destruction while protecting coastal resource-dependent communities and livelihoods. National actors framed the problem as a factor of both local and global drivers but identified the solution as one that reduced global and local drivers through local level behaviour change. This indicated the diversity in perceptions of problems in the case study locations and appropriate solutions.

The project implemented actions that were informed by global drivers and local impacts, whereby mangroves were replanted to reduce coastal erosion and flooding in specific areas. The framing adopted by the project reflected national government actors' perceptions of problems and appropriate solutions. However, despite these differences in perceptions of problems and solutions, all interviewed stakeholders supported the approach taken by the project, thus suggesting general agreement with the project's approach to addressing SLR and impacts.

The general support towards the project's approach and absence of visible opposition necessitated inquiries into whether the project had used deliberative decision making to generate a consensus within the project. Most actors, especially non-PSC stakeholders, provided differing accounts of whether they had participated in deliberative processes. Most noted that they had expressed their opinions about their perceptions of the problems and solutions but had done so in different forums at different stages of the project cycle. This suggested a lack of a distinct approach to problem and solution identification and consensus generation. A LNG stakeholder noted how they had expressed their concerns about the construction of the sea wall in a meeting:

> The wall should not have been constructed here. It should have been constructed in the other location that is more affected by strong waves from the ocean. But they still constructed it here. They had technical reasons. You asked how we were involved. We are just given instructions on what to do. But we don't say anything. Because before the project constructed the wall, we had a meeting and we advised that they construct the wall in the ocean. Geographically, we are under sea level. The river protects us. When the water decides to come, the wall will not prevent the water from reaching us.

These indicate the diversity of perceptions of problems and solutions by adaptation stakeholders engaged in the project.

### 5.4.2 Rules of engagement and actor involvement of actors in the project

Most actors reported only involvement in either design or implementation. Only NG and SNG actors who belonged to the PSC reported involvement in both project design and implementation. These also reported active involvement in the project while the others (LG, SNNG and NNG) reported marginal involvement in the project, through one-off or infrequent consultations by project coordinators. An LG representative noted:

> I have not been involved. After the mangrove people created the BMU, they have just been working with the BMU. We have not had any other information from them. Even when the Minister of Environment comes, he calls the BMU. He does not call the head of the village council. He has nothing to do with them (the village council heads). Unless if the BMU do something wrong, that is when you will receive information that the BMU has done something wrong.

Community trainings were used to engage actors, especially those at the local level, in the project. National and sub-national government and non-government representatives conducted these trainings.

Non-PSC SNG actors reported limited involvement in the project through infrequent request for inputs into project reports or attendance of project-based meetings. SNNG actors reported consultation during the project's baseline assessment and attended project seminars during implementation. LNG actors reported a top-down flow of information relating to the project:

> We were not [involved in the planning for the project]. The project is for the wall. They had already planned to construct the wall, add rocks and then plant trees. This was already planned, and they just came and told us what to do. The people who have many degrees come and tell us what to do. However, we already know some of the things they are telling us but they do not give us an opportunity to say it.

The project intended to involve a wide range of stakeholders (GEF, 2009). However, level of stakeholder engagement was not standard across all stakeholders. Project rules set during project design determined roles and level of engagement of actors. This determined actor involvement in the project. Primary stakeholders were those who were already part of the PSC. These were government representatives with frequent PSC meeting attendance. They were actively engaged in project design and implementation and reported high influence in decision-making. For example, these actors influenced decisions on location of planned project activities and roles and influence of other adaptation stakeholders within the project. As indicated in by a NG actor, project activities identified during project design (which involved a small number of stakeholders) were used to structure the project.

> The project is implemented according to the project document. Our role was to ensure that the project is implemented following agreed activities. If the

> communities have anything else that they wish to implement, then we tell them to stick to the project document.

Actors not involved in project design noted the lack of consideration of their opinions within the project. Speaking about the ratio of finance allocation between mangrove restoration and construction of sea walls, an NNG actor noted that:

> Allocation of money depended on the problem for the several places. Unfortunately, I was not involved in the project from the beginning. I did not get a chance to highlight the issues that should have been addressed at that level. I came into the project at the implementation stage when everything had been set. If I had been involved from the beginning, I would have added different thinking on the issues that needed to be addressed.

Despite the selective stakeholder engagement, some actors with limited engagement perceived themselves as having had project influence. Some respondents equated influence as having their opinions integrated into at least one aspect of the project. An SNG actor indicated:

> Our office has been heard within the project because we had a planning officer and we would go and collect data. Even though the communities were the main implementers, we have been heard because we are the managers of the project.

Another SNG actor noted:

> The project had their own plans, but they came and asked for our opinions. We suggested that they construct a durable toilet to protect the environment. We also suggested that the mangrove planting be given to the community members and not the contractors (who constructed the wall).

An SNNG actor noted:

> We have been heard. The project held a meeting for donors such as Forum CC (an NNG actor), and they invited the community to contribute to the meeting. Even small groups were invited to the meeting as part of PANGANET (a local NGO network). This is a new thing, and the government is listening to them (the communities). We also told them that they should discuss mangrove issues with the BMU, and this was done.

While some actors were contended with the limited level of influence they had achieved, some thought that this was restrictive and that more platforms should have been created to allow engagement with key decision-makers on issues related to the project.

Actors who had limited influence in the project thought that more platforms should have been created to allow engagement with key decision-makers on issues related to the project. for example, speaking about their exclusion from project issues, an LG actor commented:

> (The BMUs) do not pass information to the village [government representatives]. We, the government, have to follow the BMU when we want information. They have become bigger than the village government.

These indicate that existing rules created restrictions on the profile and roles of actors in the project.

### 5.4.3 Resource exchanges within the project

All actors identified money and information as key resources exchanged within the project. Exchange of money was mostly between primary project stakeholders while information was the most exchanged resource within the project and between actors for both project and non-project purposes. The project was co-financed by the GEF and Government of Tanzania (GoT). Intra-state actors (other than NG) reported did not make monetary contributions to the project. Instead, they received money in exchange for services towards project implementation. NG and SNG actors channelled money from national to LNG actors for the mangrove restoration activities. SNG and LG actors identified NG as important monetary exchange partners through existing sub-national budgetary support. Local and sub-national non-government actors identified SNG and NGs as their key information exchange partners. Seminars, meetings and training workshops were organised by project coordinators to facilitate sharing of project-relevant information.

Stakeholders' perceptions of who else had the most influence was informed by the control of the project's financial resources. Most stakeholders perceived that NG actors who controlled the allocation of financial resources linked to the project had the most influence in the project. For example, local non-government actors generally thought that the SNG actors (mainland) and the NG actors (Zanzibar) had the most influence in the project because project funds were channelled through them. An LNG representative pointed out the hierarchy in decision making that followed the transfer of financial resources within the project:

> In meetings for the BMU, we can decide to go and plant seedlings. We can also tell the community members to plant trees. However, we also only follow instructions such as the army. The project focal point is in the district office. That is where we direct our requests. His voice is also not heard because he has his bosses.

Non-PSC NNG stakeholders thought that PSC NG actors had the most influence. In contrast, PSC NG and SNG actors indicated the community influence through involvement of local groups. An NG actor noted:

> We made changes to the project. We did not initially plan to have mangrove nurseries. We realised, through the mangrove consultant, that this would be

> difficult. We decided to establish a nursery. The consultant and the community group made the decision for this. All these changes were communicated to the VPO.

These indicate that perceptions of actors' influence in country-owned actions were dependent on resource exchanges, specifically monetary resources.

### 5.4.4 Sources of power and influence in the project

The findings on rules of engagement, resource exchanges and actor perceptions of problems and solutions indicate the presence of three layers of power. These collectively generated government control of adaptation in the project.

Limited stakeholder involvement was linked to the project's and institutional rules which determined stakeholder engagement. Institutional rules emerged from the country ownership regulations which required that government institutions have a significant role in adaptation planning and implementation within states and that finance be disbursed through accredited institutions (Kotchen & Negi, 2016). Consequently, government institutions attained control of adaptation finance, which afforded them more influence in the adaptation project. Project rules were set during project design, where PSC actors who were present during concept development were allocated roles and responsibilities. Activities and roles identified in the project document and approved by the GEF were strictly followed during project implementation. This restricted the engagement of other actors who were left out of the project design phase.

Formal rules within the project (dispositional and structural power) enabled government stakeholders to operationalise climate finance as a resource (relational power). The exchange of this resource enabled them to have greater influence in the project. Structural and dispositional power was used to: a) determine the decision-making process i.e. which groups of stakeholders would be involved in project planning and implementation and the range of decisions these actors could contribute towards, and b) the outcomes of these decision-making processes i.e. the final decision. Government actors (i.e. national and sub-national governments) worked collaboratively with each other to achieve the desired outcomes. However, this marginalise other stakeholders, especially local and non-government actors whose relational power was restricted by their lack of dispositional and structural power. The following section discusses these findings in relation to the broad body of literature on CCA governance.

## 5.5 Government control and country ownership

Developing country ownership of adaptation actions is central to international climate action (GCF, 2017; UNFCCC, n.d). Country ownership enables adaptation that engages intra-state stakeholders, aligns with LDC priorities and addresses local needs (Ashraf et al., 2015; Chaum et al., 2011) and is expected to increase effectiveness of climate finance (Bird & Glennie, 2011; Ellis et al., 2013). MSCs enable shifts from top-down management to more network-based approaches to adaptation (Pattberg, 2010). However, hierarchies may persist within multi-level multi-stakeholder approaches (Di Gregorio et al., 2019). MSCs may also be unable to contribute to the achievement of tangible adaptation outcomes

(Melhus & Paton, 2012). Yet, adoption of multi-level and multi-stakeholder approaches are encouraged in climate change governance literature (Cash et al., 2006).

This research sought to find out whether multi-stakeholder collaboration as a principle for country ownership generates stakeholder influence in adaptation in LDCs. The results indicate that: a) Country ownership structures and project rules restrict multi-stakeholder engagement and influence in adaptation decision making; b) control of adaptation finance grants government more influence over adaptation decision-making; and c) lack of stakeholder influence in adaptation decision making does not compromise stakeholder support for adaptation interventions. The implications of these findings on intra-state equity of country ownership are discussed in the following sub-sections.

### 5.5.1 Country-ownership structures and influence

Stakeholder engagement is central to CCA which requires coordination between different sections of the society (Lopez Porras et al., 2019). The results of this study indicate that country ownership guidelines are embedded in structural conditions. Structure determine stakeholder power and influence in decision making (Wamsler, 2017). Government control emerges from these structural conditions. This suggests government-dominated influence as opposed to stakeholder influence, which is envisioned in country ownership. These findings demonstrate that engaging in MSCs does not guarantee influence stakeholder influence. Existing structures and rules present barriers to stakeholders influence the decision-making. Capture of adaptation processes by more powerful actors (at the expense of local level actors) can occur even in participatory processes (Eshkol & Eshkol, 2017; Zunino, 2006). This compromises equity in country ownership.

Local level actors are important to the design and implementation of adaptation (Anguelovski & Carmin, 2011; Roberts, 2008). They enable adaptation that responds to local level adaptation priorities (Ivey et al., 2004; Sheppard et al., 2011). Their absence in adaptation decision making results in policies that are disjointed from local level realities (Smucker et al., 2015). Sub-national governments are singled out as being critical in enabling local level planned adaptation (Bulkeley & Kern, 2006). These have previously been excluded from discussions on the allocation of international climate finance (Remling & Persson, 2015). The weak role of SNGs in national climate policy is due to structural factors that deny them political influence at the national level (Gore, 2010b). Yet, local stakeholder engagement in multi-level adaptation decision making depends on their capacity, which is determined for example by their access to financial resources, knowledge and supportive national level structures (Martins & Ferreira, 2011; Pasquini et al., 2013; Thaler & Levin-Keitel, 2016). For example, the limited capacity at the sub-national government level in Tanzania limits the downscaling of national level vulnerability assessments (Shemdoe et al., 2015). These remain under-addressed in LDCs (Smucker et al., 2015).

However, this research indicates that local level stakeholders are not homogeneous. The differential impacts of institutional and organisational structures grant some local level actors (e.g. local government) more power. Assumptions that local governments are representatives of local level (e.g. Smucker et al. (2015)) without considering influence by other actors is likely to reinforce government-driven top-down technocratic adaptation (Sherman & Ford, 2014). Technocratic adaptation has narrow

framings of risk which prevents actions from adequately addressing local level vulnerabilities and adaptation needs (Adger et al., 2011). However, the definitions associated with 'local' and 'community' can be political and can be used to include or exclude some groups (Aiken, 2014; Titz et al., 2018). This requires that identification of local stakeholders be aware of prevailing politics.

The findings indicate links between government control and legitimacy. The involvement of government in steering multi-level and multi-stakeholder actions accords legitimacy to actions emerging from these collaborations (Anguelovski et al., 2014). Legitimate actions avoid challenges that emerge from informal MSCs, such as lack of interest and trust amongst relevant stakeholders (Daniell et al., 2011). Adaptation literature however fails to identify the optimal level of government involvement in planned adaptation. This is important because government involvement can reduce trust and willingness by non-government actors to actively participate in collaborative adaptation planning (Beaumont & Dredge, 2010).

Legitimacy of adaptation projects may be at the cost of long-term stakeholder relationships. As this research indicates, perceptions of critical risks and who/what is at risk vary across stakeholders (Patt & Schröter, 2008). The limited visible stakeholder opposition to projects that do not reflect these actors' priorities suggests absence of deliberation during adaptation decision making. This may result in superficial stakeholder relationships which compromises future multi-stakeholder collaborations (Dredge, 2006). This is because actors are more likely to negotiate on issues they perceive as being highly likely to influence (Dredge, 2006).

The absence of opposition to government could also be due to the selective involvement of stakeholders or the existence of paternalistic relations between government and other adaptation stakeholders. For example, political tensions between CSOs and governments and limits to CSO freedoms are reported in some LDCs (Wood, 2016). Fear of contradiction government-led adaptation can emerge in authoritarian settings, where powerful government actors 'produc[e], reproduce[e] and legitimiz[e] a set of rules that enable an [e]litist and technocratic policy-making style' (Zunino, 2006, p. 1841).

International climate change governance and approaches to country ownership are also state-centric. This is necessitated by the highly political nature of climate change which requires intergovernmental cooperation (Van Asselt et al., 2008). However, government-based climate change governance assumes democratic government institutions (Booth, 2012). However, this can generate government-led paternalism, where adaptation processes within states must first be aligned with a set government-defined narrative before they are officiated (Degelsegger & Torgersen, 2011). Alternative framings of vulnerability and adaptation (Benzie & Persson, 2019; Nightingale et al., 2019) may not emerge. This compromises country ownership.

### 5.5.2 Justification for government control of adaptation finance

Government control in the case study is justified by the need to manage fiduciary and reputation risk. Climate finance allocation by UNFCCC mechanisms is through institutions that have met the set fiduciary standards (Fenton et al., 2014; Voigt & Ferreira, 2015). The setting of fiduciary standards helps contributor countries and bi-/multilateral institutions ensure that climate finance will be

'manage[d] and disburse[d]…in a fair, corruption-free and transparent way' (Ballesteros et al., 2010; Schalatek, 2012, p. 964). For governments, maintaining these fiduciary expectations through government control may be necessary to limit the reputation risk damage that may emerge from climate finance misappropriation.

Fiduciary risk management is important for LDCs that are particularly vulnerable to climate change and significantly dependent on international climate finance. Loss of access to these financing streams would result in significant budgetary deficits, especially in climate-sensitive development sectors such as health and disaster management. For example, 4-6% of Tanzania's annual government spending is climate change relevant and most of which is funded bi-/multi-laterally (Yanda et al., 2013). Limiting the risk of mismanagement of funds can be achieved by restricting management of international climate finance to government institutions. However, most LDC climate finance is domestically-sourced from public sources (Bird, 2014). This indicates relatively less dependence on international climate finance. In such cases, government control of adaptation finance would be less linked to controlling fiduciary risk. Instead, it can be attributed to the need to achieve public accountability by ensuring that public funds are well managed. This also applies to domestically co-financed projects like the case study project where the Government of Tanzania provided a 20% in-kind co-financing (UNEP, n.d).

Government control of adaptation finance is also necessary due to the close links between climate change and development (Ayers & Dodman, 2010; Huq et al., 2004). Previously earmarked development aid has been delivered as adaptation finance to developing countries (Klein, 2010). Development and development finance are expected to scale up action, as available adaptation finance on its own is insufficient to cover existing adaptation needs (Bouwer & Aerts, 2006) with adaptation finance covering the additional development costs generated through climate change mainstreaming (Halsnæs & Trærup, 2009). However, in welfare states, governments are likely to take control of this finance. However, Tanzania is has progressed from being a welfare state post-independence to a more neoliberal form of governance (Lal, 2012).

In summary, sub-national governments are a group of local actors who are critical to multilevel governance of adpatation. However, their engagement should not be at the expense of other non-governemnt and local level actors whose knowledge can complement sub-national governemnts. This reinforces government control, which even though justified from a risk and development lens, limits the ability of adaptaiotn to be equitable.

## 5.6 Conclusion

Country ownership of adaptation actions should result in societal ownership within states, where multi-level stakeholders can influence adaptation decision making (Biekart & Fowler, 2018). This is expected to generate adaptation that reflects local level adaptation priorities and addresses local vulnerabilities. However, there are gaps in literature on country ownership on whether country-owned adaptation initiatives allow multi-level stakeholders to influence adaptation decision making. This research uses a case study of an LDCF-funded coastal adaptation project in Tanzania. It applies a model of power and influence based on social exchange theory to understand whether multi-stakeholder engagement as

criteria for country ownership enables multi-stakeholder influence. The research finds that government control of adaptation finance enabled by institutional rules embedded in the requirements for country ownership and the rules generated during project design, which constrained engagement of other actors in the project.

This research makes theoretical and empirical contributions to debates on country ownership, MSCs and influence. Theoretically, this research integrates consideration of power into assessments of stakeholder influence. Consequently, this research frames multi-stakeholder processes as power-laden and politically-driven, characterised by conflicts and contestations for recognition, specifically between government and non-government actors (Nightingale, 2017). Resources and institutional and organisational rules are framed are critical determinants of the power and influence in multi-stakeholder adaptation processes. Empirically, the research adds to knowledge to the intra-state processes and outcomes from country ownership of CCA. It presents evidence that indicates institutionally-enabled government control of multilaterally-funded adaptation which generates government influence as opposed to multi-stakeholder influence.

The findings of this research have implications for how we view current international climate change governance. The Paris Agreement is applauded for opening up spaces for non-state actor participation in international climate change governance (Kuyper et al., 2018). However, an important area that should not be overlooked is how structures created under these mechanisms translate into local level outcomes. Climate justice is an 'accumulative multiscalar *process'* (Barrett, 2013b, p. 216). The emphasis on multi-stakeholder engagement in adaptation needs to be informed by a careful consideration of who has power and who makes the decisions (Ryder, 2018). Without this, international climate change governance may be reproducing injustices by creating structures that reinforce adaptation actor exclusion at the national and local levels. This is likely to increase local level vulnerability which counteracts the normative goal of climate change adaptation.

Initial recommendations for addressing the gap between multi-stakeholder engagement and influence target the international climate change governance. These should recognise the unequal power relations within states and integrate this into international climate change governance structures. For example, while project documents are important for awards of international climate finance, some flexibility could be built into this to ensure that projects have clear cut goals, adaptive management can be embedded into projects so as to be able to accommodate uncertainties, new stakeholders and local adaptation needs (Arora et al., 2019). Another recommendation relates to further exploring ways of moving away from state-centric approaches to climate change governance. A number of authors have argued for the allocation of funds to sub-national and non-government entities (Colenbrander et al., 2018). While this intention is reflected in international climate change policy, e.g. Paris Agreement (UNFCCC, 2015), its operationalisation remains limited. While this has the potential to address the unequal access that these institutional barriers that non-government and local institutions face in accessing finance and influencing decision making, more consideration on how this can be operationalised is needed.

# 6 Do country-owned adaptation interventions reflect local level priorities? Application of a framings approach.

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## Abstract

It is claimed that country ownership ensures that adaptation actions reflect the priorities of local level vulnerable populations. The focus on local level needs seems absent in empirical assessments of country-owned initiatives. This necessitates assessments of whether country-owned adaptation actions align with local level adaptation priorities. The chapter introduces the concept of framings of Climate Risk Management to understand equity in country-owned climate change adaptation. Three framings – the rights and responsibility, capabilities and recognition framings are used to identify principles of justice reflected in adaptation interventions and compares them to those expressed by local level communities who are expected to benefit from these interventions. A case study of a Global Environmental Facility-administered coastal adaptation project in Tanzania is used. The analysis finds differences between framings by the project and local communities. The project portrays a rights and responsibilities framing, with emphasis on the role of government in supporting adaptation planning and implementation and use of technocratic adaptation approaches. Local level communities prioritise the capabilities framing, where the need for local resource management institutions is considered necessary in mediating between resource access by resource-dependent households and resource conservation for coastal adaptation. The findings suggest that country ownership may be inequitable by supporting climate change adaptation that does not reflect local level adaptation priorities.

## 6.1 Introduction

The 2018 IPCC special report highlighted that 1.5°C warming would increase the risk of extreme events in regions such as the Sahel and the Mediterranean (IPCC, 2018b). However, Least Developed Countries (LDCs) are already experiencing an unprecedented frequency and magnitude of climate change-driven risks (De Souza et al., 2015). Efforts by LDCs to respond to these risks include engagement in planned adaptation (Pischke & Stefanski, 2016). Multi-lateral climate finance mechanisms support these planned adaption actions and emphasise on the importance of country ownership of adaptation. For example, the guidance to the Global Environment Facility (GEF) by the 23rd Conference of Parties encouraged the GEF to align its 'programming with priorities identified in countries' [Nationally Determined Contributions (]NDCs[)]...and to provide enhanced support, including enabling activities in the context of national climate strategies and plans' (GEF, 2018a, p. 35). Country owned adaptation actions are believed to be informed by country priorities and needs, hence promote climate justice and equity by ensuring that countries and groups that are particularly vulnerable to climate change are supported to adapt. This chapter looks at whether interventions implemented under the country ownership scheme are equitable by reflecting adaptation priorities of vulnerable local level communities.

Equitable adaption is defined in this chapter as that which addresses the (adaptation) needs of vulnerable local level groups.[1] It is informed by different climate justice principles, which can be divided into a) those that are concerned with the costs, and b) those addressing the benefits of climate action (Klinsky et al., 2012). Justice principles such as equality, proportionality, priority and sufficiency emerge (Stumpf et al., 2016; Young, 1995). These principles are linked to the elements of justice, i.e. distributive, procedural and recognition justice (see Bulkeley et al. (2014); Chu and Michael (2019); Ryder (2018); Schlosberg (2003); Walker and Day (2012)).[2] Adoption of these principles determines who/what gets protected from climate change risks (Jenerette et al., 2011; Thaler & Hartmann, 2016). Failure to consider inequalities and differential vulnerabilities results in inequitable adaptation. For example, adoption of market-based approaches to forest conservation, which is underscored by distributive principles of justice is likely to benefit powerful actors at the expense of poor and indigenous communities (Okereke & Dooley, 2010). This chapter's understanding of equity reflects a combination of these principles of justice, where actions support local level vulnerable groups to have access to basic needs and can also improve their wellbeing (Jones, 2009). Equitable adaptation ensures that adaptation actions are pro-poor and do not exacerbate existing vulnerabilities (Martin et al., 2014; Pasgaard et al., 2016; Sherman & Ford, 2014).

Addressing the needs of the most vulnerable requires that local level communities who are impacted by climate change be involved in adaptation decision making and have control over decision making processes and their outcomes. This is called 'substantive authority' (Massey & Huitema, 2013, p. 343; Wisor, 2012). Local communities know the priority climate change risks and impacts, are more able to identify vulnerable sub-populations and appropriate adaptation options and their involvement generates legitimacy for adaptation actions (Hiruy & Eversole, 2013; Nguyen et al., 2013; Slee, 2015; Tran & Rodela, 2019).[3] Actions that lack local community support are likely to be ineffective (Ayers & Forsyth, 2009; Macintosh, 2013). Concern for the local level is integrated into international CCA and development interventions e.g. within the UNFCCC (Shawoo & Thornton, 2019). However, extent to which these translate into local level adaptation outcomes for these local communities is dependent on a variety of factors such as willingness and capacity, most of which are outside the control of the international community (Belfer et al., 2019). Some local communities are therefore likely to be excluded from CCA and development in LDCs (see Smucker et al. (2015); Work et al. (2019)).

[1] Equity may not be a priority for some adaptation interventions (Lee et al., 2014). Instead, interventions may prioritise efficiency or effectiveness, which may compete with equity (Sasse & Trutnevyte, 2019; Stadelmann et al., 2014). However, equity can generate double or triple wins by enhancing the effectiveness and efficiency of CCA (Stadelmann et al., 2014).

[2] Other classifications of justice include structural (Devia et al., 2017) and epistemic (in)justice (also linked to recognition justice) (Chu & Michael, 2019; Temper & Del Bene, 2016)). However, procedural, distributive and recognition justice are commonly used to describe climate justice in the existing literature. The linkages between social and structural justice and procedural, distributive and recognition justice are beyond the scope of this paper.

[3] Some literature argue that local communities lack extensive knowledge of multi-level adaptation processes to enable them to engage in adaptation planning and implementation (Baker et al., 2012; Begg et al., 2015), that involvement of local actors does not necessarily guarantee meaningful participation and is likely to generate elite capture (Lin et al., 2017; Nadiruzzaman & Wrathall, 2015) and that communities are not necessarily instrumental to the longer-term success of interventions (e.g. Holcombe et al. (2018)).

The link between local level community engagement and the ability of climate change adaptation to reduce the impacts of climate change is ensured through country ownership. Country ownership is expected to address this gap by working with multilevel actors to engage local level communities and integrate their priorities into planned adaptation. For example, the GEF programs are intended to engage with diverse adaptation stakeholders, including local level actors and communities to ensure that actions are country owned and address climate change impacts (GEF, 1995, 1998, 2014). This chapter uses a case study of a coastal adaptation project in Tanzania to assess whether local communities' framings of approaches to coastal adaptation are reflected in the project. The project was funded by the Least Developed Countries Fund (LDCF) and administered by the GEF. The chapter provides a critical examination of the concept of country ownership and its contribution to local level equity.

The findings from the case study indicate that the project did not adequately reflect communities' needs as principles of justice adopted by the project were misaligned with those of local communities. The project overlooked local resource management institutions, which were highlighted by local communities as essential for coastal adaptation as these would mediate resource usage by resource-dependent households. The project prioritised 'hard' adaptation (e.g. construction of sea walls and restoration of coastal mangrove cover) which sought to strengthen the role of government institutions in supporting CCA. This suggests that country ownership of CCA may not necessarily guarantee that local level adaptation priorities will be addressed.

This research contributes to the existing literature on climate justice and equity and adds to the scarce empirical evidence on country ownership within states. The findings challenge a widely held notion in CCA, that country ownership of adaptation automatically generates actions that reflect local level priorities and address local priorities. The chapter is based on the knowledge that country ownership is political and that country-owned adaptation actions, their impacts and whether they are equitable is 'always…disputed, and dependent on specific knowledge, authorities and subjectivities' thus requiring an understanding of 'the contexts within which authorities, knowledges and subjectivities come together to shape what counts as adaptation and for whom' (Eriksen et al., 2015, p. 524). This chapter has six sections. Section 6.2 presents background literature on Climate Risk Management (CRM) and framings of CRM based on the climate justice principles. Section 6.3 and 6.4 present the methods, data, and findings. Section 6.5 discusses these findings. Section 6 concludes. The chapter finds divergences between framings of CRM by the project and local communities, which indicates that country-owned adaptation actions do not reflect local level adaption priorities.

## 6.2 Equitable adaptation through climate risk management

Adaptation through CRM focuses on specific hazards and their impacts on development trajectories (McGray et al., 2007). For example, some LDCs NAPAs identify climate risks emerging from droughts, floods and sea-level rise as a priority and appropriate CRM approaches, e.g. GoK (2016); GoT (2007b); MoEF (2009)). CRM is concerned with 'incorporating knowledge and information about climate-related events, trends, forecasts and projections into decision making to increase or maintain benefits and reduce potential harm or losses' (Travis & Bates, 2014, p. 1). CRM builds on the relationship between climate-

related hazards, exposure and vulnerability to reduce impacts and determine appropriate adaptation measures (Field et al., 2012). Its success depends on factors such as availability of resources and capacity of actors and institutions to mainstream CRM into development planning (Ayers et al., 2014; Hossain & Huq, 2013).

This chapter uses a framings framework to determine whether country-owned CRM interventions are equitable. Framing is defined as ways in which meanings are assembled and characterised by individuals to aid in understanding something (Fünfgeld & McEvoy, 2011). Framings of CRM are identified through principles of justice that are reflected in CRM activities. Three CRM framings are constructed based on the principles of justice that they exhibit (de Boer et al., 2010). Similar to other recent work on local level climate justice (e.g. Bulkeley et al. (2014); Wood et al. (2018)), this chapter uses concepts of climate justice derived from literature in political philosophy, mitigation and international climate change policy to develop these CRM framings. This is where most of the existing literature on climate justice is based (Vanderheiden, 2016). The following sub-sections present CRM framings.

### 6.2.1 Rights and responsibilities

This framing relates to human and development rights and the allocation of roles and responsibility for delivery of these rights. Current and future climate change will prevent people from enjoying their basic development and human rights (Mearns & Norton, 2010; Vanderheiden, 2008). People have a right to not having their fundamental human and development rights violated by climate change risks (Baer et al., 2009; Caney, 2010). Rights and responsibilities also relate to entitlements to resource access and use, which are essential for managing risks (Gabriel & Bond, 2019). It requires that LDC communities' or households' needs are prioritised (Shue, 1999; Vanderheiden, 2008). CRM actions are expected to recognise groups or individuals whose rights have been violated by climate change risks and allocate responsibilities to rectify these violations (Ensor et al., 2015; Hayward, 2007). This framing is informed by egalitarian and libertarian theories of justice where equality and non-discrimination in distributive, procedural and recognition justice guide rights and responsibility-based frameworks (Ensor et al., 2015). Fundamental human rights are used as the primary indicators for CRM. Responsibilities for upholding these rights are placed on different actors, based on ethical principles and pre-existing rules. The framing highlights underlying causes of vulnerability to climate change risks and poverty, and the political and social processes surrounding access to rights (Arnall et al., 2014; Gready & Ensor, 2005; Tschakert & Machado, 2012). Understanding of rights and responsibilities extends beyond the legal interpretations to the political and social and captures power relations between individuals and groups, and how citizens claim their rights (Ensor et al., 2015; Uvin, 2004).

### 6.2.2 Capabilities

The capabilities framing (as used by Schlosberg (2012) and Holland (2017) within a climate justice and adaptation context)[4] requires that CRM improve welfare, social interactions and policy engagements by individuals and communities by facilitation of acquisition of the requirements necessary for 'provision

[4] Cf. Capability approach by Robeyns (2016), which is a broader philosophical theoretical framework.

of a range of basic needs and processes necessary for citizens to construct functioning a life', thus enabling the 'incorporat[ion of] justice concerns for fair distributions, political and social recognition, and procedural inclusion' (Robeyns, 2005; Schlosberg & Carruthers, 2010; Schlosberg et al., 2017, pp. 414,415). Political capabilities are important and are achieved when vulnerable populations are 'able to apply enough political pressure within unjust adaptation decision processes to successfully push decisions in a particular direction', thus going beyond voicing opinions in decision making to having control over how and what decision are made to address the root drivers of vulnerability (Holland, 2017, p. 397). The framing is based on principles of sufficiency, where distributive, procedural and recognition justice enable achievement of a minimum level of well-being (Schlosberg, 2012). Issues related to inequality, participation and human rights are addressed in a capabilities framing (Robeyns, 2003). The framing enables achieving primary goods, i.e. resources and utilities necessary for managing climate change risks and achieving satisfaction from using these resources (Grasso, 2007).

### 6.2.3 Recognition

Recognition framing (as used by Bulkeley et al. (2014)) is closely related to recognition as a type of justice. This framing, commonly found in biodiversity conservation literature, emphasises the need to recognise cultural diversity, values and identities (Martin et al., 2016). Its core concern is on the structures that cause discrimination (Fraser, 2001; Martin et al., 2015). Principles of proportionality and priority are featured, where culture and values are used to determine who is most affected by climate change risks. CRM is framed as an ethical issue, with actions sensitive to contextual culture and values and the effects of these on drivers of risks and adaptation approaches (Fraser, 2001). In this chapter, the recognition framing falls short of emphasising on the need for political transformation that is needed for affected groups to have long-term access to decision making. Instead, there is simply an awareness of local cultures and values, without representation in decision making and changes in access to resources to enable vulnerable communities manage climate risks (Xu & Grumbine, 2014).

The rights and responsibilities, capabilities and recognition framings are not mutually exclusive. Interventions can adopt more than one framing. CRM framings are identified based on an understanding of the who, what and how of CRM. This is influenced by actor-sourced subjectivities which affect the determination of the hazards that are considered relevant/necessary, the identification of acceptable levels of risk and the selection of risk management actions (McDermott & Surminski, 2018). Section 3 presents the methods and data used in this research.

## 6.3 Methods and data

The Tanzania[5] coastal adaptation project (2008-2019) is used as a case study. This was funded by the LDCF under the country-ownership scheme where Office of the Vice President (VPO) in Tanzania was the project's executing entity in coordination with the United Nations Environmental Programme (UNEP) as the implementing agency. The project intended to broaden stakeholder engagement and strengthen institutional capacities to support multi-level adaptation and integrated coastal zone

[5] Tanzania is a union state, made up of Tanganyika (the mainland) and the islands of Zanzibar.

management through working with coastal communities and other stakeholders to restore and protect mangrove forests and coastal vegetation (UNEP, n.d). Local level project activities involved the construction of sea walls and mangrove protection and restoration. The project was coordinated at the national level by the VPO (for Tanzania mainland) and the Division of Environment (DoE) in the second Vice President's Office (Zanzibar). On the mainland, district governments (the Division of Forestry and Environment in Pangani) coordinated local level implementation by Beach Management Units (BMUs). In Zanzibar, national level coordinators (from the DoE) oversaw mangrove protection and restoration activities by Community Based Organisations (CBOs). Three case study locations were chosen – Kisakasaka and Kisiwa Panza (Zanzibar) and Pangani (Tanzania mainland) (See Figure 4-3 and Figure 4-4).

The project was aligned with Tanzania's NAPA and Nationally Determined Contribution, which prioritise coastal protection against Sea Level Rise (SLR) and coastal erosion (GoT, 2007b, 2018). The mangrove restoration component also supported the achievement of goals in national forestry policies and leveraged existing structures developed under these policies (GoT, 1998; RGoZ, 1999). As impacts of SLR on coastal regions in Tanzania are exacerbated by coastal population growth and coastal squeeze (e.g. see Kamat (2014); Kebede and Nicholls (2012)), the project adopted a conservationist approach to coastal resource management which involved reducing/stopping resource use. This conservationist approach is criticised for overlooking social and economic development and perpetuating 'green/blue grabbing' by restricting resource use by local communities while allocating conservation benefits to elites (Benjaminsen & Bryceson, 2012, p. 335; Levine, 2002). Past interventions are cited as anti-developmentalist, as they put communities in precarious positions e.g. conflicts between communities and conservation agencies linked to REDD interventions in Rufiji are reported ((Beymer-Farris & Bassett, 2012; Mangora, 2011)). This demonstrates the political environment within which the project was designed.

Data was collected through project document reviews, twenty-two semi-structured interviews with representatives from the project's stakeholder organisations (who had key roles in project design and implementation) and thirteen Focus Group Discussions (FGD) with local community groups in the case study locations. Interviewees were identified from project documents and through consultations with project focal points who identified organisations involved in project design and implementation in each case study project location. Interviewees were classified based on their type of operations (government or non-government) and their level of operations (national, sub-national and local) (see Table 6-1 for classifications). The researcher selected FGD participants with support from two research assistants. Project documents reviewed were the project proposals, baseline and midline reviews and other reports generated from project activities. These were obtained from the project staff or downloaded from the GEF website.

Table 6-1: Description of project stakeholder groups interviewed (N=22).

| Group of interviewed actors | Description, with number of interviews in brackets) |
|---|---|
| National Government (NG) | National government ministry representatives or representatives from divisions from within ministries, e.g. division of environment in the Vice President's Office of Tanzania (mainland) (n=2) |
| Sub-national government (SNG) | Representatives from different departments at the district level in Pangani, Mkoani and Magharibi B Districts (n=5) |
| National non-government (NNG) | Representatives from national level civil society organisations and the private sector (n=02) |
| Local government (LG) | Representatives from village councils/governments (n=7) |
| Local non-government (LNG) | Representatives from local level civil society organisations (i.e. Community Based Organisations (CBO) in Kisiwa Panza and Kisakasaka and Beach Management Unit (BMU) in Pangani Magharibi) (n=6). |

Source: Author

The framings framework presented in section 2 guided interview and FGD discussions. Discussions focused on perceived climate change risks, their drivers and solutions. Semi-structured interviews sought to understand stakeholders' understanding of the project in relation to the projects' perception of SLR, its drivers and solutions (during project design and implementation). The FGDs also focused on community members' perceptions of SLR, its drivers and solutions. This was intended to extract accounts of framings of equity by the project and the community. Even though equity was not mentioned in the interviews and FGDs, presentations of problems and solutions enabled the extraction of underlying principles of justice (Okereke & Dooley, 2010).

Voice recordings were transcribed and translated. Content analysis was used to analyse the data to understand the framings associated with approaches to CRM. Each transcript was reviewed, manually coded and emerging themes highlighted from the codes. These were then linked back to the three CRM framings and their corresponding climate justice principles. Data collection was between April and October 2018. Interviews and FGDs were conducted in Swahili. The University of Reading's ethics board approvals and research permits issued by the governments of Tanzania and Zanzibar were granted before data collection began.

## 6.4 Findings

This section presents the findings of the analysis, where responses are analysed using an equity framing lens. A summary of CRM framings by the project and communities are presented in Table 6-2. Excerpts from the interviews and FGDs are translations by the author.

Table 6-2: Framings of Climate Risk Management by the LDCF project and the communities where the project was implemented.

| | Rights and responsibilities | Capabilities | Recognition |
|---|---|---|---|
| **The LDCF project** | - Placed the responsibility for mangrove restoration and degradation with the CBOs/BMUs.<br>- Project coordination responsibility placed on national and sub-national government actors. | | i. Recognised communities' roles in mangrove forest degradation (by planning local awareness-raising campaigns/learning events on climate change and mangrove restoration)<br>i. Only climate change-driven sea level rise addressed by the project.<br>i. Other drivers of SLR and SLR impact, such as coastal development and coastal population rise unacknowledged<br>v. Human-driven deforestation not adequately addressed within the project |
| **Communities in project locations** | - Generally demonstrated the dependence on government to support the creation and monitoring/supervision of community forestry institutions.<br>- Communities considered themselves responsible for engaging with the community forestry institutions and ensuring that mangroves forests were used sustainably.<br>- Mangrove forest-dependent local groups emphasised on their need for access to mangrove resources for livelihoods needs | - Demonstrated awareness that mangrove restoration and protection would affect mangrove dependent livelihoods<br>- Required maintenance of rights to mangrove forests as these were critical for maintenance of their livelihood needs<br>- Noted that strengthening of community forestry management institutions would be critical in ensuring that communities were able to use and protect the mangrove forest | v. Communities recognised the significant role of communities in mangrove forest degradation, which was leading to SLR and associated impacts<br>i. The well-being of some members of the communities recognised as being dependent on mangroves |

Source: Author

### 6.4.1 Framings by the project

A comparison of the project sites showed that mangrove restoration was implemented in areas with ongoing or past mangrove conservation activities. The project built on existing institutions and capacities to manage mangroves and adapt to SLR. Already existing coastal resource management policies, structures, and knowledge amongst some actors relating to the cross-sectoral benefits of mangrove conservation were used to advance the project's objectives. For example, in Kisiwa Panza and Pangani had previous mangrove restoration initiatives (Terra Global Capital, 2014; UNEP, n.d). In Kisiwa Panza and Kisakasaka, the CBO that led the restoration activities had previously replanted mangroves in the same project locations. The locations also had pre-existing mangrove protection by-laws. This reflected a rights and responsibilities framing.

The project adopted a multi-stakeholder approach to project design and implementation. National, sub-national and local level actors (including local communities) were consulted during project design (UNEP, n.d). Multi-stakeholder involvement in project implementation was through stakeholder capacity building and direct engagement of some stakeholders in implementation. For example, the CBOs and BMUs led local awareness-raising activities targeted at community members and led mangrove restoration and protection activities. Sub-national government actors also oversaw CBO/BMU activities. Some non-government actors were involved in providing technical support on specific areas of the project. For example, a National Non-Government (NNG) organisation was contracted to conduct training and capacity building on climate change to local CSOs in the three districts.

However, interviews revealed high government involvement in the project design and implementation. A representative of a National Government (NG) institution highlighted how other government ministries and departments were involved in decision making relating to the project.

> We consulted the District Commissioners on where to move the project. It was a joint meeting that involved different stakeholders, including the commission for land, the district commissioners, port authority, fisheries and other actors. We discussed the proposed project and how it would impact the LDCF activities, and then we decided that it was not feasible to continue with the LDCF project in that area, so we moved it to a different location (NG actor)

Sub-national level interviews in Pangani supported this finding, as different SNG interviewees reported involvement in project planning and implementation. As indicated by a Sub-national Government (SNG) representative, government's role was considered essential in covering the high costs associated with coastal adaptation through infrastructure development.

> The government in coordination with other actors (should support local coastal adaptation). The people do not have the capacity to do anything

> because if they had, they would have constructed a wall a long time ago. They can probably plant mangroves but not construct sea walls (SNG actor).

The project identified poverty as the root cause of vulnerability in coastal areas, emerging from local community's reliance on dwindling marine/coastal resources and unsustainable use of natural resources as the root causes of vulnerability in the coastal areas (UNEP, n.d). It also identified 'low or inefficient implementation of existing plans and policies and low enforcement of laws, low local level 'capacity, awareness and knowledge' within local level institutions as some of the factors that exacerbate these root causes of vulnerability (UNEP, n.d, p. 22). The project recognised that communities were drivers of mangrove degradation, which exacerbated SLR impacts. For example, the project proposal submitted to the GEF noted that Pangani's mangrove forest had 'faced increased human pressures as well as pressures from climate changes' while also acknowledging that even though 'plans and policies governing the use of natural resources in vulnerable areas are in force, there is limited capacity…for their enforcement' (UNEP, n.d, pp. 22, 23). An SNG representative also noted that:

> The communities are impacted by SLR because they need land and mangrove resources, but those are not there. The government has prohibited the cutting of mangroves. However, the people cut the mangroves so that they can use them. So the mangroves are not there. Also, when the waves are too strong, there is no fish, so the people lack economic income.

The involvement of local community groups was considered a proxy for community involvement. When asked how the project had involved the local communities, a National Government (NG) representative noted "We asked the community groups (referring to the Local Non-Government (LNG) actors) to involve the communities in the implementation. Among their work plan is community mobilisation. They have had meetings with the Shehia (local government representatives), district office and with NGOs". Interviews with Local Government (LG) and LNG representatives indicated that community involvement in mangrove forest protection did not go beyond mangrove replanting activities and was constrained by the CBOs/BMU.

Despite the recognition of the role of communities in mangrove resource degradation and protection, the project only addressed the natural drivers of SLR and coastal erosion-related impacts. The project supported replanting of mangroves but did not engage communities in strengthening of institutions to manage them. There was little recognition of the impacts of mangrove restoration and protection on mangrove dependent livelihoods.

Little attention was paid to local institutions in supporting continued mangrove resource management and coastal adaptation. While most project stakeholders acknowledged the importance of forest policies that enabled local mangrove communities to manage mangrove resources sustainably, they also acknowledged the weak institutional structures that limited the effectiveness of these local policies in supporting mangrove conservation and protection against SLR. The project failed to reflect and act on these concerns. Even though project actors emphasised that CBOs/BMU that were used in the mangrove

restoration represented part of the mangrove resource management structures, interviews with local communities suggested that project initiatives did little to strengthen the mangrove resource management capacity of existing local resource management institutions. For example, project activities did not focus on addressing the reasons why existing mangrove protection by-laws in Kisiwa Panza were ineffective in preventing human-driven degradation.

In summation, the project reflected two central framings of CRM –rights and responsibilities and recognition (see table 1). First, the project demonstrated awareness of the communities' contribution to mangrove degradation and their potential role in supporting restoration activities. By involving CBOs/BMU, the project sought to link community members with the project to engage them in restoration activities. However, there was limited recognition of other non-climate related drivers of SLRI. A rights and responsibilities framing was reflected through the project's division of responsibilities amongst government and non-government actors at the national, sub-national and local levels. More roles were allocated to government actors with non-governments actors only being invited to undertake specific pre-determined tasks. Based on these framings, the project prioritised equality (as opposed to proportionality) in the distribution of protection against SLR impacts as actions sought to protect all community members.

### 6.4.2 Framings by local communities

The FGDs revealed a general support for the project by the local communities. All FGDs acknowledged the role of communities in driving mangrove degradation, which exacerbated the effects of SLR. Communities acknowledged other drivers of SLR impacts, such as coastal population increase and coastal development, with some in Pangani Magharibi and Kisakasaka noting that the number of people living in coastal areas had increased with coastal land being converted into commercial land to support the growing demand for tourist resorts. FGDs in Pangani Magharibi highlighted other drivers of vulnerability to climate change, such as lack of employment and inflation. They noted that mangrove restoration created significant implications for well-being as local livelihoods were (in)directly dependent on mangroves. FGDs in Kisakasaka and Pangani Magharibi pointed out that the adoption of a protectionist approach for mangroves had instead led to the increase of illegal resource access and use.

> We cut [the mangroves] because the economy here is small. You may wake up in the morning but do not know what your children will eat. So you take your axe and make those trees your livelihood and can cut the wood, take it round hotels so that you can have some income. We know it is not allowed but sometimes, it has to be done. If you are caught, they take your axe and you get beaten. But in the morning, you go back because the drought has been too much (Women's FGD in Pangani Magharibi).

FGDs anoted that the project failed to make provisions to allow communities to access the forest to extract dry wood, which was considered an important means of income and a source of energy for cooking. FGDs had initially hoped that the project would support alternative income generation,

especially for households with mangrove dependent livelihoods, which was not done. One mixed-gender FGD from Kisakaska noted:

> The people in Kisakasaka all depend on mangroves. Those who are natives get most of their natural resources from the forest. They just recently learned how to start farming, but they still depend on mangroves. That is why there are high levels of forest degradation. They used to construct their houses with mangroves. Some of them have recently started using bricks. Therefore, even though there is the protection of mangroves, they are still cutting them on the other areas that are not protected. That is why we say we need alternative livelihoods, especially for the youth.

The FGDs did not consider the CBOs/BMUs as representatives of community forestry management institutions. They claimed unawareness of the resource management/protection laws adopted by the CBOs/BMUs and considered institutions for mangrove protection as either non-existent or weak and ineffective.

> The [mangrove protection] laws are not there. You will only know about these things (laws) if you are involved in creating them. It is difficult for us to know [the laws]. You will only know those laws when you get arrested. They (the BMU, classified as a LNG actor) have not held a meeting to educate people about mangrove laws (Men's FGD, Pangani Magharibi).

Women's FGD in Pangani Magharibi expressed similar concerns:

> The youth from the village tell us to stop cutting mangroves. We know them (the youth). They are our children. But we do not know who gave them the power over the mangroves…we were just told not to cut trees. If you have constructed a house (using mangrove poles), they ask for a [mangrove access] permit and if you do not have it, they tell you to take [the house] down. They bring a cart and carry the timber away. You cannot complain…You must have money to obtain a permit.

However, most FGD participants acknowledged that in hindsight, an earlier integration of these laws into the project would have supported the effective implementation of the project, as it would have raised awareness about mangrove forest use. One FGD highlighted that "People do not understand these laws because they are not educated about them…we needed to know the laws before planting of mangroves in the project began. This is because you cannot plant mangroves without having the skills and knowledge about the laws relating to mangroves" (men's FGD in Kisiwa Panza). The communities expected that the government would take on the role of creating and strengthening these local resource management institutions.

The potential of success by local forest management institutions in enabling sustainable use of mangrove resources elicited sentiments of doubt amongst the FGDs. While the FGDs were mostly in support of the development/strengthening of these institutions, they thought that a later (rather than immediate) development of by-laws to guide the operation of these institutions would protect the forest from severe degradation. A women's FGD from Kisakasaka noted:

> It is possible to have by-laws [for mangrove conservation], but the mangroves must first be mature enough to be cut. Right now, they are not ready. You should only be allowed to go in there if you are looking for firewood…right now, if you create by-laws, then you are finishing [the forest]. It will be gone in one day because everyone will go in there. It should continue to be protected.

The FGD discussions from the three case locations reveal that communities framed equity as both recognition, rights and responsibilities and capabilities (see table 1 for a summary). Recognition was demonstrated through the awareness of the roles that communities have to play in driving SLRI, but also recognise that some community members' wellbeing was tied to mangrove dependent livelihoods. Unlike the project, communities also demonstrated awareness about other drivers of risk, such as population growth and coastal development. The communities presented the rights and responsibilities framing through their expectation that the government would take the lead in developing/strengthening these local institutions. They also blamed the government for the ineffectiveness of the existing institutions. They indicated an awareness of their right to access and use mangrove resources due to their livelihood dependence. The communities also considered that it was their responsibility to engage with the existing institutions to support mangrove protection. They noted the effects of mangrove protection on mangrove dependent livelihoods. They indicated a desire for local resource management institutions that would mediate between mangrove conservation and mangrove use by communities. The communities' framings of CRM emphasise the role that local institutions can play in protecting communities' capabilities by ensuring access and use of forest resources for livelihoods and income. Emphasis was on proportionality as an equity principle, where priority was given to those whose livelihoods were severely affected by both SLR impacts and mangrove restoration efforts. Resource management institutions were therefore believed to have the ability to mediate the use of resources to ensure that those who were adversely affected achieved a minimum level of capabilities.

## 6.5 Discussion

The paradox of CCA is that it is globally generated, but the impacts are experienced locally (Ayers, 2010). The premise behind equitable adaptation is based in this paradox, which emphasises on having adaptation actions address the needs of vulnerable local populations who are most vulnerable to climate change. Adaptation is critical for current and future survival in LDCs (Paprocki & Huq, 2018). The choice of adaptation actions can be an indicator of how societies are structured and interact (Eriksen et al., 2015). Hence, an understanding of approaches to adaptation within country-owned initiatives can provide insights into the level of priority given to equity, as equitable adaptation considers the links

between multiple (non-)climate risks and responses to these and its impacts on vulnerable populations (Wilson, 2014). While climate justice and equity are already evident at the international level, where LDCs are already receiving climate finance (Chen et al., 2018), this should translate to local level equity, where individuals and community groups who are most vulnerable to climate change benefit from country-owned adaptation through having their adaptation needs to be addressed.

Findings from the Tanzania case study suggest that country ownership may be misaligned with local level needs, as country-owned actions can adopt framings of CRM that do not reflect those of communities. In the case study, communities presented local institutions as central to their ability to adapt to SLRI by enabling them to use and conserve mangrove resources concurrently. Conversely, the project prioritised the allocation of responsibilities to government institutions to support technocratic approaches to risk management (e.g. replanting of mangroves and construction of sea walls). Differences were also observed concerning the specific ways in which each framing was understood. For example, while the project reflected an understanding that adaptation was primarily a government responsibility, communities held the view that allocation of adaptation responsibilities should include community responsibilities the allocation of responsibilities of supporting adaptation to local communities. The extent to which these findings apply to other LDCs is unknown due to the diversity in approaches to adaptation, country ownership and climate change governance. The implications of these findings to adaptation and country ownership are discussed in the following sub-sections.

### 6.5.1 Technocratic adaptation in country-owned initiatives

The gap between rights and responsibilities and recognition by the project, the stronger government's role in the design and implementation of adaptation actions and the focus on ‘hard' adaptation through the construction of sea walls and restoration of mangroves, as observed in the Tanzania case study is not new (e.g. see Granderson (2018); Lindegaard (2018)). Previous research highlights how adaptation actions can be biased towards technocratic approaches (Ojha et al., 2016). Such approaches depoliticise adaptation by failing to recognise that vulnerability to climate change is driven by deep-rooted power structures, thus making CCA inequitable (Nagoda, 2015; Ojha et al., 2016). Local level actors are only considered instrumental for advancing development or adaptation agendas, which in most cases do not reflect their priorities.

Even though community participation may be emphasised in such approaches to adaptation, existing research shows that existing inequalities may prevent marginalised and vulnerable groups from benefiting from adaptation, thus failing to reduce local level vulnerability (Nagoda, 2015; Nagoda & Nightingale, 2017). Efforts to involve communities in these technocratic approaches are likely to create an ‘illusion of inclusion' as involvement is not matched with the influence of adaptation decision making (Few et al., 2007, p. 46). Those who are vulnerable, e.g. with mangrove dependent livelihoods are therefore highly likely to become more vulnerable to these climate risks, as a protectionist approach to mangrove conservation further exacerbates their exposure or sensitivity to risks.

In such cases, maladaptation is likely. The involvement of government can enhance mainstreaming of CCA into development planning. However, when this is at the expense of community involvement, then

'policy misfits' are likely to emerge, as the absence of local input results in actions that fail to account for interactions between proposed initiatives and longer-term socio-economic and biophysical changes thus increasing local vulnerability (Bunce et al., 2010a). Multi-stakeholder approaches to adaptation are recommended, as these represent diverse views on how adaptation can be achieved (Kuyper et al., 2018; Nasiritousi et al., 2016). Multi-stakeholder involvement especially by vulnerable local level communities can inform choices between 'soft' and 'hard' adaptation. 'Soft', as opposed to 'hard' adaptation is sometimes preferred, as it contributes towards building adaptive capacity which is essential for longer-term adaptation (Fankhauser & Burton, 2011). 'Hard' adaptation is also considered more expensive (Sovacool, 2011). However, the choice between the two involves trade-offs (Sovacool, 2011). The information on these trade-offs needs to be made aware to local level vulnerable groups to inform adaptation actions.

### 6.5.2 Importance of local level resource management institutions

Local processes and structures are essential in local adaptation, as they support the creation of capital that enables local communities to adapt to climate change through enabling communities to access and use shared resources and strengthen their capacity to respond to climate risks (Nganga et al., 2016; Wang et al., 2013). The interest in strengthened local institutions by the LDCF project communities emerged from the desire by communities to maintain access to the mangrove resources. However, even though resource management institutions are critical in mediating resource use, they are also likely to exhibit inequitable relations when elites' (as opposed to marginalise groups') needs are prioritised (Iversen et al., 2006). Hence, local institutions can reduce the ability of communities and households to adapt to climate change risks, for example, when local institutions implement structural changes, which leave some local populations more vulnerable to climate risks (Wang et al., 2013).

Local level institutions can also promote maladaptation. This risk is exhibited in Tanzania's history of conservation. Communal and participatory forestry management underscores Tanzania and Zanzibar's forestry policies (GoT, 1998; RGoZ, 1999). Previous research in Tanzania also indicates that these local forest management structures have failed to improve household and community well-being but have supported technocratic management of resources that overshadows the voices and needs of communities (Gross-Camp, 2017; Scheba & Mustalahti, 2015). Others also find no significant difference between deforestation in protected and community forests (Bray et al., 2008). Community forest management institutions also experience challenges such as internal and external conflicts, which act against the goal of community forest management (Driss Ezzine de et al., 2011).

Despite these risks, the presence of resource management institutions, as emphasised by communities in the case study locations creates opportunities for adaptation to engage marginalise and vulnerable populations. Communities with communal forestry management structures demonstrate general awareness about and support towards these structures (Gross-Camp, 2017). This is dependent on whether disadvantaged groups are represented in these institutions (Chomba et al., 2015; Villamayor-Tomas & García-López, 2017). These institutions can generate changes in social structures which strengthen cultures such as forest conservation which in turn improve the general condition of forests

(Baral et al., 2019). This can lead to improved protection against SLRI, which reduces the costs of adaptation in the longrun as responsibility for adaptation is shared between government and communities. This means that even though local resource management institutions carry the risk of promoting maladaptation, their links with local level vulnerable groups can contribute towards informing the choice between hard and soft adaptation.

### 6.5.3 Framing gaps and implications for country ownership

The gaps in framings of CRM highlights the political nature of CCA, which is characterised by prioritization of adaptation actions and emergence of trade-offs. By choosing to focus on strengthening government actors' roles in adaptation planning and implementation of technocratic adaptation action and overlooking local resource management institutions, the Tanzania project created adaptation trade-offs by marginalising resource-dependent households. Trade-offs can occur when adaptation resources are scarce, and actors have competing adaptation priorities ("Adaptation trade-offs," 2015). Struggles emerge when actors assert their authority over adaptation resources and resources (Nightingale, 2017). In the case study, the absence of resource management institutions in the project was highlighted by communities as disabling mangrove dependent households from accessing resources which critical for them to adapt. This demonstrates that adaptation at one scale may cause vulnerability increases at others (Beckman, 2011).

Desired trade-offs can be selected. Choices on scale and approaches to adaptation are shaped by actors' perceptions of 'place, well-being, and fairness', which further informs choices of acceptable spatial and temporal trade-offs (Adger, 2016, p. A1). While trade-offs are common in adaptation (Foerster et al., 2015; Johnston et al., 2018), equitable adaptation recognises these different priorities and considers them when designing adaptation actions. A focus on the needs of communities who are vulnerable to climate change ensures that those who lose are not those who are least able to adapt to climate change (Paprocki & Huq, 2018). While community preferences introduce new risks (i.e. potential for elite control and further marginalisation of resource-dependent households), the involvement of communities in designing and implementing country-owned adaptation remains critical.

An equity-based understanding of country ownership prevents actions from favouring local level elites and instead focuses on the needs of those whose vulnerability is likely to be exacerbated by blind adaptation actions. It recognises differential patterns of vulnerability within local communities. However, LDCs need to find a balance between addressing national level and local level priorities. For example, while protecting coastal areas may be a priority for national level adaptation, this has to be in line with more nuanced local priorities of CRM through local resource management institutions. These findings can inform recommendations for adaptation interventions and UNFCCC finance mechanisms seeking to address local needs through country ownership.

The first recommendation relates to how adaptation actors can ensure that adaptation interventions are better aligned with the priorities of local level vulnerable groups. This requires engagement with local actors to identify local level vulnerable groups and use of participatory approaches to vulnerability assessments and adaptation planning. Emphasis should be on ensuring that participatory approaches

offer local vulnerable populations a substantive authority (Massey & Huitema, 2013), where local level vulnerable populations' opinions are valued and used to inform adaptation decision making to enhance country ownership. Second, UNFCCC finance mechanisms (such as the GEF) should continuously re-assess the extent to which existing policies are effective in ensuring that the needs of local level vulnerable groups are reflected in proposals and funded activities. Equity-based regulations and policies (e.g. social and environmental safeguards policies which require that local level groups be consulted during project design and implementation to avoid project-induced harm) need to be enhanced and adhered at all stages of the project cycle so as to ensure that local level priorities are identified and integrated into climate change adaptation. This prevents adaptation from being technocratic.

## 6.6 Conclusion

The global climate change regime is built around climate justice and equity, where the goal is to ensure that climate actions reduce the vulnerability of those most affected by climate change. It is therefore essential to establish whether country-owned adaptation actions, which drive the current international climate action supports equitable adaptation. This chapter sought to find out whether adaptation initiatives funded under the country ownership scheme of multi-lateral climate finance reflected local level priorities by comparing the framings of CRM by the project and local level communities expected to benefit from CRM. Principles of equity reflected in each framing are compared. The chapter uses a case study of a GEF-administered LDCF coastal adaptation project in Tanzania and finds a gap in the framing of CRM, which results in implementation of technocratic adaptation interventions while overlooking local resource management institutions, which are a priority for local mangrove dependent households. The analysis demonstrates a gap in framing between what communities and country-owned initiatives consider essential for adaptation. This indicates a lack of equity within this project, as community priorities that relate to local resource management remain unaddressed within the case study project. Hence, while initiatives that are considered country-owned may work with local level actors, they may fail to be equitable due to their inability to address priorities of those who are most vulnerable to climate change.

These findings advance knowledge on county ownership of adaptation. Country ownership should be assessed based on whether interventions are responsive to the needs of those who are particularly vulnerable. These findings are generated from a single case study from LDCs. These findings cannot be used to generalise about the nature of country ownership in other LDCs because CCA governance, which is a significant determinant of the extent to which local level priorities are reflected in adaptation, varies across LDCs. However, country ownership processes and outcomes are also affected by broader country and donor institutional structures, which affect the relationship between multilateral climate finance institutions and the actors they work through within states to achieve country-owned adaptation. Further research is needed to understand the extent to which these structures determine local priorities are reflected in country-owned projects is necessary.

# 7 Challenging the obsession with local level institutions in country ownership of climate change adaptation

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**Abstract**

Working with local level actors to enable country ownership is applauded within the multilateral climate finance landscape. However, are emerging adaptation interventions equitable by reflecting the priorities of local level vulnerable populations? This research sought to find out whether the engagement of local institutions in projects that seek to achieve country ownership enabled local level vulnerable groups to participate in and influence adaptation decision-making processes and outcomes, thereby enabling them to have a voice in local level adaptation. It used a case study of a Global Environmental Facility-managed coastal adaptation project in Tanzania, which sought to restore and protect mangroves to enable adaptation to sea level rise. Data was generated from 13 Focus Group Discussions and survey questionnaires administered to 629 individuals in three locations on the mainland of Tanzania and in Zanzibar. The findings indicate that community-based organizations were used to facilitate the implementation of project activities at the community level. However, participation spaces created in the project and facilitated by these local institutions were exclusionary and failed to enable vulnerable community groups to have a voice on mangrove restoration and protection. Use of these local institutions altered local level power relations and disempowered other pre-existing and informal local resource management institutions. Community members questioned legitimacy of actions implemented by these local institutions. These findings suggest that working with local level stakeholders to generate country ownership does not automatically guarantee that actions will address the needs of local vulnerable groups. Multilateral climate finance institutions should acknowledge these risks and implement measures to address them.

## 7.1 Introduction

The Paris Agreement recognises the need to achieve country ownership and the consideration of vulnerable communities and groups in adaptation to climate change (UNFCCC, 2016). Country ownership ensures that adaptation is informed by developing country institutions (as opposed to international and donor organisations), thus making adaptation likely to address intra-state adaptation needs and local level vulnerabilities. For example, country ownership is achieved through the direct access to international climate finance by developing country actors to support planned adaptation to climate change (hereafter ‘adaptation') that aligns with national priorities as opposed to international priorities (UNFCCC, 2013). This is expected to generate climate justice as funds are allocated to vulnerable developing countries and funds adaptation priorities identified by developing countries (Colenbrander et al., 2018). Equitable adaptation also emerges, defined here as enabling local level vulnerable groups to have their adaptation needs addressed. This chapter is interested in equity in country owned adaptation. It investigates whether country-owned actions that work with local level

institutions enable participation and adaptation decision-making influence by local level vulnerable communities.

Empirical evidence on the link between country ownership and engagement of local stakeholders is limited. Some studies find the translation of efforts by multilateral climate finance institutions into local engagement of local level actors is central to country ownership. Addressing climate change requires adequate understanding of the problem and appropriate vulnerability reduction options. Working with local level actors enables this, as local vulnerable groups can contribute towards adaptation decision-making (Cash & Moser, 2000; Chu et al., 2016). Local institutions link local vulnerable populations to national and international level actors and facilitate knowledge and resource exchanges (Brown & Sonwa, 2015; Smucker et al., 2015; Yaro et al., 2015). These also contribute to the cost-effectiveness of planned adaptation (Twigg, 1999) and 'facilitate access to and influence over decision-making for a wider range of [local] stakeholders…thereby redress[ing] power imbalances that fuel inequality and exclusion' (Colenbrander et al., 2018, p. 903).

Involvement of local institutions in multi-lateral and country-owned climate actions experiences limitations. Unequal interactions between local level actors and national and international actors dominate country owned interventions (Virtanen et al., 2011). International commitment to channel financing to the local level and engage local level institutions and communities is low (Fenton et al., 2014). There are few accredited local institutions directly engaging with multilateral finance institutions (GCF, 2018a). As of early 2018, 75% of GCF funding had been allocated through international accredited agencies (Fonta et al., 2018). This counters intention of direct engagement with country institutions in access and management of climate finance. Other studies find greater country ownership and engagement of local level actors within the climate finance landscape. Enhanced direct access support by the Adaptation Fund improved local ownership of adaptation and participation of local level groups (Adaptation Fund, 2018).

The link between local institutions and local vulnerability reduction is contested. Projects that consult local actors during project planning may generate plans that do not reflect the priorities of vulnerable groups. This can be due to: a) power differences between actors engaged in multi-level processes and structural biases that may prevent local institutions from adequately engaging in multi-level processes (Moore, 2016; Paavola, 2005; Smucker et al., 2015) or b) local processes that generate elite capture and result in exclusion of vulnerable groups from adaptation decision making (Arnall et al., 2013; Lebel et al., 2011; Sovacool, 2018). Despite these limitations, projects funded by multilateral climate finance mechanisms seeking to demonstrate country ownership use local level institutions as entry points to the local level (e.g. Garcia (n.d)). Inclusion of local institutions in design of national policy processes is therefore applauded (Agrawal et al., 2012). This chapter seeks to understand whether the use of local institutions by multilaterally funded adaptation projects generates adaptation decision making influence by local level vulnerable populations. Two research questions guide this research: a) to what extent do country owned projects working through local level institutions enable the participation of level

vulnerable populations in adaptation decision-making? b) Does participation translate in vulnerable local populations influencing adaptation decisions?

This chapter makes conceptual and empirical contributions to existing research. Conceptually, it frames equitable adaptation as a factor of influence by vulnerable local populations in adaptation decision-making processes, which emerges when vulnerable groups have voice in adaptation. Voice is dependent on the types of participation spaces created and accessed by vulnerable groups and levels of participation achieved during decision-making. This generates *meaningful participatio*n. Empirically, this chapter adds to existing literature on country ownership, climate justice and equity. It presents evidence on the structure of country-owned projects at the local level and the equity outcomes generated by these projects. The chapter also challenges common policy assumptions that the engagement of local level institutions generates country ownership of adaptation (e.g. GEF (1995, 1998, 2014). The chapter finds that achieving country ownership through working with local institutions does not guarantee that adaptation will address the needs of vulnerable local populations. Instead, there is a risk of maladaptation, as local level power inequalities may result in the inability of vulnerable local populations having their priorities reflected in local level adaptation actions.

This chapter has 5 sections. Section 7.2 summarises the literature on equitable adaptation and local level adaptation, and frames voice in adaptation decision making as influence enabling. Voice is a factor of type of participation spaces accessed by local level vulnerable populations and the levels of participation attained by these groups. Section 7.3 presents the methods used in data collection. Section 7.4 presents the findings and discusses them regarding their implication on their voice in decision-making. Even though the case study project intended to engage local level actors and communities by working with local institutions, the project altered local level power relations and enabled elite control and exclusion of vulnerable populations. Engagement of local level institutions did not generate participation and influence in adaptation decision-making processes and outcomes.

## 7.2 Local level influence, voice and participation

Equitable adaptation is a factor of procedural and distributive justice. Distributive justice relates to the allocation of costs and benefits of adaptation actions. Globally, distributive justice is achieved through ensuring allocation of climate finance is in response to country priorities and supports country ownership. Within states, distributive justice ensures that adaptation responds to the needs of vulnerable local populations (Colenbrander et al., 2018). Procedural justice relates to: how adaptation decision-making processes are structured; criteria for actor inclusion and exclusion of actors in these processes; and determination of the normative principles that guide the identification of what is equitable (Martin et al., 2013; McManus et al., 2014). Procedurally just adaptation ensures representation of vulnerable groups in decision-making (Anand, 2001; Young, 1990). Linked to procedural justice is recognition, which acknowledges and incorporates intra-group diversity into decision-making processes (Tschakert, 2009).

Equitable processes prioritise particularly vulnerable populations. Vulnerability is defined as the likelihood of being affected by climate change, which is a factor of individual/groups' socio-cultural and

economic conditions (Cardona et al., 2012). Country ownership is expected to enhance local ownership by creating opportunities for local level populations to influence adaptation decision-making. This is achieved through representation and prioritisation of local voices in adaptation. Voice in adaptation facilitates procedural and distributive justice (Lind et al., 1990; Smith & McDonough, 2001). Participation in critical in facilitating achievement of voice in adaptation (Atela & Quinn, 2014; Nasiritousi et al., 2016).

Voice relates to power over when and how decisions are made, their implementation and outcomes. A distinction is made between 'transformative participation' and standard participation, where the former generates influence and change in planning policies and outcomes (Aylett, 2010; Winkler, 2011, p. 258) while the latter creates an 'illusion of inclusion', where actors participate without actually influencing the outcomes of decisions (Few et al., 2007) (also see Bahauddin et al. (2016)). Voice also emerges from 'competence' which is achieved when 'stakeholders either have or are provided with the tools and knowledge necessary to participate meaningfully in both technical and non-technical negotiations' (Webber (1995), cited in Murdock et al. (2005, p. 224)). Voice of vulnerable groups in adaptation decision making enables co-production of adaptation decisions (Few et al., 2007), signifying that vulnerable communities' interests are taken into account (Bovaird, 2007).

The absence of meaningful participation or voice may result in the creation of 'legally entrenched rights to participate, coupled with limited opportunities to influence', which turns participatory processes into 'bureaucratic hurdle[s]' (Lee et al., 2013, p. 33) that are only met as minimum requirements for adaptation. Entrenched interests may dominate different types of participation spaces, generally at the expense of the interests of groups that are most vulnerable to climate change. This disempowers communities and commits injustices by validating inequalities (Bifulco, 2013). In equitable adaptation, local institutions supporting local adaptation facilitate participatory decision-making processes that are aware of power differences and inequalities within populations and that prioritise the voices of those who are most vulnerable to climate change. This chapter is part of a larger research project that investigates the intra-state equity implications from country ownership within projects that are funded by multilateral climate finance mechanisms of the UNFCCC. This section presents a framework that links voice and influence in decision making to types of participation spaces and levels of participation in adaptation decision making.

### 7.2.1 Types of participation spaces in adaptation decision making

Quality of participation is determined by the nature of participation spaces used in decision-making. This chapter defines participation spaces as physical spaces which enable interactions between individuals and groups (Massey, 2013). The nature of participation spaces determines the characteristics of participants and their power within the adaptation process, which affords participants different levels of voice in decision-making. For analytical purposes, this chapter distinguishes four types of participation spaces –closed, open, invited or claimed (Gaventa & Martorano, 2016; Wood et al., 2016). Closed spaces involve specific groups of actors who make adaptation decisions on behalf of others 'behind closed doors without any pretence of broadening the boundaries [of these participation spaces]

for inclusion' (Winkler, 2011, p. 260). These have a likelihood of elite control, as local level inequalities remain unrecognised. Local level vulnerable groups lack a voice in such spaces. Processes in these spaces involve a one-way flow of information from one source, likely powerful actors, to the communities without any opportunity for feedback.

Invited spaces recognise certain local level actors, where specific exclusionary characteristics determine who participates. The hosts subjectively recognise inequalities amongst local actors. Power and the exercise of power in these spaces is moderated by the host, who can be (in most cases) formal government institutions/authorities (Winkler, 2011). Voice may only be granted to those who are invited (irrespective of whether they are vulnerable or not). Open and claimed spaces do not place restrictions on the participation of vulnerable local populations. Vulnerable groups create these spaces, recognise their own inequalities and pursue their self-identified interests, which gives them agency. Invited spaces result in stakeholder participation (actors who are deemed relevant) while open and claimed spaces enable public participation (Sprain, 2017). Country owned adaptation actions should enable vulnerable local populations *to access participation spaces* for adaptation decision making and have *open and claimed participation spaces* to enable local level vulnerable groups to have a voice in adaptation decision-making.

### 7.2.2 Level of participation in adaptation decision making

The level of participation achieved by vulnerable groups also determines their voice in adaptation decision-making. For analytical purposes, this chapter defines three levels of participation –informed, consulted and involved. These correspond to Pretty's passive, consulted and functional/interactive participation levels respectively (Pita et al., 2010; Pretty, 1995). Vulnerable local level populations have different extents of voice in these levels of participation. In the informed level, vulnerable groups are made knowledgeable of the decisions made by groups in more powerful positions (Cornwall, 2008). Feedback from vulnerable actors towards decisions is restricted (Arnstein, 1969). This signifies a lack of voice. At the consulted level, local problems and solutions are identified by external actors without input from vulnerable groups (Cornwall, 2008). Vulnerable populations only provide opinions towards these pre-determined problems and solutions (Jentoft & McCay, 1995). There is no guarantee for the incorporation of these opinions into decisions (Arnstein, 1969). Their voice in decision-making cannot be ascertained. In the involved stage, vulnerable populations contribute to both problem identification and solution design, planning and implementation (Cornwall, 2008). Vulnerable populations' voices in decision-making is significant and observable.

The three levels of participation have different patterns of *who* participates and *what* vulnerable groups derive from these processes. Informed participation mostly uses closed and invited participation spaces. The informed level emerges through participation spaces such as media briefings or public announcements, which only allow for one-way flow of information. The consulted level of participation uses invited spaces, where only select individuals or groups participate in decision making without assurance that their opinions will inform adaptation decisions. Such spaces can include workshops, meetings or participation in project (baseline or midline) assessments.

The consulted level shifts power in favour of the host, as the communities have no input in problem definition and generation of solutions. Vulnerable local groups have limited or no voice. The involved level of participation leverages both open and claimed participation spaces, where local level actors have the power to influence the adaptation process. These spaces may include voting processes, use of advisory committees or local public level meetings. Vulnerable groups' voice is significant as meaningful participation, which recognises diverse actors' identities, values and norms is achieved (Wood et al., 2016). Meaningful participation requires action that challenges institutional norms, entrenched power relations and inequalities that restrict access to decision-making by the most vulnerable (Tschakert et al., 2016). Equitable country-owned adaptation projects should enable vulnerable local populations to be *involved* in adaptation decision-making.

In summary, this section has presented a framework that links voice and influence in decision making in country-owned adaptation processes to types of participation spaces and levels of participation. The following section presents the methods and data, results and findings.

## 7.3 Methods and data

### 7.3.1 Case selection

Selection of cases was from the Least Developed Countries Fund (LDCF)-funded coastal adaptation project in Tanzania. The LDCF, which became operational in 2002 supports LDCs in the preparation of National Adaptation Plans of Action (NAPA) and implementation of NAPA projects (Sovacool et al., 2017a). It is administered by the GEF which is an operating entity of the UNFCCC (Climate Funds Update, n.d). LDCF projects use GEF operating procedures including country ownership guidelines (Australian Aid, 2012; Climate Funds Update, n.d). Total funding by the LDCF (as of 2017) was $1.2 billion, directed towards vulnerability reduction, resilience and capacity building (GEF, 2019). The GEF's approach to country ownership is use of sub-national, national or regional government or non-government institutions as executing entities and international development agencies (referred as 'GEF Agencies') as Implementing Agencies (IAs). IAs support national organisations (government and non-government) to 'develop, implement and execute their projects' (GEF, n.d). Country ownership is demonstrated through projects reflecting country priorities and endorsement by country focal points.

The 'Developing core capacity to address adaptation to climate change in productive coastal zones' project (hereafter referred to as 'the project') was implemented by the Government of Tanzania (GoT) (EA) with the United Nations Environmental Program as the IA. The project's goal was to 'develop institutional capacities to manage climate change impacts through improved climate information, technical capacity and through the implementation of concrete adaptation measures and innovative solutions to reduce vulnerability in key vulnerable areas, and learning' (GEF, 2009, p. 1). One of the project components was the piloting of an integrated coastal zone and river basin management, which involved local level vulnerability reduction initiatives such as capacity development, the construction of coastal infrastructure and mangrove restoration to protect coastal zones from sea level rise (GEF, 2009). The project was implemented through national and sub-national governments, making it country-led and owned. Local institutions were used to implement project activities at the local level.

Tanzania is a union state, made up of Tanganyika (the mainland) and Zanzibar islands. Key climate change risks in Tanzania include Seas Level Rise (SLR), erratic and extreme rainfall patterns (GoT, 2007b; Mongi et al., 2010). Coastal areas are severely impacted through coastal flooding and erosion, loss of biodiversity and degradation of coastal and marine resources such as fisheries and mangroves (Ellison, 2015; Kebede & Nicholls, 2012). Coastal population growth and conflict over resources further threaten resource-dependent livelihoods (Bunce et al., 2010b; Suckall et al., 2014). To protect coastal areas from SLR-induced coastal erosion, mangrove protection and restoration is done, which promises to provide physical, biodiversity and livelihood protection from SLR impacts (Hansen et al., 2010). This is supported by Tanzania's historical conservationist approach to mangrove protection, which is embedded in existing forestry policies (GoT, 1998; RGoZ, 1999).

While mangrove protection has generated net benefits to coastal communities in Tanzania (McNally et al., 2011), balancing mangrove protection and maintaining community access to these resources is challenging (Beymer-Farris & Bassett, 2012; Yanda et al., 2019b). This is due to the culturally-driven mangrove dependence in Tanzania (Gustavson et al., 2009; Mangora, 2011), where mangroves have many uses. This has generated conflicts between conservation agencies and communities and continues to drive mangrove degradation (Beymer-Farris & Bassett, 2012). Community forestry management arrangements (mainstreamed into national forestry policies) are used to promote participatory and decentralised forest management on the mainland and in Zanzibar (Eilola et al., 2015; FAO, 2019b).

The case study focused on the involvement of local level vulnerable groups in the design and implementation of the mangrove protection and restoration component of the project. The unit of analysis was the project in three locations in Tanzania mainland and Zanzibar. Case selection was made based on the approach used in implementing the project in the different locations, the presence of a pre-existing mangrove forest before project implementation (so that there would be a history of engagement with mangrove forests) and the proximity of case study location to the restored mangrove forests. The unit of observation was individuals in Kisiwa Panza (Zanzibar), Pangani Magharibi (mainland) and Kisakasaka (Zanzibar), hereafter KP, PM and KS respectively (see Figure 4-3 and Figure 4-4).

On the mainland, local institutions used to implement the mangrove sub-component of the project were Beach Management Units (BMUs), which were public local groups, which had been created by a village-level public vote. New members needed to be voted in by the community members. In Zanzibar, local institutions were community-based organisations, which were private local groups whose membership was closed. New members were invited and admitted at the discretion of the management teams of these groups. Data was collected between April and October 2018. Ethics approvals by the University of Reading ethics review board and research permits issued by the governments of Tanzania and Zanzibar were issued before data collection began.

Qualitative and quantitative tools were used to collect the data. Quantitative data was digitised, cleaned and coded in excel and analyses done in Stata SE 15. Thematic analysis was used to analyse the qualitative data. This mixed approach was chosen for its potential to offer insights into the interaction between 'human and the social world[s]' concerning to local level actor participation in adaptation

actions (Malina et al., 2011, p. 61). The complementarity and convergence/divergence between qualitative and quantitative methods provided that could be triangulated to produce more robust findings (Nightingale, 2016). Sections 3.2 and 3.3 continue the discussion of the data collection tools.

### 7.3.2 Focus group discussions

Qualitative data was collected using Focus Group Discussions (FGDs) with groups of individuals (age>18) within the case study locations. Thirteen FGDs (4 in PM, 4 in KP, 5 in KS) were conducted (see Table 7-1). Six FGDs had all-male respondents, six had all-female, and one was a mixed male and female FGD. FGDs had 6-13 participants each. The researcher, with input from local informants, selected participants. FGDs were conducted in a local language and lasted 60-120 minutes. Voice recordings were transcribed and translated by the researcher. Discussions focused on groups' understanding of SLR drivers and impacts, participation in the project and knowledge of forest by-laws and policies.

Table 7-1: Summary of case locations and data collection tools used

| Characteristic | Case location 1 | Case location 2 | Case location 3 |
|---|---|---|---|
| Administrative details | Mtondooni and Panza villages in the shehia[a] of **Kisiwa Panza** Mkoani district | **Kisakasaka** village in Shehia of Kombeni Magharibi B district | **Kumba** Hamlet [b] in Pangani Magharibi village Pangani District |
| Mangrove area (re)planted [c] | >200 ha replanted | >50 ha of mangroves replanted | Unknown area of mangroves replanted |
| Type of group used | Private local group [d] | Private local group | Public local group [e] |
| CFM [f] agreement present? | Yes | No | No |
| Number of FGDs conducted | 4 | 5 | 4 |
| Number of FGD participants | 49 | 45 | 37 |
| Number of complete questionnaires | 241 | 161 | 227 |

Source: Author

**Notes**

[a] Shehia is the second lowest unit of administration in Zanzibar, immediately above the village and below the ward.

[b] A Hamlet is the lowest unit of administration in Tanzania mainland, below the village.

[c] This indicates the acreage of mangroves replanted by the project

[d] Membership to these groups was closed. Other community could only join by selective invitation by the group's management.

[e] Membership to these groups was open. Members of the groups were elected during village meetings. New members were voted in by the rest of the community.

[f] A CFM (Community Forest Management) plan is a decentralised policy approach that engages communities in forest conservation. In Tanzania mainland, this is done through a Community Based Forest Management (CBFM) as part of the National Forestry Policy (FAO, 2019b; GoT, 1998). In Zanzibar, this implemented as a Community Forestry Management Agreement(COFMA) as part of the Zanzibar National Forestry Policy (Eilola et al., 2015; RGoZ, 1999).

### 7.3.3 Structured questionnaires

Data from structured questionnaires was collected to complement and validate the findings from the FGDs. Structured questionnaires were administered to adult individuals (age >18 years) who had been residents of the study locations for at least 6 months before date of data collection. Questionnaires were administered in a local language. The sampling of individuals was stratified (based on sub-village and

gender) and done along transects that cut across each of the sub-villages. Sample sizes for each sub-village were calculated based on 2012 population census data, calculated at 95% confidence level and 6% confidence interval.

Information on participation spaces and levels of participation was collected. Respondents were asked to identify the different types of participation spaces they had accessed within the project. A list of participation spaces developed through consultations with key informants involved in the project and from the review of project documents was either presented or read out to the respondents. Information on levels of participation attained was also sought. The respondents were presented with three levels of participation –involved, consulted and informed, and were asked to identify which one they thought they had reached within the project. The fourth level of participation –*not involved at all/none*, which had not been in the original questionnaires, was added by the respondents during data collection in the first study location and repeatedly identified by others in subsequent locations. This corresponded to individuals who reported not having received any form of information about the adaptation process. Levels of vulnerability were captured using variables of individuals' reported engagement with coastal resources (i.e. mangrove forests). Individuals were asked to identify the different ways and levels to which they a) were affected by SLR b) dependent on mangroves c) perceived the effects of the mangrove restoration and protection activities on livelihoods and wellbeing. These measures were designed for this study.

## 7.4 Findings and discussion

Of those surveyed, 51% were female, while 49% were male. Figure 7-1 shows the distribution of dependence on mangroves, level of impacts from SLR and perceived impact of mangrove restoration, obtained from the survey data. 52% of those surveyed reported mild impacted by SLR. 53% and 39% of the respondents were mildly and highly dependent on mangroves, with dependence culturally driven. Uses of mangroves were for livelihoods (sale of timber from mangrove forests), for seafood (e.g. crabs), sources of medicine and as religious places. Most surveyed people also perceived that they would be negatively affected by the mangrove restoration and protection project. Appendix 5 presents a description of the variables collected in the surveys. The following subsections present findings from the FGDs and surveys and discuss their implications for equitable intra-state country ownership.

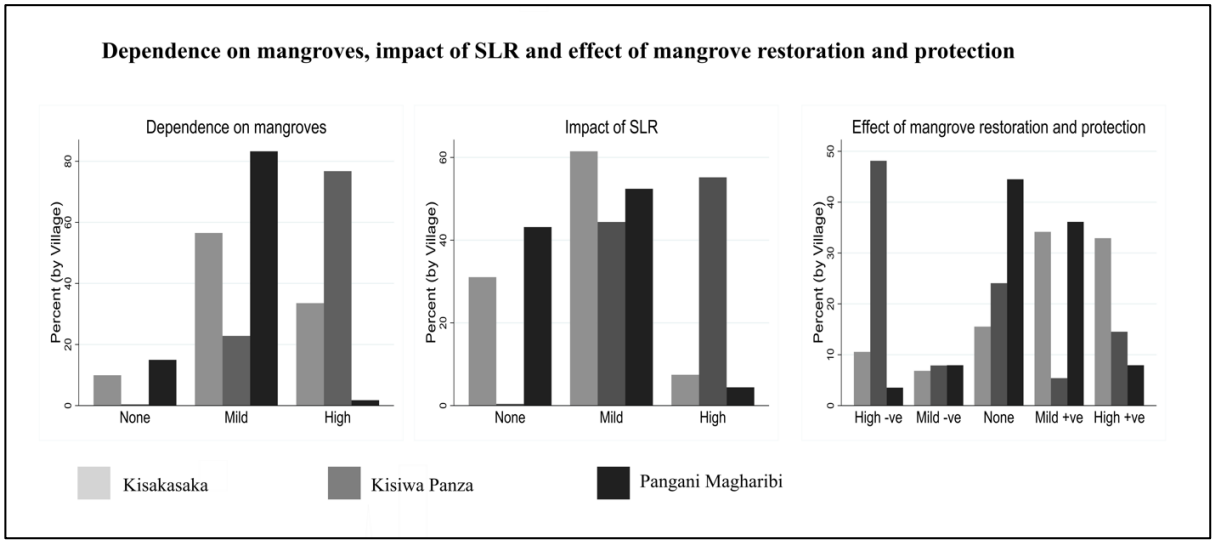


Figure 7-1: Dependence on mangroves, impact of SLR and effect of mangrove restoration and protection

a) Dependence on mangroves representing the number of ways in which an individual is dependent on mangroves b) the impact of SLR and effect of mangrove restoration c) protection on livelihoods and well-being (n=629).

Source: Author

### 7.4.1 Participation spaces and exclusion from adaptation decision making

Surveyed individuals had different levels of access to different participation spaces (see figure 3), each of which enabled the participants to have different levels of voice in the mangrove restoration component of the project. Participation spaces with the highest levels of access were friends/relatives, awareness-raising campaigns, public address systems, radio/tv and local council meetings. Voting spaces, project meetings/seminars and village government meetings had the lowest levels of access (Figure 7-2). Even though a variety of participation spaces were present at different times during the project, local populations considered the participation spaces within the Tanzania project to be inadequate in ensuring inclusion of local populations.

The project's local institutions were contractually required by the project to hold community meetings in their respective villages to introduce the project to the community and raise awareness about climate change. However, FGD discussions indicated that these meetings did not adequately engage all members of the communities. In KS, the meetings were held long after project implementation began. Attendees were unable to influence project design or implementation. Instead, those who attended were informed about the project and asked to participate in replanting activities. Participation spaces associated with the project were also discriminatory and exclusionary. Levels of participation also indicated the extent to which community members had a voice in the project. 5% of the total survey sample indicated involvement in decision making relating to the mangrove restoration project, 4% indicated that they were consulted within the project while 25% and 66% indicated that they were informed and not involved at all, respectively. These findings suggest that very few people had a voice in the decision-making process.

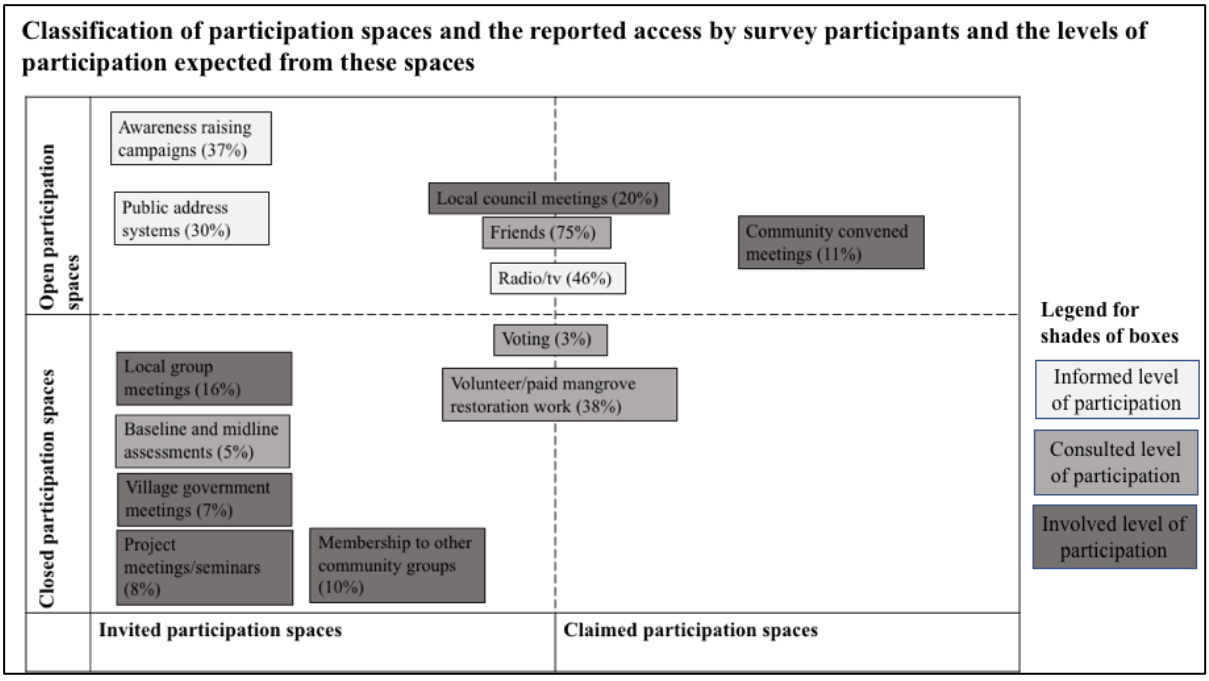


Figure 7-2: Participation spaces and the levels of participation associated with these participation spaces

The numbers in brackets indicate the percentage of survey respondents who reported access to these spaces (n=629).

Source: Author

In general, survey data showed higher access by community members to open and invited participation spaces such as public address systems, mangrove restoration activities, local council meetings and awareness-raising campaigns. While most of the participation spaces within the project seemed open to any member of the community (for example awareness-raising campaigns, posters and the public announcements regarding upcoming project activities), most FGDs described these spaces as closed and invited. Only individuals with prior knowledge about upcoming community meetings were able to attend them. Women FDGs in PM indicated that information on upcoming meetings was more likely to reach men as announcements targeted markets areas where men worked but failed to target farms and homes where the women spent their time. Most FDGs participants noted that they lacked information about planned meetings. Access to one participation space depended on previous access to another. For instance, participation in mangrove planting activities and seminars in all case study locations depended on whether one had participated in the community meetings or whether individuals could get private invitations from members of the local groups. FGDs also reported partial community involvement in project implementation but no participation in project design.

Open and invited participation spaces only enabled community members to be informed about the project with no opportunity for them to provide feedback relating to the adaptation project. People who accessed these spaces were informed about the project and were able to provide their input on how mangrove restoration would be conducted. However, there did not have a guarantee that their opinions would be incorporated into future mangrove restoration or the program in general. Other participation spaces that were open and claimed, such as community-convened meetings enabled community members to have a greater voice due to the possibility of two-way communication. These were very few

or even absent, suggesting the limited availability of spaces that enabled local communities to have a voice in decision-making.

The characteristics of adaptation spaces within the project indicates the project's extent of engagement with local vulnerable communities. Substantive authority by vulnerable populations over the adaptation decision making process and its outcomes (Massey & Huitema, 2013) was constrained by the limited availability and access to open and claimed adaptation spaces by local communities. Perceptions of risk, drivers and solutions are informed by knowledge and beliefs about climate change (Below et al., 2015; Guy et al., 2014). Limiting participation spaces to closed and invited therefore excludes certain knowledges from informing adaptation decision. The project risked failing to capture the preferences and needs of vulnerable populations and compromised the legitimacy of adaptation decisions emerging from the project (Zurita, 2006). This is not new. Adaptation interventions that claim to work with local communities fail to either engage vulnerable community members or only do so during project implementation, not before or after, resulting in low or absence of community voice within projects (Islam and Nursey-Brat, 2017). Literature proposes deliberative engagement of local level communities in adaptation, which involves in depth and repeated discussions throughout the adaptation project cycle and enables adaptation to be transformational by addressing the socio-political drivers of vulnerability (Schlosberg et al., 2017).

Access to participation spaces is dependent on availability and willingness by vulnerable community populations to access these spaces. FGDs indicated that even though different participation spaces were available, preference of participation spaces over others resulted in selective efforts to access and use some spaces. Preference for participation spaces was dependent on anticipated benefits from participation. In KP, FGD participants noted that they would only give their opinions at local council meetings if they believed that those opinions would be incorporated into adaptation decisions. As a result, those who perceived that they lacked a voice in local council meetings made little effort to access it. Men in KP reported declining to participate in paid mangrove restoration activities and instead left it to their wives because they considered it to have little pay and therefore suitable for women. This was culturally-driven as lesser-paying was considered feminine. FGDs expressed a general dissatisfaction with the project due to the limited replanting paid work opportunities offered within . Dissatisfaction was due to the inadequate monetary benefits associated with engagement in mangrove replantation work. FGDs did not express concern for the inadequate availability and use of other forums such as community meetings for public consultation or public community meetings for deliberation on project design or implementation. Therefore, monetary benefits from access to participation spaces were used to determine preference for participation spaces.

The preference for participation spaces by community members in the study locations suggests that individuals and groups seek different goals from adaptation. For example, while public meetings are preferred as a tool for public governance in some developing countries (Tang-Lee, 2016), the communities in all the study locations preferred engagement in the project through mangrove planting activities which offered economic returns. This suggests that most individuals would prefer immediate

monetary benefits from adaptation actions (instant gratification) as opposed to slower longer-term benefits that emerge from institutional transformations (delayed gratification). Hence, interest in long-term changes in decision-making structures may not be a priority for some communities engaging in adaptation actions.

The preference for specific decision-making spaces is also linked to perceptions of whether participants' opinions are incorporated into adaptation decisions. In Nepal, even though the most vulnerable participated in adaptation decision making, their needs were not incorporated into the plans that arose from these participatory processes resulting in 'participatory exclusion', with those who were excluded choosing not to access these participation spaces again (Nagoda & Nightingale, 2017, p. 89). However, the preference for some participation spaces over others should not imply that communities have contended with the unequal power structures that determine their access to adaptation.

Even though access to key participation spaces across was generally low across the survey sample, a higher percentage of those who had access to these spaces were vulnerable local groups. For instance, local council meetings were mostly attended by groups who were highly dependent on mangroves and mildly impacted by SLR. Local populations that reported being highly negatively affected by the mangrove restoration activities were also the highest percentage of people who accessed awareness-raising campaign participation spaces and took part in the mangrove replanting activities through volunteer or paid work (Figure 7-3). The survey results also indicated that the involved level of participation, even though achieved by very few people, had representation from individuals who reported mild to high dependence on mangroves and mild to high impact of SLR (Figure 7-4). Most of the people who reported the involved level of participation also reported being highly negatively affected by mangrove restoration and protection. Those who reported not being involved at all had different levels of dependence on mangroves, impact of SLR and effect of mangrove restoration and protection. These results suggest that the few people who had a voice in the project were also those who had high levels of vulnerability.

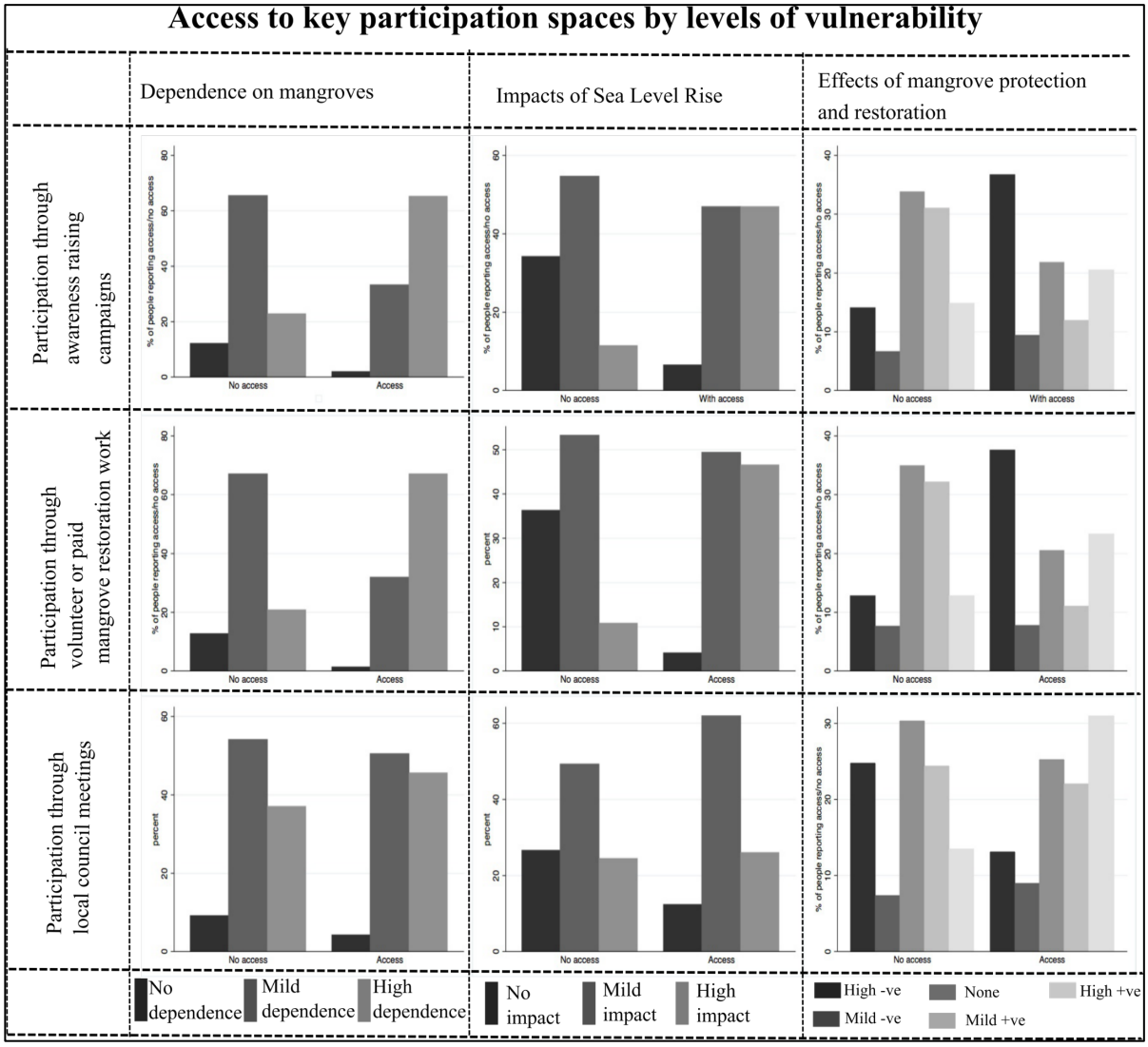


Figure 7-3: The three most highly accessed participation spaces by levels of vulnerability (n=629)

Source: Author

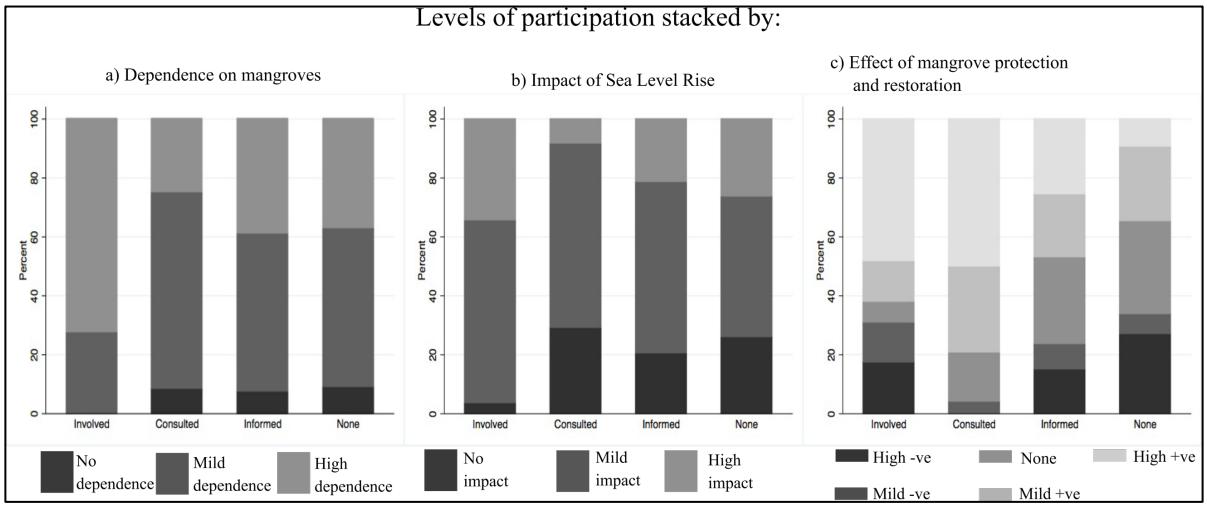


Figure 7-4: Distribution of vulnerable groups across the levels of participation (n=629)

Source: Author

The findings on the types of participation spaces, levels of participation and their level of access have implications on the extent to which the project enabled local level populations, especially those who are

vulnerable to climate change and its impacts to have a voice in adaptation decision-making. Local level adaptation recognises the importance of communities as adaptation process stakeholders, who need to be consulted and involved in adaptation processes (Islam & Nursey-Bray, 2017). However, working at the local level carries the risk of exclusion, where 'the disutility of local processes in community climate change adaptation efforts' is observed (Sovacool, 2018, p. 184).

The results from this study also demonstrate that the use of local groups is not an assurance of the absence of local level exclusion. For example, the use of local groups in project implementation can create closed participation spaces, which can result in the socio-economic-based exclusion of come community members from adaptation actions. This can have significant implications on who contributes to decision making and who benefits from adaptation actions. The exclusion of local populations is also cumulatively enabled/restricted by actions at different levels. For example, in the Tanzania project, the decisions by national and sub-national level actors to use local groups and to define their terms of engagement within the project may have contributed to the limited engagement of some local populations in the adaptation project. Addressing these drivers of exclusion requires that multi-level institutional structures acknowledge the risk of creating or reinforcing local level exclusion and institute measures to address these risks.

### 7.4.2 Alteration of local level power relations and resultant local inequalities

The limited levels of access to participation, lack of involvement and the limited/ or no voice in decision-making can be explained by the project's choice of local stakeholders. In KS and KP, FGDs indicated that patronage from government and NGOs had given the project's local institutions more control over local decision making as compared to the time before the implementation of the project. FGD responses in KP and KS noted that the use of local institutions to implement adaptation activities at the local level had displaced other pre-existing formal local institutions such as public local institutions such as environment and forestry committees. Individuals who had initially been part of these public groups were now members of the private local institutions operating under the mangrove restoration project. The legitimacy of these new institutions was questioned. The project's local institutions used informal mangrove resource management rules that were less understood by most community. Power struggles and conflicts between village governments and the project's local institutions were also reported.

FGD participants demonstrated awareness of local level power inequalities, which constrained their ability to engage in adaptation decision-making. Even though they noted their dissatisfaction with the approaches taken by the project's local institutions, they demonstrated limited willingness to confront these local institutions for fear of further marginalisation. For example, the FGDs also highlighted their lack of knowledge on and averseness to the lengthy procedures for reporting grievances and a lack of trust in the ability of existing institutions to address these grievances.

In the case study, working with local level institutions altered local level power relations within the community, making groups aligned with the project's local institutions more powerful. By supporting the creation of and working with the project's local institutions, the Tanzania project legitimised these local institutions. The project also reinforced the local institutions' new or existing control over decision-

making processes on resource access and use by the local level communities who were dependent on these resources. There was also local level restructuring, as other pre-existing local institutions were delegitimized and displaced from their local mangrove resource management roles. This demonstrates the risk of engaging in local level adaption without consideration for local level patterns of inequalities or their drivers, which introduces new power structures or reinforces existing unequal, which may counteract the intended goal of adaptation. For example, if redistribution of power acts in disfavour of local groups that mediate resource access for local populations who are vulnerable to climate change, then these groups become more marginalise and limits their capacity to adapt to climate change.

Working with local communities and institutions has power-based implications. Adaptation actions that involve external actor-led interventions are likely to alter local level power relations (Nygaard, 2008). A process that re-distributes local level power in disfavour of vulnerable local populations results in maladaptation. External-actor led interventions can be captured by political actors and used to oppress the poor or gain political support (Schaer et al., 2018). Local level equity is determined, in part, by the structure of local level institutions (Regmi et al., 2016b). The creation of new local institutions by adaptation interventions can generate institutional fragmentation which 'creates different layers of influence and legitimacy, which co-exist in the same socio-political space' (Schaer et al., 2018, p. 252). This is likely to generate local level conflicts, which can disadvantage poor and vulnerable groups. Projects working at the local level should be aware of the existing power structures and the new patterns that may emerge from the introduction of new structures (Wong, 2013).

These findings also indicate that some institutional-based conditions are a necessary prep-cursor for achieving equitable adaptation. The project seemed to assume that working with the project's local institutions would automatically generate local level participation in decision-making. However, other factors such as local level community trust in these local institutions and the perceptions of legitimacy and fairness in those institutions and the processes were limited. The project's local institutions were considered (by the community members) as externally driven, thus generating an averseness by local communities to engage with these institutions about the local communities' expectations from adaptation.

The nature of local level institutions therefore plays a significant role in enabling local level adaptation. Distinct outcomes emerge from institutions that are locally-created and those that are externally-led (Rydin & Pennington, 2000). Local institutions, which are more informal and autonomous (as compared to those driven by external actors) increase local participation and reduce clientelism which is a barrier to local level decision making influence (Montambeault, 2011). Local solutions are also generally favoured in making adaptation successful in addressing local vulnerabilities (Middlemiss & Parrish, 2010). However, balancing between externally- and locally-led local institutions can however leverage the role of external and local actors in supporting adaptation (Adegun, 2015). The following section discusses the implications of these findings on equity in country owned actions.

### 7.4.3 Equity implications from country-owned actions

The findings from this research generally show that country-owned adaptation actions are reaching the local level. They demonstrate an awareness within climate change governance that appropriate scaling determines the success of adaptation actions (Adger et al., 2005). However, the findings further suggest that these actions are likely to be similar to those that are 'state managed, professionally directed and…funded by international donors' without actively engaging local level vulnerable populations (Satterthwaite, 2008, p. 307). Reaching the local level is likely to be accompanied with alteration of local level power relations and exclusion of local level vulnerable populations, a failure to align adaptation actions with local level preferences and failure to build on existing capacities. The challenges emerging from working with local institutions in Tanzania are common to generic approaches to development. While local institutions are essential in reducing poverty (Donnelly-Roark et al., 2001; Manor, 2006), working with local institutions introduces the risk of elite control (Fritzen, 2007).

Issues emerging from this case study can be attributed, in part, to existing approaches to 'governance of adaptation' (Sovacool et al., 2017b, p. 1260). This is linked to how global climate finance is structured. For example, current approaches to climate change governance are criticised for favouring elites (even at local levels) while exacerbating inequalities (Sealey-Huggins, 2017). For example, the disjointed consultation approach by adaptation projects could be attributed to the limited availability of adaptation finance (Sovacool et al., 2017a) and the complex multilateral funding structures that generate time-lapses between project approval and implementation (Sovacool et al., 2017b). This is likely to result in community engagement being sought as a minimum requirement for funding but not to inform decision-making. Another governance structure is the requirement that actions reflect government priorities and thereby engage government institutions at all levels.

Working through government institutions to enable country ownership (as is in the case study project) enables mainstreaming of adaptation into development planning. However, mainstreamed adaptation is likely to be implemented through traditional development channels (at all levels), which are criticised for promoting technocratic approaches to adaptation that prioritise expert knowledge, making them unable to address the drivers of vulnerability to climate change (Lebel et al., 2018; Nagoda, 2015). Some of the issues relating to the limited capacity of country ownership to address local level vulnerabilities can be addressed through the existing climate change governance structures.

This research recommends that explicit effort be made within climate change governance to ensure that country owned actions generate outcomes that address local level adaptation needs. Adaptation interventions that seek to be country owned by working with local institutions should also demonstrate an awareness of power relations and contestations between adaptation actors at different level, including between local institutions and vulnerable local populations (Arora & Romijn, 2012). For instance, country ownership policies and funded projects should carefully consider the meaning of local level engagement with reference to the context within which adaptation will be implemented to ensure that actions adequately involve local level vulnerable populations. This avoids making assumptions that country-owned actions working with local level actors will generate equitable outcomes by addressing

the vulnerabilities of those who are vulnerable to climate change is insufficient. When such assumptions about the local level are used to inform adaptation, 'not much will be achieved' (Boyd et al., 2008, p. 391).

In summary, this section has presented the finding from the case study and discussed them about their implications for local level adaptation, equity and country ownership. The findings indicate that country-owned actions engaging local stakeholders do not guarantee that local level vulnerabilities will be addressed.

## 7.5 Conclusion

The goal of country ownership in the international climate change regime is to ensure that climate finance is allocated to particularly vulnerable countries and that planned adaptation is informed by those who are affected by climate change. The local level is critical to country-owned adaptation, and most country-owned adaptation actions strive to work with local institutions to achieve local level adaptation, for example, through local level stakeholder consultation and engagement. Local level institutions are presented as essential local level stakeholder, due to their ability to link local level communities to national and international level processes. This article sought to investigate the extent to which country-owned adaptation implemented at the local level through local level institutions generates equitable adaptation by enabling local level vulnerable communities to have a voice in adaptation through participation and influence decision making processes and their outcomes. The findings indicate that reaching the local level does not necessarily mean that actions generate outcomes that address the needs of vulnerable local groups. Specifically, the paper finds that country-owned actions that engage with communities through local institutions can fail to facilitate participatory decision-making and influence by local level vulnerable communities. Instead, actions are likely to alter local level power relations n disfavour of those who are vulnerable to climate change risks.

Local community members had limited access to participation spaces available in the project. Open and invited spaces had comparatively higher levels of access, but these provided the participants with a limited voice in project decision making. Survey respondents also associated themselves with the informed or no involvement levels of participation. These are linked to a lack of voice in adaptation decision-making. While working with the local institutions in the project locations signified an inclusion of local level stakeholders in country-owned projects, this altered local level power structures. These power-based implications further disincentivized local communities from confronting project-based local institutions due to limited trust in the ability of existing institutions to address their grievances.

These findings contribute to existing research that emphasises that adaptation avoid 'redistributing risk and vulnerability' (Atteridge & Remling, 2018, p. 2). By excluding the vulnerable local population from adaptation planning and implementation and changing power structures and relations in disfavour of these populations, country-owned adaptation fails to address priorities of vulnerable communities and limits their capacity to adapt. This promotes maladaptation. While climate finance mechanisms like the GCF have provisions for 'stakeholder and observer input and participation…in the design, development and implementation of the strategies and activities financed by the GCF' (Schalatek et al., 2012, p. 7),

implementation of these provisions in practice can vary. Addressing these implementation gaps requires a transformation in multilateral climate change governance. For example, multilateral institutions' accountability should expand from state actors to also include intra-state adaptation stakeholders in developing countries (Nakhooda, 2011). This means that multilateral institutions should have provisions that support other non-national and non-state actors to be part of country ownership efforts. Guidelines on identification of local level stakeholders should also recognise local level power inequalities as the drivers of vulnerability. This would enable different adaptation stakeholders like local populations and intra-state civil society to have a formal right to demand that country-owned actions adopt practices that contribute towards local level equitable adaptation. This article found that country-owned adaptation projects engaging local level stakeholders do not guarantee that the needs of local vulnerable groups will be addressed.

# 8 Conclusion

## 8.1 Introduction

This study explored intra-state equity in country ownership of adaptation to climate change. This chapter summarises the findings of this thesis and discusses the implications of these findings on multi-lateral climate change adaptation finance and climate change adaptation policy both within states and at the international level. Section 8.2 summarises the thesis and presents its main findings. Sections 8.3 and 8.4 present the thesis' conceptual and empirical contributions respectively. Section 8.5 highlights the policy implications of the findings of this thesis while 8.6 suggests areas for further research.

The Paris Agreement has changed global climate change governance by generating commitments by parties to the conference to 'holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial level' (UNFCCC, 2015, p. Art 2) . A provision is created for the transfer of climate finance, technology and capacity building based on a country-driven approach to encourage country ownership (UNFCCC, 2015). Recent international policy developments have also generated a scaling up of climate finance (GCF, 2019; UNFCCC, 2018a). A 2018 assessment by the UNFCCC Standing Committee on Finance indicated that global climate finance flows had a 17% increase between 2013/2014 and 2015/2016. This is expected to increase the amount of climate finance flows towards LDCs, which will be allocated based on country ownership principles as defined in the Paris Agreement and the GCF governing instrument (GCF, 2011). This thesis contributes to country ownership, which is a critical policy area in climate change governance.

The thesis presents an analysis of processes and outcomes from UNFCCC-funded CCA interventions that are guided by country ownership principles. It questions whether country ownership of adaptation enables adaptation processes and outcomes that address the needs of the most vulnerable. The thesis argues that intra-state country ownership processes and outcomes are political and involve contestations for power and influence. To develops a conceptual understanding of intra-state adaptation processes that is characterised by power and influence. Equitable processes are those that allow local level vulnerable populations who are mostly least powerful to influence the adaptation process and its outcomes. This occurs through empowerment through structural transformation and developing the agency of those who are marginalise. A case study of an LDCF-funded project in Tanzania is used.

The thesis' major contribution is towards international and national CCA policy. It highlights the political nature of multilevel adaptation and how this features in country ownership of adaptation within states. The thesis makes a conceptual contribution by framing equitable intra-state adaptation in terms of power and influence of intra-state adaptation actors. Empirically, the thesis generates clarity on the nature of country ownership within states by looking at the multilevel dynamics of country ownership processes and outcomes at and below the national level. Its policy significance is based on the implications of the findings on existing understandings of country ownership within the UNFCCC climate finance mechanisms, the implications for the design of climate finance mechanisms and the

allocation and spending of CCA finance. The findings can inform adaptation policy advocacy by national and international adaptation actors for the improvement of climate finance institutions to enable local level vulnerability reduction. The following section (8.2) starts by presenting the thesis structure and a summary of its findings.

## 8.2 Summary of thesis and findings

The thesis focuses on whether country ownership delivers on equitable adaptation within states. Equitable adaptation is defined as adaptation that addresses the needs of local level communities and individuals who are vulnerable to climate change risks. Six questions are answered: What are the approaches to intra-state stakeholder collaboration in projects that intend to be country owned? Does intra-state stakeholder collaboration as a principle of country ownership enables intra-state adaptation stakeholder to influence adaptation decision making? What framings of equitable adaptation are reflected in the country owned adaptation initiatives? How does the project's framing of equitable adaptation compare to that of the communities? How are country-owned adaptation actions engaging local level populations that are vulnerable to climate change? Do these engagements generate actions that reduce vulnerability to climate change?

Power is conceptualised as central to equitable adaptation within states. A conceptual framework based on the links between power and influence in adaptation processes within states is presented in Chapter 3. Intra-state adaptation processes are inherently power-laden, with more powerful actors likely to influence adaptation decision-making (Eriksen et al., 2015; Nightingale, 2017). By designing structures that pay attention to LDC adaptation priorities during allocation of adaptation finance (UNFCCC, 2015), country ownership principles pay attention to differential vulnerability and capacities and reflect the intention to address local level vulnerability to climate change. Equitable adaptation emerges from country ownership when local level vulnerability reduction occurs from country owned interventions (Oberlack & Eisenack, 2014). This occurs when vulnerable and least powerful local level populations can influence adaptation decision-making processes and outcomes.

The framework presents empowerment as essential to equitable intra-state adaptation processes. It makes a distinction between relational and non-relational empowerment. Non-relational empowerment generates local level communities who have agency over their adaptation needs but pays very limited attention to differential patterns of inequalities. This is likely to generate elite control, as those who are already powerful are given equal opportunities to decision making as those who are least powerful and marginalise. The chapter endorses a relational approach to empowerment informed by knowledge of patterns of local level differential vulnerability. While participation is considered important in enabling local level vulnerable groups to access and influence adaptation decision making, this chapter further recommends an empowerment-alongside-participation approach to adaptation decision making. This generates shifts in power relations within communities, which enables vulnerable members of the communities to participate in decision making without barriers emerging from elite control and exclusion.

The thesis uses a case study of a LDCF-funded (and GEF-administered) project in Tanzania. Research methods are discussed in Chapter 4. These seek to generate data to inform an understanding of the intra-state multi-level processes and outcomes from country ownership-informed CCA interventions. Adaptation decision-making processes and outcomes under the project within the Tanzania are studied. Cases are selected purposively. Three case study locations (two in Zanzibar and one on the mainland of Tanzania) are used to understand these multilevel processes and outcomes emerging from the coastal adaptation project. Random and purposive sampling approaches are used to select the sample. The sampling units are divided into two: a) community level adaptation stakeholders, which include individuals at the community level who are expected to be the target population or beneficiaries of the mangrove restoration project b) non-community level adaptation stakeholders who are other adaptation stakeholders who contribute towards adaptation project design and implementation.

Purposive and random sampling approaches are used. The sampling approach applied to non-community stakeholders is informed by a network theory understanding of adaptation processes within states. Individuals are considered to represent the community-level adaptation stakeholders, as this is the level where resource use occurs. Qualitative and quantitative data is collected through document and policy reviews, key informant interviews with project stakeholders (47 interviews), questionnaires administered in survey form to individuals at the community level in three case study location (629 questionnaires) and focus group discussions with groups of individuals in the case study locations (13 groups). Quantitative data is analysed in Stata (Stata SE 15) while qualitative data is analysed thematically, where themes emerging from the data are linked back to the conceptual framework.

The thesis has three main findings. First, the thesis finds government ownership of adaptation within states instead of multi-stakeholder ownership, which is envisioned in country ownership (Chapter 5). Stakeholder influence is understood through a network, resource exchange and resource dependencies, where influence is enabled by the amount and type of resources exchanged actors' perceptions of problems and solutions and their interests. This finding indicates that allocation of funding to LDCs through government institutions generates government control of adaptation finance, which in turn generates government ownership as opposed to multi-stakeholder ownership of adaptation. Other stakeholders engaged in these multi-stakeholder partnerships are unwilling to challenge state governments, which generates projects that may be superficially multi-stakeholder owned. Government control of adaptation finance and consequently government ownership of adaptation is enabled by the country ownership structures created at the international level by climate finance mechanisms.

This finding questions literature on the role of multi-stakeholder engagement in enabling country ownership. Multi-stakeholder collaboration is considered important in adaptation for its role in supporting legitimacy of actions and integrating different knowledge into adaptation decision-making (Bauer & Steurer, 2014; Ford & King, 2015; Tompkins et al., 2008). Consequently, multi-stakeholder engagement is emphasised in academic literature (Ayers et al., 2014; Bowman & Minas, 2019; Shankland & Chambote, 2011) and policy (GCF, 2017). Capacity building of these stakeholders enables them to articulate their needs and implement planned adaptation (Gomez-Echeverri, 2013). The thesis

finds that stakeholder engagement guidelines for country ownership do not generate stakeholder influence. Instead, processes are characterised by government-paternalism and technocratic control of adaption in LDCs, which is likely to supress alternative framings of vulnerability and adaptation to climate change that may be held by other non-government actors.

Second, the thesis finds that communities' priorities are likely to be overlooked in country owned CCA. Framings of climate risk management are used to understand community versus project priorities for climate risk management at the local level. This is through analysing how local level communities understand the problems and solutions to climate risk management and comparing these framings to those reflected in the case study project (Chapter 6). There is a gap between local communities and the project in how problems and solutions to risk management are framed. Local level communities expressed interest in local level resource management institutions, which were considered essential in mediating the access to and use of mangrove forests. This was not reflected in the project. Despite recognising local level communities' roles in driving mangrove degradation, the project worked through government-appointed institutions that replaced and weakened local resource management institutions.

The findings challenge policy assumptions on the links between country ownership and local level adaptation priorities. Adaptation processes within states are evaluated against their ability to reflect local priorities (Kalame et al., 2011; Lee et al., 2014; Smucker et al., 2015). Literature assumes that country owned actions automatically generate actions that reflect local level priorities (Winkler & Dubash, 2016). International policy approaches such as direct access of climate finance are assumed to contribute towards ensuring that funds those who are vulnerable to climate change (GCF, n.d; Schalatek, 2012). The findings indicate that adaptation interventions that are guided by country ownership principles can fail to reflect adaptation priorities of local level vulnerable populations.

Third, the research finds that the use of local level institutions as a country ownership guidelines, on their own, do not guarantee that local vulnerable groups will influence local level adaptation decisions. This is based on an analysis of approaches to local level community engagement through participation (Chapter 7). The concept of voice in decision-making is used as a determinant of whether local level groups achieve meaningful engagement in local level decision making relating to the adaptation processes enabled by the country owned intervention. Participation spaces created in the project were exclusionary, accompanied by the inability of local vulnerable groups to influence adaptation actions.

This finding challenges existing literature that emphasises on the importance of channelling finance to the local level. Multilateral climate finance is expected to facilitate actions that address the needs of the most vulnerable (Fenton et al., 2014). Local institutions, like local civil society are considered critical in generating linkages between vulnerable communities and other adaptation policy actors (Burkett, 2015; Comte et al., 2019; Dombrowski, 2010). The findings of this thesis add onto other existing research that caution against uncritically adopting the notion that local institutions are appropriate (Dodman & Mitlin, 2013; Forsyth, 2013; Nalau et al., 2015). Local level institutions may be a barrier to reducing local level vulnerability.

Country ownership of adaptation contributes to the achievement of international climate justice through ensuring that countries and regions that are particularly vulnerable to climate change receive climate finance and policy support (Scoville-Simonds, 2017). Country ownership guidelines recognise also that adaptation that is informed by intra-state actors is likely to address country and local priorities (Lebel et al., 2018; Winkler & Dubash, 2016). This thesis establishes that the intra-state equity of country ownership of adaptation is not guaranteed, as actions are likely to: a) generate government control and ownership as opposed to stakeholder ownership, b) fail to address local level adaptation priorities and instead focus on technocratic top-down solutions, and c) fail to enable local level vulnerable groups to influence adaption decision making.

Multilevel governance is tricky and difficult to get right. Empirical work indicates that governance of adaptation across scales is characterised by power differences between actors and levels (Dzebo & Stripple, 2015; Hall & Persson, 2018; Vink et al., 2013). The reflection of PDAE principles in international climate finance enables countries that are particularly vulnerable to climate change to have control over adaptation decisions (Hyden, 2008). This generates government control and ownership of adaptation (Di Gregorio et al., 2019). Control and technocratic adaptation is not new in adaptation governance literature (Dewulf, 2013; Scoville-Simonds et al., 2020). Local level vulnerable groups are likely to lose out from technocratic adaptation (Ojha et al., 2016; Yates, 2012). This awareness should equally be reflected in academic literature on country ownership and international climate change policy guidelines. As such, multilevel adaptation that excludes local level vulnerable populations from decision making is considered to lack country ownership (Oberlack & Eisenack, 2014).

In summary, this section has presented the structure of the thesis and summarised its key findings. The findings indicate government control of adaptation finance, which prevents stakeholder influence, and ownership of adaptation, the inability of adaptation interventions to reflect local level priorities and the limited engagement of local level vulnerable communities, which results in their inability to influence adaptation decision-making processes and outcomes. The following section builds on the findings and presents the conceptual contributions made by this thesis.

## 8.3 Conceptual contributions

The main conceptual contribution of this research relates to an understanding of country ownership of adaptation within states. A review of literature on country ownership identified limited clarity on conceptual understanding of country ownership of what and for whom (Chapter 2). In seeking to generate clarity on this, this thesis also made conceptual contributions to an understanding of power and influence in intra-state adaptation processes and the characteristics of influence linked to different actors within adaptation processes. Section 8.3.1 discusses the contributions relating to the role of resources in enabling influence in adaptation decision making. Section 8.3.2 discusses the contribution in relation to an understanding of the nature of influence in adaptation decision making within states. Section 8.2.3 presents the conceptual contribution relating to nature of influence in adaptation decision making.

### 8.3.1 Vulnerability as a basis for understanding of country ownership within states

The thesis makes conceptual linkages between adaptation and country ownership. The thesis initially identified weakness in conceptual understandings of country ownership in adaptation, with existing understandings of country ownership of what and for whom dissociated from theoretical concepts in adaptation literature, which are guided by vulnerability concept (Chapter 2). The thesis uses an equity lens to introduce vulnerability as a basis through a definition of country ownership of what and for whom.

The problem is that despite the conceptual goal for country ownership in adaptation is clear i.e. to improve the effectiveness of climate finance (UNFCCC, 2019a), clarity on who and what of country ownership is limited (Hasselskog & Schierenbeck, 2017). Existing work is either informed by national government-based understandings of the who of country ownership (Ayers et al., 2014; Shankland & Chambote, 2011) or fails to be specific on the what of country ownership (Gomez-Echeverri, 2013; Horstmann & Abeysinghe, 2011). These fit into development-based concepts, where governments (who) and general adaptation policy processes (what) are associated with country ownership (Best, 2007; Dijkstra, 2011; Dornan, 2017; Sridhar, 2009). Country owned adaptation is apolitical, with assumptions of democratic decision making on adaptation priorities within states accompanied by absence of contestations (Smucker et al., 2015).

Existing concepts of country ownership of adaptation are mismatched with current progress in conceptual understanding of CCA. Literature frames adaptation as multilevel and involving multiple stakeholders other than national governments (Eriksen et al., 2011). Adaptation processes and interactions between adaptation actors are characterised by power inequalities and struggles for influence (Eriksen et al., 2015). Adaptation is expected to support actions that generate vulnerability reduction (Pelling et al., 2015). This indicates a conceptual gap between country ownership of adaptation and literature in adaptation. By adopting a development-based conceptual understanding of country ownership, country ownership of adaptation is depoliticised and makes it difficult to operationalise (Arensman et al., 2017; Spanou, 2016). This limits its practical applications, especially in LDC communities, which are severely impacted by climate change.

The thesis uses a climate justice and equity lens to frame vulnerability as a core driver of country ownership. Country ownership should seek to ensure that local level vulnerable groups have influence in adaptation decision making and emergent adaptation addresses the adaptation needs of local level vulnerable populations. Power and influence are presented as interlinked concepts that can be used to understand country ownership's contribution to vulnerability reduction. The thesis presents three conceptual approaches for assessing equity in country ownership: a) through patterns of stakeholder engagement and its links to stakeholder influence in adaptation decision-making b) comparison of framings of risk management between communities and country owned projects and c) linkages between engagement of local level institutions and influence of vulnerable groups in adaptation decision making. Influence is enabled by politics and power. Country ownership is framed as seeking to ensure that

vulnerable groups (country ownership *by whom*) influence multi-level adaptation decision making (country ownership *of what*).

### 8.3.2 Resources and the politics of adaptation within states

Climate change causes a re-allocation of resources and wealth and leaves some groups more vulnerable to climate change risks (Fenichel et al., 2016). Availability of and access to resources is a key component of adaptation at all scales. For example, capital is considered central to enabling communities to adapt (Adger, 2003; Petzold & Ratter, 2015). Adaptation governance literature recognises the importance LDC access to technical and financial resources to support adaptation planning and implementation (Liverman & Billett, 2010; Pauw et al., 2019; UNFCCC, 2015). For example, under the Paris Agreement, LDCs receive the technical and financial resource support from developed countries. This thesis findings advance knowledge on the conceptual links between climate finance, which is an adaptation resource, and the political economy of adaptation within states. It makes conceptual links between allocation of adaptation resources to the political economy of adaptation governance, which refocuses attention to stakeholder relations and the politics of decision making within states (Tanner & Allouche, 2011).

The problem is that conceptual literature on country ownership of adaptation pay insufficient attention to resources in determining the political economy of adaption in LDCs. Resources are critical in developing adaptive capacity (Chaudhury et al., 2017; Cinner et al., 2018). Absence of resources is also a driver of vulnerability (Bohle et al., 1994; Demetriades & Esplen, 2008a). Other socio-economic inequalities e.g. gender also determine access to and use of resources (Demetriades & Esplen, 2008b). Resource access and use is governed by existing institutional structures (Hill & Engle, 2013). Resource allocation also determines the power relations between different social groups (Purdy, 2012; Vij et al., 2019). These links inadequately captured in conceptual discussions on country ownership.

The thesis demonstrates the conceptual links between country ownership, resources linked to climate finance and power and influence in adaptation decision making. These links, while already existing in climate governance literature, are selectively applied in climate change adaptation. For example, country ownership is only constructed around the links between country adaptation actors and access to financial resources from multilateral climate finance institutions and capacity of country actors to identify adaptation priorities and engage in adaptation planning and implementation (Huq & Burton, 2003). Yet, implications of these allocations are thought to be apolitical as further thought on how choice of one partner over another generates power inequalities is missing.

The analysis in chapter 5 uses a framing of power informed by social exchange theory to understand stakeholder influence in multi-level and multi-stakeholder adaptation decision-making processes. The allocation of resources is considered to generate or reinforce patterns of power and influence between adaptation stakeholders within states. Financial resources, which are the basis of country ownership policy at the international level, are found to accord some actors more control over adaptation decision making. Other factors that determine influence in multi-stakeholder collaborations, such as rules and regulations governing engagement, actors interests and their perceptions of problems and solutions are

found to not generate as much power and influence. The comparative superiority of financial resources on enabling control over adaptation processes and influence in decision making adds conceptual linkages between country ownership of adaptation and intra-state stakeholder interactions and decision-making.

These conceptual linkages between country ownership structures, resources and power and influence have implications for how country ownership within states is conceptualised. The structural approach to country ownership is driven by the need for climate change mainstreaming and climate policy integration 'of multiple policy objectives, governance arrangements and policy processes related to climate change mitigation, adaptation and other policy domains' (Adelle & Russel, 2013; Di Gregorio et al., 2017, p. 36). National level institutions are critical to achieving policy integration as this generates legitimate adaptation policies (Duguma et al., 2014; Pilli-Sihvola & Väätäinen-Chimpuku, 2016). The thesis refocuses attention to the role of country ownership in determining power as a key element of adaptation policy integration (Di Gregorio et al., 2019; Wamsler et al., 2019).

### 8.3.3 The role of structure and agency in adaptation decision making

The findings of this thesis make a conceptual contribution to existing understandings between structure and agency in climate change adaptation. Existing research on vulnerability emphasizes on the links between existing structures and local level agency in supporting local level communities to reduce their vulnerability and engage in adaptation activities (McLaughlin & Dietz, 2008). For example, while women who have collective agency can lobby for changes in structural conditions that determine their welfare, their agency also depends on whether they have access to resources and opportunities to decision making, both of which are factors of prevailing structural conditions (Goetz & Jenkins, 2016). As indicted in Chapter 3, this thesis considers both as important to empowerment. However, as the findings of this thesis indicate, structure is likely to be a stronger determinant of the extent to which local level agency is developed and manifested.

Structure and agency are considered conceptually interdependent. How one causes the other is an area of interest for environmental governance research (e.g. Cotton (2015)). Structure and agency determine the extent to which actors can be engaged in adaptation decision making, thereby setting the social limits to adaptation (Adger et al., 2009a). Actors with agency can collectively change adaptation decision making structures to further enable them to participate in decision making and to influence outcomes from these spaces (Schroeder, 2010). Two levels of agency are identified in literature—individual and group/collective agency. Individual agency involves individuals pursuing adaptation outcomes that they value while collective agency involves a group of individuals with shared values pursuing a specific outcome (Ibrahim, 2006; Pelenc et al., 2013). Collective agency generates changes in values (Ibrahim, 2006). This contributes towards generating enough momentum to achieve structural changes in approaches to decision making. Research indicates that individual agency can be transformed into collective agency through individuals achieving political agency Political agency is defined as an 'individual's…[willingness] to contribute to transformations both by changing behaviour and by influencing structures and systems' (O'Brien, 2015, p. 1170).

The thesis found indications of individual agency but lack of collective agency to generate changes in structural limitations to influence by local level vulnerable communities and to challenge the government-based conception of country ownership of adaptation. At different levels, actors demonstrated individual agency. For example, non-local adaptation stakeholders indicated their willingness to engage with project actors relating to the project (Chapter 5). Local level community members who were vulnerable to climate change also demonstrated their desire to achieve specific outcomes from the project (Chapter 6 and 7). However, collective agency was lacking amongst adaptation stakeholders as actors did not collectively engage in activities that challenged existing structures and increased their ability to influence adaptation decision making. This suggests an absence of political agency by both community and non-community adaptation actors in Tanzania prevented the transformation of individual agency into collective agency.

Individual agency is itself linked to structural conditions and a precursor for collective agency (Cleaver, 2007). Structures created by the UNFCCC, the GEF and LDCF and the project within Tanzania had an influence on the extent to which different actors could engage in the design and implementation of the project. Individual efforts to influence decision making were limited by their contractual obligations or existing laws, both of which were created and maintained by the UNFCCC mechanism or by intra-state governance structures (Chapter 5 and 7). Other structural barriers to the generation of political agency include loss of trust in political processes (Carvalho, 2010), which was also observed in the case study locations.

### 8.3.4 Characteristics of influence in adaptation decision making

Influence in decision-making is presented in this thesis as critical in enabling equitable adaptation within states. At the beginning of the thesis, influence was treated as desired by all actors and homogenous i.e. adaptation stakeholders all compete to influence the same thing. This thesis provides conceptual insights into the nature of stakeholder influence in multilevel adaptation decision making. It also makes a conceptual contribution to an understanding of links between (in)equity and legitimacy in climate change adaptation processes and outcomes.

Literature on adaptation recognises the conceptual links between influence and adaptation decision-making. It recognises the multiplicity of adaptation decision makers (Roelich & Giesekam, 2019). Actors involved in decision making have competing priorities which inform their interests (Wise et al., 2014). These interests are not static, but instead vary across space and time based on the changes in risk and vulnerability profiles as well as based on the amount of information available about risks and their certainty (Kunreuther et al., 2013). Interest profiles determine whether and how actors influence adaptation decision making. Recent literature on adaptation decision making considers adaptation decision making through a pathways approach, where actors make incremental adaptation decisions based on the amount of information they have about the climate risk and viable adaptation options (Wise et al., 2014). This means that influence in decision-making is not one-off and singular. Instead, opportunities for influence emerge at different times during the adaptation process

Organisations and social units are used to understand influence and decision-making ((Chalmers, 2011; Lee & Beatty, 2002; Thornton et al., 1997). Recent literature has delved into influence by interest groups and the types of influence that may be generated in decision making (Michalowitz, 2007). The most common framework on interests and influence is the Advocacy Coalition Framework, which hypothesizes that groups of actors who share beliefs collaborate to generate policy shifts (Weible, 2005). Influence within different decision-making contexts is studied e.g. how networks of actors generate influence (Klostermann & Cramer, 2007) and whether and how actors are perceived to be influential in multi-level adaptation processes (Sova et al., 2015b) and the role of multiple forums in generating influence (Bates et al., 2013). Legitimacy of adaptation processes and outcomes is dependent on influence, which is a factor of participation, representation and accountability (Kuyper et al., 2018). This indicates the multiplicity of decision makers and decision-making avenues.

The findings also indicate links between influence, legitimacy and equity. The analyses conducted in chapters 5 and 7 introduces the concept of partial influence in adaptation decision making (as discussed by Renn et al. (2011)). The thesis indicates that actors are likely to consider processes equitable when they achieve partial influence in decision making processes or outcomes of these processes (Betsill & Corell, 2001; Betzold, 2010). Such processes and outcomes are perceived as legitimate by these stakeholders, even if these do not generate local level vulnerability reduction. While this can be attributed to the hierarchical nature of pathways approaches to decision making (Câmpeanu & Fazey, 2014), it also provides insights into how multi-stakeholder processes are generated and sustained even though they may fail to achieve the ultimate goal of local level vulnerability reduction.

Partial influence can be explained by the absence of collective agency by adaptation stakeholders and local level communities. A lack of collective agency by local level communities who are vulnerable to climate change and by adaptation stakeholders leads to limited bargaining power by these groups (Ibrahim, 2006). Absence of collective agency discourages actors and groups from bargaining and negotiation (Evans & Nambiar, 2013). Instead, actors use their individual agency to achieve personal goals that make little contribution to the collective welfare (Rahman, 2003). Consequently, actors are likely to settle for options that are available to them and not seek greater rewards. This means that structures, which determine actors' agency, determine the level of influence that actors perceive and whether these actors link these levels of influence to equitable adaptation.

In summary, this thesis makes a conceptual contribution to understanding of country ownership within states by providing insights into the role of financial resources on enabling influence by actors, the role of structure and agency in enabling influence and the characteristics of influence that enable equitable adaptation. In addition to the theoretical contributions discussed in this section, this thesis also makes empirical contributions. These are discussed in the following section.

## 8.4 Empirical contributions

The main empirical contribution of this research is the understanding of intra-state country ownership using a case study of a LDCF project in Tanzania. Adaptation literature acknowledges the multi-level nature of adaptation, where actions at one level are enabled by actions at another. This multilevel

adaptation processes in turn enable local level adaptation by communities impacted by climate change risks. The thesis uses of a multi-level approach to understand intra-state outcomes from country ownership. Previous work has focused on one single level –the national level. The multi-level approach that acknowledges the different actors, institutions and processes that are involved in generating equitable intra-state outcomes from country ownership. Consequently, knowledge on how country ownership structures and policies translate into actions within states has been missing.

The thesis generates empirical knowledge on approaches to empowerment for adaptation in Tanzania. The thesis is based on an understanding that influence by those who are marginalized and vulnerable to climate change can be achieved through empowerment. It makes a distinction between a relational and non-relational approach to empowerment. A relational approach to empowerment is aware of variations in vulnerability and the drivers. Relational-based empowerment seeks to increase the political power of individuals who are most vulnerable to climate change as a pre-cursor to enabling collective political power and agency (Hall et al., 2009). Non-relational empowerment increases political power but occurs without consideration for differential vulnerability and the historical and underlying socio-economic and political drivers of vulnerability. The generates processes that reinforce power inequalities and increase the marginalization of vulnerable populations while enabling elite control.

The findings from this study indicate that country ownership of adaptation in Tanzania supported a non-relational approach to empowerment. While the project demonstrated an awareness of the drivers of vulnerability i.e. mangrove degradation as enhancing coastal erosion, mangrove forest restoration activities did not consider the root causes of forest degradation or the differential patterns of mangrove forest dependence (Chapter 6 and 7). The engagement with local level communities through CBOs and BMUs also assumed equal access to decision making by local communities while failing to consider the challenges faced by poor and marginalized populations at the local level (chapter 7). This led to actions within the project being implemented under the assumption that all members of local level communities were vulnerable to climate change. This non-relational approach to empowerment led to vulnerable local level communities failing to generate the required political power and collective agency required to challenge unequal power structures that created their vulnerability.

This finding on the presence of a non-relational approach to empowerment in the Tanzania project suggests that multilaterally-funded adaptation actions in Tanzania are likely failing to address the underlying drivers of vulnerability and marginalization. It is also possible that actions are increasing the vulnerability of some sections of local level communities in Tanzania. A non-relational approach to empowerment applies egalitarian notions of justice, where allocation of costs and benefits is based on equality principles. Adaptation literature indicates that drivers of vulnerability can vary between and within populations (Adri & Simon, 2018; Thomas et al., 2019). Failing to recognise and address these inequalities or implementing actions that increase these inequalities generates maladaptation, which is unjust (Owusu-Daaku, 2018; Sovacool, 2018). This goes against the goal of international climate change governance and multilateral climate change finance which prioritise the need to ensure that adaptation achieves equitable adaption by reducing local level vulnerabilities.

This thesis generates new evidence through a case study of an intervention that is governed by UNFCCC country ownership principles. The research creates a better understanding of country ownership within LDCs. To the author's knowledge and as at the compilation of this thesis (November 2019), empirical evidence on the intra-state equity implications of country ownership is missing. Most existing work is policy-based, where arguments are made in favour of strengthening country ownership structures at the international level. The Tanzania case study also provides context specific insights into the politics and governance of multilateral adaptation in Tanzania.

The empirical findings can inform the design of other similar studies in other countries in East Africa, which have (almost) similar governance structures, but also in other LDCs that adopt similar approaches to governance of multilateral climate finance. The thesis also provides insights into how coastal adaptation in LDCs is undertaken. This contributes to existing research on coastal regions, especially in Tanzania and the East African coastal, which focuses on coastal ecosystem management (Beymer-Farris & Bassett, 2012; Burgess et al., 2013; Sallema & Mtui, 2008; Yanda et al., 2019a). the following section presents the policy implications and recommendations for addressing the equity gaps identified by this thesis.

## 8.5 Policy implications and recommendations

The findings of this thesis have implications for policy on county ownership of multilaterally funded climate change adaptation. These implications are discussed at three levels: for the UNFCCC and other international climate finance actors, for national government and non-government actors and processes and for local level processes. This thesis mainly speaks to international policy processes. These are discussed in this section.

### 8.5.1 Intention versus outcome of country ownership of CCA

First, the findings have implications on the intention versus outcome of country ownership within the UNFCCC climate finance mechanisms and its funds. The thesis finds that adaptation interventions that are intended to be country owned emerge as government controlled and government owned. This implies that the goal of country ownership may not be achieved, as finance allocations that go through government institutions may not achieve stakeholder ownership. This slows down global progress towards addressing climate change and supporting particularly vulnerable countries to adapt to climate change. This is because adaptation actions that are exclude other non-government stakeholders are least likely to reflect the needs of the country and local level communities in LDCs who are most vulnerable to climate change.

Country ownership is based on the need to adequately engage intra-state stakeholders in adaptation design and implementation. While there are stakeholder engagement guidelines by the UNFCCC climate finance mechanisms (GCF, 2018c; Harmeling & Kaloga, 2011), research indicates that these guidelines lack clarity on who should be engaged and how this should be done (Remling & Persson, 2015). Other than the intention to engage multiple stakeholders in adaptation, stakeholder engagement in practice may not be achieving this goal.

Support towards stakeholder engagement should go beyond guidelines. It should be accompanied by capacity building of both governments and non-government national, sub-national and local actors so that these have the ability to extensively identify relevant adaptation stakeholders but also seek out and claim engagement spaces in interventions that are funded the UNFCCC mechanisms. Opportunities to do this already exist. For example, the GEF committed towards enhancing its public communication of projects and project outcomes (GEF, 1998). Projects funded by the UNFCCC mechanisms and funds are listed and described on their respective websites (e.g. GEF (n.d.). The GCF also requires that 'relevant information, including with respect to environmental and social issues, is made available to the affected and potentially affected communities and external stakeholders', which ensures 'transparency, public access to information and stakeholder participation' (GCF, 2018b, p. 20). While these open up spaces for stakeholder engagement, improving intra-state stakeholder agency can ensure that these actors recognise their rights to this information.

### 8.5.2 Structural drivers to inequitable adaptation within the UNFCCC

The findings of this thesis indicate that international climate change governance mechanisms may be contributing towards creating and or reinforcing local level inequalities. This is due to the limited engagement of local level communities in adaptation, the preference for procedural justice over distributive justice and the non-relational approach to empowerment which generates elite control and increases the marginalization of local level vulnerable communities. These can be linked to how multilateral climate finance mechanisms are structured.

While there is a recognition of importance of local level communities and indigenous peoples in the UNFCCC through the establishment of the UNFCCC Local Communities and Indigenous Peoples Platform at COP 21 (Belfer et al., 2019), findings from this thesis indicates that this has not been applied to other levels below the international levels. Local level communities in the case study locations did not have their priorities addressed by the project. This suggests an inadequate consideration for the impacts of adaptation actions on local level communities. Civil society institutions, which are usually highlighted as advocates for indigenous people in LDCs were also marginally involved in the case study project. Representation of local level communities in multilevel adaptation requires the development of 'a system built on procedural and recognitional justice' (Belfer et al., 2019, p. 28) that extends beyond the international level to other intra-national levels i.e. multi-scalar engagement (Brugnach et al., 2017).

The limited consideration for the implications of multilaterally-funded adaptation on local level communities, especially for those who are vulnerable, can be attributed to the emphasis on procedural while overlooking distributive justice in adaptation and the inadequate engagement of local level populations who are vulnerable to climate change. Recent UNFCCC policies are praised for 'depart[ing] from a state-centric view of global climate politics and emphasiz[ing] the multilevel, non-hierarchical nature of climate change governance' (Lesnikowski et al., 2017, p. 827). UNFCCC processes are also state-centric, and hence place the burden of engaging in climate change adaptation and mitigation on nation states (Ford et al., 2016). This glorifies national state governments' roles in adaptation and pays comparatively less attention to other key actors like intra-state civil society and the private sector. This

is generally because national governments are considered important in advancing climate change adaptation, e.g. due to their critical role in legislation development (OECD, 2009). The emphasis on a state-centric approach within international climate change governance structures generates power inequalities between government and non-government actors.

One consequence of a state-centric approach to country ownership is the emphasis on procedural justice while overlooking distributive justice implications of county ownership of climate change adaptation. Procedural and distributive justice are both considered important in enabling both climate justice and equitable adaptation to climate change. Procedural justice in climate change adaptation is achieved when adaptation actors have opportunities to engage in adaptation decision making (Paavola & Adger, 2006; Thomas & Twyman, 2005). Building procedural justice also involves 'building [actors'] political power to influence [adaptation] decisions' (Holland, 2017). Distributive justice is achieved when the allocation of costs and benefits of climate change adaptation are informed by an understanding of local level vulnerability (Klinsky & Dowlatabadi, 2009; Thomas & Twyman, 2005). The achievement of one enables the other. For example, achievement of procedural justice through creation of participation spaces that enable influence in decision generates adaptation outcomes that address local level vulnerabilities specifically those who are most vulnerable to climate change risks.

The findings from this thesis have implications indicate that the pursuit of country ownership can result in the design and implementation of actions that favour achievement of procedural justice over distributive justice. The project achieved a basic level of procedural justice through 'fostering forms of financial assistance and capacity building that enhance the ability of affected parties to participate in adaptation decisions' (Holland, 2017). While adaptation stakeholders (both local level communities and non-community stakeholders) had some level of participation in decision making on some aspects of the adaptation process (Chapter 5 and 7), limited thought was given to the outcomes from this participation, specifically whether local level needs would inform these decisions. As indicated in Chapter 6, the outcomes from these decisions did not fully reflect local level priorities. Instead, government perceptions of problems and solutions dominated the project.

This preference has also been reported at the international level. For example, Grasso (2011) identifies an aspiration within the AF to achieve distributive justice but a lack of explicit attention to it. others find comparatively greater progress in institutionalising procedural justice as compared to distributive justice (Paavola, 2005). Khan et al. (2019b) also indicates that 'the post-Paris context is characterised by a neglect of distributive justice as a guiding principle in favour of libertarian justice ideals'. This means that the international level is a driver to the unequal allocation of priority between distributive and procedural justice.

The preference for procedural over distributive justice in multilateral climate change governance can be attributed to structural issues that emerge from the international level within the UNFCCC climate finance mechanisms. An example is the requirement by the GEF and GCF to obtain written endorsements from national government focal points. Choices about the range of stakeholders to engage in adaptation projects solely up to national government institutions which work with the climate finance

mechanisms (Harmeling & Kaloga, 2011). UNFCCC structures adopt an apolitical view of adaptation to climate change adaptation within states by assuming that national governments will represent the needs of their populations and will, without favour, encourage the participation of all adaptation actors in international climate change processes and policies (Booth, 2012). The result is that climate finance is the prioritization of national government entities in the allocation of climate finance as opposed to local entities which means that actions are less likely to generate distributive justice (Colenbrander et al., 2018).

A prioritization of procedural justice over distributive justice implies that actions that seem to have involved communities in decision making are considered to be successful in addressing local level vulnerability. Participation in decision making is therefore likely to be a qualifying factor in determining whether adaptation projects are financed or positively reviewed during implementation. Insufficient attention is paid to whether vulnerable community members participate in decision making or if outcomes from decision making recognises differential vulnerability. This reduces the effectiveness of climate finance and compromises future climate action which is dependent on current progress. This is because future climate finance commitments by developed countries and other climate finance actors like the private sector can be enhanced when there is evidence of vulnerability reduction impacts from current climate finance investments (Nakhooda et al., 2014). This means that the willingness of communities and other multi-level adaptation actors to engage in adaption will depend on whether past climate change interventions have been successful in reducing vulnerability to climate change. The following section presents a policy recommendation that is hinged on the structural drivers of inequitable country owned adaptation.

### 8.5.3 Top-down approach to restructuring the governance of climate change adaptation

As shown in this chapter, this thesis' findings suggest that current approaches to the governance of climate change, through their approach to country ownership of adaptation, are replicating and reinforcing inequalities and failing to address local level inequalities. However, the implications of these findings in relation to the links between structure and agency in country ownership and nature of existing approaches to empowerment can inform recommendations on how approaches to achieving equitable adaptation through country ownership can be achieved. The governance of climate change, specifically that which is funded by multilateral climate finance, is designed at the international level. Currently, the UNFCCC has the highest legitimacy on issues related to climate change (Vanderheiden, 2015). This makes the international level a good entry point for addressing the gaps in adaptation governance that have led to the exclusion of local level vulnerable communities from adaptation that is intended to be country-owned.

Climate justice is an 'accumulative multiscalar *process*' (Barrett, 2013b, p. 216) (emphasis in original text). Hence, approaches to governing climate change at the international level determine how institutions at other levels view climate change adaptation. To reflect this understanding, international policies, guidelines and actions should recognise local level vulnerability as differential and historically-driven by socio-political and economic factors can filter down to that national and local levels.

First, this requires greater civil society and community engagement in policy design and implementation as this results in more effective adaptation (Neebe & Reusswig, 2012). Their engagement should be at all levels of adaptation governance, including the international level and should not be restricted to intra-state decision making. This would contribute towards shifting adaptation finance away from addressing 'international equity' which is broadly based on allocations to countries (Persson & Remling, 2014) to delivering local level equity where actions are designed to address local level vulnerability.

Second, international climate change governance should generate mechanisms that ensure concrete action that allocates finance to local level actors as opposed to solely focusing on national government actors can enable innovative approaches to addressing local level vulnerability. This would demonstrate an international recognition of local level actors as critical for enabling country ownership. Consequently, this will compel national governments to work with local actors, for example, when applying for funds from multilateral climate finance mechanisms (Colenbrander et al., 2018). This would avoid excluding national governments from adaptation processes, as this also generates injustices (Sovacool et al., 2017b). This proposed top-down restructuring demonstrates awareness of the multiple stakeholders that contribute towards adaptation decision making and the role of structure and agency in enabling influence of local level vulnerable communities.

In making this recommendation, this thesis recognises the limits of influence of international climate change governance structures on state approaches to governance of climate change adaptation. The ability of international climate change politics to determine intrastate climate change governance is limited by the politics of international relations which are tied to issues like sovereignty of states. While policy evolution in some developing countries is in part, attributed to international climate change policy, approaches to governance of adaptation within states is also influenced by other factors that are internal to countries, such as national social and economic development goals and lobbying by civil society within states (Atteridge et al., 2012). While some studies show that civil society actors have been critical in holding parties to the conference accountable to mitigation and adaptation commitments (Kuyper et al., 2017), others indicate that civil society has had limited impact in lobbying state delegations in favour of specific policy agendas (Böhmelt, 2013). This means that effectiveness of a top-down approach to enabling equitable outcomes from country ownership of adaption will vary depending on intra-state political economy factors.

In summation, the implications discussed in this section suggest the need for a multi-level approach to achieving country ownership. This involves structural changes at the international level as well as working with actors and institutions at the national, sub-national and local levels to ensure that these institutions contribute towards addressing local level adaptation needs and reducing local level vulnerabilities. Country legal and regulatory structures are important for country ownership (Bowman & Minas, 2019). However, more consideration should be given into how these structures can be strengthened. For example, national level coordinating bodies which would link actors at different levels or coupling the principles of country ownership with that of subsidiarity will ensure that local level actors have influence over adaptation decision making (Dombrowski, 2010).

## 8.6 Further research

This thesis focused on a single case study of a GEF-funded project in Tanzania. Potential areas for future research exist in relation to: conducting case studies in other countries (e.g. in South East Asia), conducting case studies for other climate finance mechanisms and conducting a comparative case study of intra-state equity outcomes from different county ownership structures by the different climate finance mechanisms. These are discussed in the following paragraphs.

### 8.6.1 Case studies of other countries and other climate finance mechanisms

Future research could therefore select case studies in other countries that exhibit different political economy characteristics to understand the dynamics of country ownership within those states. These could be countries within or outside the Horn of Africa. Other LDC regions could be explored to get a more geographically distributed.

While one case study can (in some cases) be used to make sweeping conclusions about a phenomena (Evers & Wu, 2006), generalisation about intra-state equity in country ownership from this case study is likely to have high levels of uncertainty. This is because most of the processes and outcomes studied were a factor of Tanzania's political economy. For example, due to Tanzania's geography (long coastline) and history, mangrove conservation in Tanzania is deeply embedded in historical biodiversity and environmental conservation policies (Beymer-Farris & Bassett, 2012; Mangora, 2011). Most coastal areas in Tanzania have had experience from engaging with mangrove conservation either through external donor funded projects or local initiatives led by volunteer groups or government-sponsored local resource management. Consequently, respondents in the case study locations demonstrated clear awareness about the role of local institutions in enabling adaptation and risk management against sea level rise. Other countries within and outside the Horn of Africa may not exhibit similar political economy characteristics. This is likely to generate different intra-state equity outcomes from country owned interventions.

Future research could also investigate country ownership approaches and project processes and outcomes within the AF and the GCF. This thesis conducted a case study of a project funded by the GEF-administered LDCF project. The choice of a GEF project was convenience based, as a case study of a UNFCCC-funded project that was in its final implementation stages was required. However, the GEF is not the only UNFCCC climate finance mechanism. Other climate finance mechanisms include the AF and the GCF. Recent policy developments post-Paris have led to the GCF emerging as the largest climate finance mechanisms within the UNFCCC even though other mechanisms and funds continue to disburse climate finance. Both of these finance mechanisms and funds have country ownership as a key principle for the allocation of climate finance and implementation of CCA action.

Country ownership by the GCF is specifically important because it is the main operating finance mechanism of the Paris Agreement. The GCF has recently acquired over $10 billion in climate finance pledges, meaning that it will scale up its efforts towards addressing adaptation for LDCs over the next

4 years. A better understanding of its approach to country ownership can contribute towards thinking on how to improve the delivery of climate finance.

### 8.6.2 Structural design of country ownership and intra-state equity outcomes

Future research can investigate the structural differences in approaches to country ownership between the three climate finance mechanisms and conduct a comparative study to understand which approach enables equitable intra-state processes. All the three main climate finance mechanisms of the UNFCCC have different approaches to country ownership. For example, while the GEF uses the implementing-executing authority approach, the GCF uses NDAs, AEs and DAEs to ensure that adaptation actions are country owned. These actors are likely to have different mandates under each finance mechanism. Additionally, policies used by the finance mechanisms to ensure local ownership within country ownership cannot be assumed similar. For example, the Social, Environmental and Gender safeguards policy by the GCF is, on a broad scale, different from the counterpart policy of the GEF. These nuanced differences can be argued to generate structural differences in approaches to country ownership. This comparative assessment would contribute towards an understanding of how approaches to country ownership can be improved to generate vulnerability reduction outcomes for local level groups that are most impacted by climate change risks.

Another important area relates to further understanding the feasibility of a top-down approach to restructuring multilateral climate finance governance mechanisms so as to address the gaps identified in this thesis. Questions include:

i) What structural changes (at the international level) are feasible to generate equal priority for both distributive and procedural justice in country ownership of adaptation within states?
ii) How can a balance between the implications of scalar politics of multilevel adaptation and a relational approach to empowerment be achieved?
iii) How would giving a higher priority to local level communities and non-government intra-state adaptation stakeholders within the international multilateral finance decision making change the dynamics of international climate change governance? How would moving away from a state-centric framing of country ownership affect governance of multilateral climate finance and the governance of climate change in general?

### 8.6.3 Conceptual development of country ownership in climate change mitigation

Future research can also focus on developing conceptual understanding of country ownership of mitigation, low carbon sustainable development and climate change adaptation in non-democratic settings. These are discussed below.

This research has solely focused on country ownership of adaptation to climate change and overlooked the mitigation of climate change which occupies a significant portion of multi-lateral climate finance allocations to LDCs (Buchner et al., 2019; UNFCCC, 2018a). A significant proportion of future mitigation actions will occur in LDCs due to the deep mitigation potential in these countries (Mulugetta & Broto, 2018). Additionally, LDCs have laid out climate change mitigation ambitions in their LDCs,

which are expected to reflect increased ambitions after every 5 years (UNFCCC, 2015). However, future climate finance sources for these mitigation plans are diverse. Innovative sources of finance, like the private sector are currently being sought for funding mitigation (Bowen et al., 2017). Additionally, as opposed to adaptation, which generates localised benefits, mitigation benefits are a public good (Hasson et al., 2010). Further research is therefore required to understand a) the conceptual links between country ownership of climate change mitigation and climate justice and b) whether principles of country ownership as reflected in the UNFCCC and its mechanisms, apply to mitigation.

Recent policy developments encourage the integration of mitigation and adaptation in LDCs. For example, low carbon sustainable development has emerged as a policy area for LDCs, where funded interventions are required to generate both mitigation and adaptation outcomes (Klein et al., 2005; Mathy & Blanchard, 2016). Future research can investigate how country ownership in such interventions can be achieved.

The conceptual links between intra-state adaptation and country ownership can be further developed. This research used a conceptual framework that assumed democratic and non-conflict settings where multi-stakeholder engagement is a normative expectation of adaptation. Future research can explore the conceptual links between country ownership and intra-state equity in these contexts. Additionally, conceptual development can be undertaken for country ownership of other elements of the Paris Agreement i.e. capacity development and technology transfer, which do not necessarily require or involve resource exchanges and or multi-stakeholder engagement.

# Appendices

## Appendix 1

### List of actors used for probing network identification

This appendix presents the list of actors who were used to probe for network connections.

**a) Primary actor list**

**National government**

1. Vice President's Office, Department of Environment (Tanzania)
2. Department of Environment, Second Vice President's Office

**Sub-national government**

1. Pangani District Council
2. Division of Environment, Pangani District
3. Division of Environment, Mkoani District
4. Division of Environment, Magharibi B District

**Local government**

1. Kisakasaka village representatives
2. Kisiwa Panza village representatives
3. Pangani Magharibi Village representatives

**Local non-government**

1. BMUs in Pangani District
2. CBOs in Kisakasaka and Kisiwa Panza

**International non-government**

1. UNEP - DTU
2. UNEP-UNOPS

**b) Secondary actor list**

**National-government**

3. Ministry of Health, Community Development, Gender and Children (Wizara ya Afya, Maendeleo ya jamii, Jinsia na Watoto)
4. Prime Minister's Office (Ofisi ya Waziri Mkuu- Sera, Bunge, Kazi, Vijana, Ajira na Walemavu)
5. Ministry of Agriculture (Wizara ya kilimo)
6. Ministry of Livestock and Fisheries (Wizara ya mifugi na Uvuvi)
7. Ministry of Energy Tanzania (Wizara ya Nishati)
8. Ministry of Mining, Tanzania (Wizara ya Madini)
9. Ministry of Works, Transport and Communication (Wizara ya ujenzi, uchukuzi na mawasiliano)

10. Ministry of Education, Science and Technology (Wizara ya Elimu, Sayansi, Teknolojia na Ufundi)
11. Ministry of Labour, employment and youth development
12. Ministry of Lands, Housing and Human settlements
13. Ministry of Natural Resources and Tourism (Wizara ya Maliasili na utalii)
14. Ministry of Water and Irrigation (Wizara ya maji na umwagiliaji)
15. National Environment Management Council (NEMC)
16. Zanzibar Environmental Management Agency (ZEMA)
17. Parliamentary Climate Change Steering Committee
18. Prime Minister's Office- Disaster Management Department (DMD)
19. Prime Minister's office- Investment and Empowerment (PMO-IE) division
20. Tawala za Mikoa na Serikali za Mitaa- Ofisi ya Rais (TAMISEMI)
21. Tanzania Disaster Relief Committee (TANDREC)
22. Tanzania Forest Service (TFS)
23. Department of Forestry (Idara ya misitu, Zanzibar)
24. Tanzania Meteorological Agency (TMA)
25. Tanzania Natural Resource Forum
26. Tanzania Port Authority
27. Tanzania Traditional Energy Development and Environmental Organisation (TATEDO)
28. Vice President's Office- Division of environment (Tanzania)
29. Vice President's Office – Idara ya Mazingira (Zanzibar)
30. Vice President's Office-Water resource management division (Tanzania mainland)
31. Tanzania Port Authority
32. Zanzibar Port Authority

**National- Government committees**

33. National Climate Change Technical Committee

**National-NGO**

34. Adaptation Fund project team
35. Climate Action Network-Tanzania
36. Forum CC - Tanzanian Civil Society Forum on Climate change
37. Informal Discussion Group on Environment (IDGE)
38. National Gender and Sustainable Energy Network
39. National Forest Resource Monitoring and Assessment Project
40. SUNARE (national NGO)
41. Zanzibar Civil Society Alliance on Climate Change (ZACCA

**National- academic**

42. Julius K. Nyerere Memorial Academy
43. UDSM Center for Climate Change Studies

44. UDSM-Department of Geography
45. UDSM-Institute for Marine Sciences
46. State University of Zanzibar (SUZA)
47. Sokoine University of Agriculture (SUA)

**Region and District**

48. District Environmental Offices
49. Pangani District Disaster Management Committee
50. Rufiji District Disaster Management Committee
51. District Disaster Management Committees
52. Pangani Coastal Cultural Tourism program
53. Ward Environment committees
54. Village Environment Committees
55. Pangani district council
56. Ranki Fishermen organisation
57. Rufiji district council
58. Village Disaster Management Committees
59. Ward Disaster Management Committees
60. SACCOs
61. Local NGOs and CBOs
62. Salt mining organisations (Private sector)
63. Tanzania Marine parks

**Appendix 2**

**KII guide**

1. **Introduction**

- Introduce yourself
- Present letter of introduction to respondent
- What is the purpose of the meeting? Discuss expectations by researcher and participants
- Discuss research ethics applicable to this research, mention the ethics approval by University of Reading Research Ethics Board and Research Permit by RGoZ and URT (where applicable)
- Explain the use of verbal consent and the
- Send round a sheet of paper with their names and age (for those willing to have that information recorded). Mention confidentiality and anonymity option and that information collected will only be used in case follow-up is required.

2. **Understanding of equity**

In reference to ward X, who does the organisation consider as:

a) What climate change related risks are considered important in location X? (*Ni hatari zipi ambazo zinahusiana na mabadiliko ya hali ya anga zina umuhimu sana mahali X?*)
b) Who are vulnerable to these risks? (*Ni vikundi vipi vinavyoathiriwa Zaidi na athari hizi?*)
c) Why are they vulnerable? i.e what characteristics make them vulnerable? (*Kwa nini vikundi hivi vinaathiriwa? Ni nini kinachofanya viathiriwe?*)
d) What actions are critical for addressing these vulnerabilities? Who should do these actions? (*Ni vitendo vipi vinahitajika ili athari hizi na wanaoathirika wasaidiwe? Ni nani afaa kuhusika na vitendo hivi?*)[6]

3. **History of engagement with policy process**

*a)* How did your organisation get involved in the policy process? i.e what process led to you getting involved in the policy process? (*Ni nini kilisababisha shirika lako kuhusishwa katika project hii?)*
b) Was your organisation's involved in the design and/or implementation? *(Shirika lako lilihusishwa kwa project hii wakati wa kubuni na kutekeleza project?*)
c) Why did the organisation get involved in the policy process? What did the organisation hope to achieve through this involvement? (*Kwa nini shirika lako lilihusishwa katika project hii? Madhumuni yenyu yalikuwa yapi?*)[7]
d) What were your roles within this policy process? i.e during both design and implementation (*Majukumu ya shirika lako yalikuwa yapi? i.e kwa kubuni na kwa utekelezaji wa project*)

4. **Position within network**

Provide respondents with a list of organisations/actors

- Please identify the 6 most important actors that your organisation has had any sort of relations with (relations/interactions of any form) (*Tafadhali tambua watendaji/washikadao ambao shirika lako linahusiana nao kwa wingi*)[8]
- What two actors do you think are your links (and were part of the policy process) but are not in this list? (*Ni watendaji wapi ambao walishirikishwa kwa project na shirika lako linahusiana nao, na hawajatajwa hapa?)*

5. **Resources exchanged within network**[9]

[6] See if you can tease out the perceived role of government and non-government actors
[7] This can be treated as an overt interest
[8] This is based both negotiated and reciprocal exchanges, for all types of resources. So respondents use decide on the relative degree of importance.
[9] Two types of resources are used –money and goods/services, due to their ability to be valued. The reason why we aren't using information is because information is fluid, and in most cases, the sources and its value cannot immediately be assigned.
We are also using negotiated exchanges and ignoring reciprocated exchanges because of the ability to attach a value to them.

a) Please identify the 3 most important actors (from the list) that your organisation has (contractually) given either money (pesa) or goods/services (bidhaa/huduma) or information (taarifa) to over the past 5 years (2012-2018) (*Tafadhali tambua watendaji/washikadao watatu ambao wamepokea fedha, bidhaa au huduma au taarifa kutoka kwa shirika hili kwa miaka ya 2012-2018)*[10]

| Actor name | Type of resource | Cumulative resource value[11] |
|---|---|---|
| | | |
| | | |
| | | |

b) Please identify the 3 most important actors (from the list) that your organisation has (contractually) received either money or goods/services from over the past 5 years (*Tafadhali tambua watendaji/washikadao watatu ambao wamelipa shirika lako fedha, bidhaa au huduma au taarifa kwa miaka ya 2012-2018*)

| Actor name | Type of resource | Cumulative resource value[12] |
|---|---|---|
| | | |
| | | |
| | | |

c) What has been your organisation's contribution to the policy process?

| Type of resource | Cumulative resource value | Notes |
|---|---|---|
| Money | | |
| Goods/services[13] | | |
| Information (such as attending meetings?)[14] | | |

d) What have you received from the policy process? How have you benefited from the policy process? (Mmepokea nini kutoka kwa project hii? Mmefaidika vipi?)

[10] We are specifying a time frame for standardization of responses, even though it might be possible that some power and influence might have spilled over from previous interactions

[11] This is the contractually agreed on value, in monetary terms

[12] This is the contractually agreed on value, in monetary terms

[13] This also includes expertise.

Note that am having trouble differentiating between information given out during meetings and expertise information e.g. consultant. Even though the latter can easily be valued. But then we can argue that the ability of it to be valued is the reason why we think it is more important (i.e if we were looking at it from the lens of a policy network)

[14] Ask if they regularly attended meetings, and if this was optional or a contractual requirement

**6.** Rules within network[15]

Go through specific decision-points within the policy process.[16]

| Decision point (*Uamuzi uliotendeka*)[17] | How decision was made (process) (*Uamuzi ulifanyika vipi?)* | Why it was made (*Kwa nini uamuzi ulifanyika?*) | Based on actor's perception, who had more influence on this decision? (*Ni nani alikuwa na ushawishi mkubwa katika uamuzi huu?*) | Why did these actors have more influence? (*Ni mambo yapi yalichangia wao kuwa na ushawishi mkubwa?*)[18] | Does actor feel that they had a say in this decision? Why? (*Je, unahisi ni kama ulichangia katika kufanya huu uamuzi? Kwa nini?*) |
|---|---|---|---|---|---|
| | | | | | |

[15] This will seek information on the informal rules developed within the network and whether they are favourable or not.

[16] These decision-points should relate to definition criteria for equity i.e when at least one of that criteria was changed/agreed on. They'll have been identified from a historical analysis of the policy process, and decisions relating to specific locations identified.

Alternatively, we could look at the elements of equity in general- i.e at what time was the decision made to implement the program at this location and use this group blab la bla.

[17] For Magharibi B, the decision-point is choosing Bwawani and Kilimani during design and the move from Bwawani to Kisaka saka during implementation.

[18] Tease out the informal rules here- i.e what conditions favoured this actor to have more influence? How were these conditions created?

**Appendix 3**

**Focus Group Discussion guide**

The following is a protocol and guide for the FGDs that were conducted in the three case-study locations.

**1. Introduction**

Introduce ourselves;

- What is the purpose of the meeting? Discuss expectations by researcher and participants
- Discuss research ethics applicable to this research, mention the ethics approval by University of Reading Research Ethics Board and Research Permit by RGoZ and URT (where applicable)
- Explain the use of verbal consent and the
- Discuss are the house rules
- Send round a sheet of paper with their names and age (for those willing to have that information recorded). Mention confidentiality and anonymity option and that information collected will only be used in case follow-up is required.

**2. Impacts of climate change and reliance on mangroves**

| Question | Notes | Location to ask |
|---|---|---|
| Which groups in the community are most affected by rising sea levels? | Probe from the findings from the surveys. | All[19] |
| Who would benefit the most from the restoration of the mangrove forest? Who would lose? | Look out for specific groups e.g. women and men who sell mandazi. The communities tend to say that the whole community will be affected. Try to probe using age, gender, livelihood, those who live close to the coast or those whose farms are by the coast | All |
| Would it be okay to say that people in Bondeni are more affected by sea level rise and more dependent on | The survey respondents mentioned that there is a spatial difference in the effects of sea level rise and their involvement in adaptation projects. | Kisakasaka-Majority[20] |

[19] This refers to all communities i.e Kisakasaka, Kumba and Kisiwa Panza
[20] This is the majority of the Kisakasaka population which were captured during the first round of surveys and FGDs

| | | |
|---|---|---|
| mangroves than those in Kilimani? Who owns most of the coastal farms? | | |
| Is it correct that the Wanyamwezis are more affected by sea level rise as compared to the rest of the local people? | | Kisakasaka-Minority[21] |
| How are the people within the Wanyamwezi sub-community likely to benefit or lose from a mangrove restoration project?<br>Who wouldn't be affected by the mangrove project here? | | Kisakasaka-Minority |
| Why is it that so many people don't understand what problem the project was attempting to address?<br>Why don't people know about climate change? | The surveys in Pangani revealed that a considerable number of people did not know what problems the project was attempting to address, nor did they know anything about climate change. This is despite there being a 'community awareness' element in the project implementation, where the BMUs were tasked with conducting awareness raising campaigns in their respective villages. | Kumba |

**3. Participation spaces created, and levels of participation achieved**

[21] This refers to the Wanyamwezis in Kisakasaka

| Question | Notes | Location to ask |
|---|---|---|
| Did the mangrove project adequately involve people in the decision making-processes? | | All |
| What did the project do well on in involving the community and what did it not do well on? | This is in relation to the types of spaces created and the general approach used in the project | All |
| Of the different ways in which people were involved in the program (give examples). Which one did people find most effective in getting their voices heard? Which one was most appropriate for the community? | Refers to the participation spaces created | All |
| Who were favoured/disfavoured in the contribution towards decision-making in the project? Why were they favoured/disfavoured? | Refers to socio-economic groups that exist within the community. | All |
| Why are there people who did say that they did not get involved in the project at all or even know about the project, even though things such as community meetings and replanting of mangroves were held? | | All |
| How did the project do well/not well in terms of involving the sub-community?<br>Which means of engagement were most preferred by this sub-community? | | Kisakasaka-Minority |
| What reasons could have resulted in members of the community not being | | Kumba |

| | | |
|---|---|---|
| adequately involved in the project?<br>Why wasn't the BMU team effective in getting people to be adequately engaged in the project? | | |
| What does the sub-community expect from the rest of the community? What does the rest of the community expect from the sub-community? Is the sub-community happy with what the status-quo is? If not, how have they attempted to rectify/address it? | This refers to informal expectations in regard to participation in development projects and community decision making. This is especially important given that the sub-community are considered 'foreigners' by the rest of the community, and are in some way spatially excluded from the rest of the community | Kisakasaka-Minority |
| Are there people in the community and sub-community who are favoured/disfavoured in the involvement in such projects/policy processes? | Finding out whether there are any inequalities existent within the sub-community | Kisakasaka-Minor |
| How did the project try to include this sub-community? Have previous development/climate change adaptation projects been inclusive? | | Kisakasaka-Minority |
| Why do people in Kisiwa Panza consider engagement in paid work the most important form of participation in the policy process? Does it help in getting their voices heard? How effective is it?<br>Why don't people value other ways of contribution towards decision-making? | The people here placed so much emphasis on the fact that they weren't involved in the second forest restoration activity and used it to assess the effectiveness of participation in the project and in decision-making | Kisiwa Panza |

| | | |
|---|---|---|
| How were people who participated in the tree-planting exercise get selected? Who were included? Who were excluded? | Refers to the 50 groups of 40 people each that were used to provide labour to the project during mangrove restoration. | Kisiwa Panza |
| Tell me about the community meetings that were held to discuss the project. When were they held? How many were they? Who attended? Who did not attend? How did people know about the meetings? What was discussed? | There were differing accounts of whether, when and how (many) the community meetings happened. | Kisiwa Panza |

**4. Access and use of mangrove resources**

| **Question** | **Notes** | **Location to ask** |
|---|---|---|
| What are the (examples of) rules of access and use of mangrove forest resources? Do the people understand these rules? | This is to find out whether the participants know about the rules of access and use of mangrove forests and to also generate a reference for follow-on conversations about forest access and use laws. | All |
| What are the advantages/disadvantages of having these rules? | | All |
| Why don't some people know/understand the rules of access and use of mangrove forests | | All |
| How do those who know about the existing forest use laws come to know about them? | Knowledge about forest laws in Kisakasaka is quite random…some people know them while others don't. I would like to know if there is a pattern. | Kisakasaka - Minority |

| | | |
|---|---|---|
| What is the difference between the time when there was a COFMA and now (no COFMA)? | This is in relation to the access and use of mangrove forest resources i.e how easy is it (comparatively) to access these resources? Are forests more protected now as compared to then? Do people know a lot more about the laws of forest access and use as compared to then? | Kisakasaka-majority |
| What is the role of the development and fisheries committees in the design and implementation of these rules? | These committees are important to the success of any forest protection/restoration initiative because their activities are directly linked to the forest. But I learned that these committees, even though legally required to be existent, do not exist in most of these communities. | All |
| Would it be possible to reinstate a COFMA in Kisakasaka? What conditions would need to be there for this to happen and for a COFMA to be successful? Do you think it would be useful/helpful? | The responses from the interviews mentioned that there was a possibility of creating another COFMA in Kisakasaka. I just wanted to know if this was something that the community desired and whether they thought it would be possible. | Kisakasaka - Majority |
| Are existing forest-use laws favourable/unfavourable to the sub-community? How? Does the sub-community feel that the existing forest-use laws are fair? | The minority are a minority. I wanted to know if they felt oppressed by the existing forest use laws | Kisakasaka - Minority |
| Does the forest in Kumba need by-laws? Why?<br>How bad is the destruction of mangroves in Kumba? Why is the forest being destroyed? By whom? | The forest in Kumba is relatively small and quite detached from the village. It is important to note that Kumba is a fairly urban area (compared to the other 3 communities), although half of it is urban and the other is rural (i.e. Madina).<br>Also, the only forest that was replanted was the forest area at the ferry-front. This was a relatively small patch (although I wasn't able to get the | Kumba |

| | | |
|---|---|---|
| | total acreage of mangroves replanted). Also, the replantation was done to protect the wall and trees were planted where older ones had been uprooted to make way for the wall. | |
| Why aren't community forest by-laws observed? Don't people understand or know about them? Is the COFMA committee still functional? | The interviews revealed that even though Kisiwa Panza still had a COFMA and a COFMA committee, these rules were almost non-functional, and that forest destruction was still ongoing. The decrease in forests was therefore due to both natural and human driven factors. | Kisiwa Panza |
| Would it have helped to have discussions about the forest-by-laws at the beginning of the project? | I thought that these conversations could probably have changed the way the project played out. I also think that this discussion was important due to the fact that they were replanting forests within an already existing forest. | Kisiwa Panza |

**5. Project specific inquiries**

| Question | Notes | Place asked |
|---|---|---|
| What other activities (other than those that the project engaged in) were important for the project to be successful? | The project, from the assessment seemed like it had dedicated a lot of its resources to enabling the structural components of adaptation possible. They only replanted the trees and did not engage in any other activities to support communities in social and economic/political ways. | Kumba |
| What are some potential threats to the project as it stands? | I'd like to know whether there are any unforeseen threats from the project's under-addressing the socio-political issues related to the project | Kumba |
| Have all past projects been implanted the way this one has? i.e. through JSEUMA? | | Kisiwa Panza |

| | |
|---|---|
| Why do you think the project decided to use JSEUMA? What is their history in past project implementations? | |

Questionnaire identification code:

Jessica Omukuti
University of Reading

## Appendix 4

## Survey Questionnaire

## Survey information

## Survey information

Survey date: ……  Other information: ……

Survey done by: ……

## Local information

Area (*Kitongoji*): ……  Ward (*Kata*): ……

Village (*Kijiji*): ……  District (*Wilaya*): ……

**1. Respondent information**

i. Gender (*Jinsia*)

☐ Male  ☐ Female

ii. Age (*Umri*)

☐ 18-25  ☐ 36-45  ☐ 56-65

☐ 26-35  ☐ 46-55  ☐ >65

iii. Main source of income (*unajishughulisha na nini?*)

☐ Fishing (crabs, fish, bivalve collection- *chaza*)

☐ Farming (crops/vegetables) (*Mkulima*)

☐ Animal husbandry (*Ufugaji wa mifugo*)

☐ Burning charcoal/selling firewood (*Kuchoma makaa au kuuza kuni*)

☐ Beekeeping (*Ufugaji wa nyuki*)

☐ Sea weed farming (*Upandaji wa mwani*)

☐ Self-employed-small enterprise (*Kuajiriwa-biashara ndogo*)

☐ Self-employed-large enterprise (*Kuajiriwa-biashara kubwa*)

☐ Employed-private sector (*Kuajiriwa - sekta ya kibinafsi*)

☐ Employed-civil servant (*Kuajiriwa-serikali)*

☐ Other

☐ Unemployed (*Sijaajiriwa*)

……..

iv. Other sources of income

……..

v. Marital status (*Umeolewa?*)

☐ Single  ☐ Divorced

☐ Married  ☐ Widowed

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University of Reading

vi. Level of education (*Kiwango chako cha elimu*)

- ☐ None
- ☐ Primary
- ☐ Secondary
- ☐ Tertiary

vii. Assets owned

| ☐ Cattle | ☐ Goats/sheep | ☐ Bicycle | ☐ Motorcycle | ☐ Car/Van | ☐ Land | ☐ House | ☐ Chicken/Ducks | ☐ Sewing machine |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

viii. Communication

- ☐ Radio
- ☐ TV
- ☐ Mobile phone

**2. Knowledge about policy process**

What problems was the policy process addressing and what solutions did it implement? (*Mradi wa upandaji mikoko Kijijini unashughulikia matatizo yapi?Na mradi ulikuwa na suluhisho zipi?*)

……

……

**3. Impacts of sea level rise to individual**

How have you been affected by sea level rise and its related impacts? (*Kibinafsi, umeathirika vipi na kuoanda kwa kina cha maji ya bahari?*)

- ☐ Unable to engage in livelihood activity e.g fishing, crab fattening (*kutoweza kupata kipato*)
- ☐ Salt water intrusion into water wells (*maji ya visima kuingia chumvi*)
- ☐ Farmland being flooded with salt water – destroying crops and reducing productivity (*Maji ya bahari kuingia kwenye mashamba na kuharibu mazao)*
- ☐ Sea water intrusion into residences (*Maji ya bahari kuingia kwenye makaazi*)
- ☐ Health impacts e.g Malaria (*Kuathirika kiafya)*
- ☐ Strong winds that blow off houses (*Upepo wa nguvu unaong'oa paa za nyumba)*
- ☐ Limited availability of food (*kuadimika kwa chakula*)
- ☐ Other effect (*Athari zingine*)
- ☐ No effect (*Hakuna athari)*

**4. Dependence on resource**

Are mangroves your primary source of (*Chanzo chako cha chakula cha kila siku kama kaa, samaki na mboga kinatokana na mikoko? Mapato yako ya fedha yanatokana na mikoko?):*

- ☐ Food e.g crabs, fish, farming (*chakula, kama kaa, samaki na mboga*)
- ☐ Income e.g fishing, crab fattening, rice cultivation (*mapato kama uvuvi, kufuga kaa, kupanda mpunga*)
- ☐ Recreation (*starehe, kama kupunga hewa*)
- ☐ Construction materials (*Nyenzo za ujenzi*)
- ☐ Religious and cultural (*kuabudu au mizimu*)
- ☐ Medicinal (*dawa asili*)

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- ☐ Cooking fuel (*kuni au makaa)*
- ☐ Farming sea weed (*Kupandia mwani*)
- ☐ Making furniture *(kutengeneza fanicha)*
- ☐ Other uses (*matumizi mengine*)

**5. Effect of policy on resource reliance**

How has/will the policy affect the following uses (*Upatikanaji wa chakula chako utaongezeka au utapunguka kutokana na mradi huu?)*

| Use | Positively affected (*Umefaidika*) | Not affected (*Hakuna mabadiliko*) | Negatively affected (*hujafaidika*) |
|---|---|---|---|
| Food(*chakula*) | | | |
| Income (*mapato ya fedha*) | | | |
| Recreation (*starehe*) | | | |
| Shelter (*Nyenzo za ujenzi*) | | | |
| Religious and cultural (*kuabudu na mizimu*) | | | |
| Medicinal (*dawa asili)* | | | |
| Fuel (*Kuni au makaa*) | | | |
| Construction of furniture (*Kutengenezea fanicha)* | | | |
| Farming sea weed (*kupandia mwani*) | | | |
| Other uses (*Matumizi mengine)* | | | |

**6. Participation spaces**

a) Would you have liked to be involved in the project design and implementation? (*Ulitaka kuhusishwa kwenye mradi?*)

☐ Yes ☐ No

If no, explain why (*Ikiwa hapana, eleza kwa nini*).

……

b) How were you involved in the program? (*Ulihusishwa vipi kwenye mradi?*)

- ☐ Heard about the program from posters (*Vipepererushi au mabango*)
- ☐ Was told about program by public announcements e.g from village government or mosque/church (*Mabomba, Msikitini au kanisani*)
- ☐ Heard about it from friends, or passers-by (*Marafiki au wapiti njia)*
- ☐ Heard about it from Radio/TV (*Toka kwenye redio au televisheni*)
- ☐ Participated in program assessments (baseline and midline assessments) (*Utafiti wa mwanzo wa mradi*)
- ☐ Volunteered for the program or engaged in paid labour (*Kazi ya kujitolea/yenye malipo kwenye mradi*)
- ☐ Attended meetings and seminars organized by the program (*Kuhudhuria mikutano ya mafunzo iliyoandaliwa na mradi*)
- ☐ Attended public meetings/barazas organized by program and village government (*Kuhudhuria vikao vya Kijiji vilivyoandaliwa na mradi au sheha*)

- ☐ Attended public meetings organized by community (*Kuhudhuria vikao vya kijiji vilivyoandaliwa na wanakijiji)*
- ☐ Attended meetings with JUMKISA and program/village government because am a member of JUMKISA (*Kuhudhuria mikutano kati ya JUMKISA na mradi au kamati ya kijiji/mwenyekiti wa kijiji, kuzungumzia mradi, kama mwanachama wa JUMKISA)*
- ☐ Attended meetings between environment/fisheries committee and program team/Shehia government to discuss the program (*Kuhudhuria mikutano kati ya kamati ya mazingira/uvuvi na mradi au Kamati ya Sheha kuzungumzia mradi, kama mwanachama wa kamati ya mazingira/uvuvi*)
- ☐ Advised the village government because am a member of Shehia committee (*Uliishauri kamati ya kijiji kuhusu mradi kwa sababu wewe ni mwanachama wa kamati ya kijiji)*
- ☐ Member of any other community social group that advocated for certain issues related to the program (*Mwanachama wa kikundi kingine hapa kijijini ambacho kilijihusisha na mradi kwa hiari*)
- ☐ Voted on the issue (*Kupiga kura*)
- ☐ Other

**7. Level of participation**

Tick whichever is appropriate

- ☐ I was involved in the identification of the problems, design of solutions and planning for program implementation (*Mradi ulinihusisha katika kuainisha matatizo yaliyoko kijijini, suluhisho ya matatizo hayo na kwa kupanga jinsi mradi utakavyotekelezwa*)
- ☐ I was involved in the provision of more information about the problem that the program was addressing and the solutions (*Mradi ulinihusisha katika kutoa maoni kuhusu matatizo na suluhisho zilizokuwa zimeainishwa na mradi*)
- ☐ I was informed about the problem being addressed by the program and the proposed solutions (*Mradi ulinifahamisha tu kuhusu matatizo yaliyoko Kijijini na suluhisho la matatizo haya bila kutaka kujua maoni yangu*)
- ☐ Not involved at all

**8. Voice in decision-making process**

a) Do you feel that you were given adequate opportunities to voice your opinion about the program (e.g about the problem, benefits and side effects of the program) during (*Unahisi kama ulipata njia au nafasi/fursa za kutosha kutoa za maoni yako kuhusu matatizo, faida na hasara zinatokana na mradi?*):

i. Program design? (*Maandalizi ya mradi*)?

☐ Yes ☐ No

ii. Program implementation (*utekelezaji wa mradi*)?

☐ Yes ☐ No

b) Do you feel that your opinions were used to inform decision making? (*Unahisi ni kama maoni yako yasilikilizwa na kufanyiwa kazi katika mradi*)?

☐ Yes ☐ No

Jessica Omukuti
University of Reading

**9. Access and use of resources**

Answer yes or no to the following questions.

i. I know about the rules of access and use of mangrove forest resources (*Ninaelewa sheria za matumizi ya misitu ya mikoko*)

☐ Yes ☐ No

ii. I was involved in the creation of the rules of access and use of mangrove forest resources (*Nilihushishwa katika utengenezaji wa sharia za matumizi ya mikoko*)

☐ Yes ☐ No

iii. I support the rules of access and use of mangrove forest resources (*Ninakubaliana na sheria za matumizi ya misitu ya mikoko*)

☐ Yes

☐ No

**10. Other**

In retrospect, what would you change about the process in regard to how you were involved in the decision-making process (*Ungependa nini kifanywe ili uhusike ipasavyo kwenye mradi)*?

……

**Appendix 5**

**Description of variables used in chapter 7**

| Variable | Description | Description of variable and how the variable was derived |
|---|---|---|
| Level of participation | Level of participation perceived to have been achieved by an individual | Respondents were asked to identify the level of participation they thought they had achieved during the project. Four categories were used: 1-involved; 2-consulted; 3-informed; 4-not involved at all. |
| Impact of SLR | This relates to the impacts of SLR on livelihoods and well-being e.g. health and availability of freshwater for household use. | Respondents asked to identify whether they were impacted by SLR in specific ways e.g salt water intrusion into domestic water points, coastal flooding into residences, flooding into farmland etc. Those who were impacted scored 1 while those who were not scored 0. These were then summed up to generate an impact score. Sums ranged from 0 to 7. These were then categorised into three categories: 0-No impact; 1,2,3,4- Mild impact; 5,6,7-High impact. |
| Dependence on mangroves | Dependence relates to the use of mangroves for socio-cultural e.g. recreational, medication and construction and livelihood/economic e.g. selling mangroves to get an income. | Respondents were asked to identify the ways in which they were dependent on mangroves e.g. for cooking fuelwood, construction, medicine etc. Dependence was scored as 1 and non-dependence was scored as zero. These were summed up to generate a mangrove dependence score of 0-7. These were then categorised into: 0-no dependence; 1,2,3,4- mild dependence; 5,6,7- high dependence. |
| Effect of mangrove restoration and protection | Level of effect of the mangrove restoration and protection activities on livelihoods and well-being. | Respondents were presented with the local 'sectors' that would be affected by mangrove restoration and protection e.g. food availability, recreational facilities, income etc. They were asked to identify whether they would be positively, negatively or not affected in the |

| | | |
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| | | presented sectors. Positive was scored as +1, negative as -1 and no effect as zero. These were summed up during data analysis, with the sums ranging between -7 and +7. These were then categorised as High negative effect- -7 to -4; Mild negative effect- -3 to -1; No effect- 0; Mild positive effect- 1 to 3; High positive effect- 4 to 7. |
| Participation-awareness raising campaigns | Awareness raising campaigns were organized by the organized by the project. activities included posters and festival-type events where people gathered to receive information about the project. | Respondents were asked to say whether they had received any information about the project or participated in the awareness raising campaigns organized by the project. Those who participated were scored 1 while those who did not were scored zero. |
| Participation-public address systems | Public address systems were used to spread information across the village about upcoming project-related events/activities. For example, in KS, a town crier would walk around the village informing people about upcoming activities. | Respondents were asked to say whether they had received any information relating to the project from public awareness systems that were deployed round their villages. Those who participated were scored 1 while those who did not were scored zero. |
| Participation-radio/tv | Radio programmes and TV/Radio news clips discussing different aspects of the project were aired. In some cases, e.g. in PM, community members got an opportunity to phone in to the radio stations and engage in debates relating to the project. | Respondents were asked to say whether they had received any information or participation in debates related to the project via radio or tv. Those who participated were scored 1 while those who did not were scored zero. |
| Participation-paid/volunteer work | Community members were given opportunities (volunteer or paid) to plant mangrove seedlings. | Respondents were asked to say whether they had been part of the paid or volunteer mangrove planting activities planned by the project. |

| | | |
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| Participation-seminars | Seminars and meetings (mostly outside the villages) were held by the project and some members of the community were invited to participate. | Respondents were asked to say whether they had attended any of the seminars that were organised under the project. Those who participated were scored 1 while those who did not were scored zero. |
| Participation-baseline/midline | Some community members had been interviewed during the project baseline and midline assessments. | Respondents were asked to say whether they had been requested to provide information about the project during the project baseline or midline assessments. Those who participated were scored 1 while those who did not were scored zero. |
| Participation-local counfil meetings | Council meetings were regularly held at the village level as part of the local formal governance structures. These were chaired by the village head and attendance was open to all members of the public. | Respondents were asked to say whether they attended any of the local government meetings (with project representatives present) in which the mangrove restoration project was discussed. Those who participated were scored 1 while those who did not were scored zero. |
| Participation-local group membership | Community members who had membership to the CBOs/BMU attended the groups' internal planning meetings | Respondents were asked to say whether they were members of the local group which had been contracted to lead the project at the local level and whether they had been engaged in project-related activities as part of the group's member. Those who participated were scored 1 while those who did not were scored zero. |
| Participation-local government committee meetings | Community members who were also government representatives attended internal local government planning meetings. | Respondents were asked to say whether they were part of the local government committee and whether had attended committee meetings with project representatives present) where they discussed project-related issues. Those who participated were scored 1 while those who did not were scored zero. |

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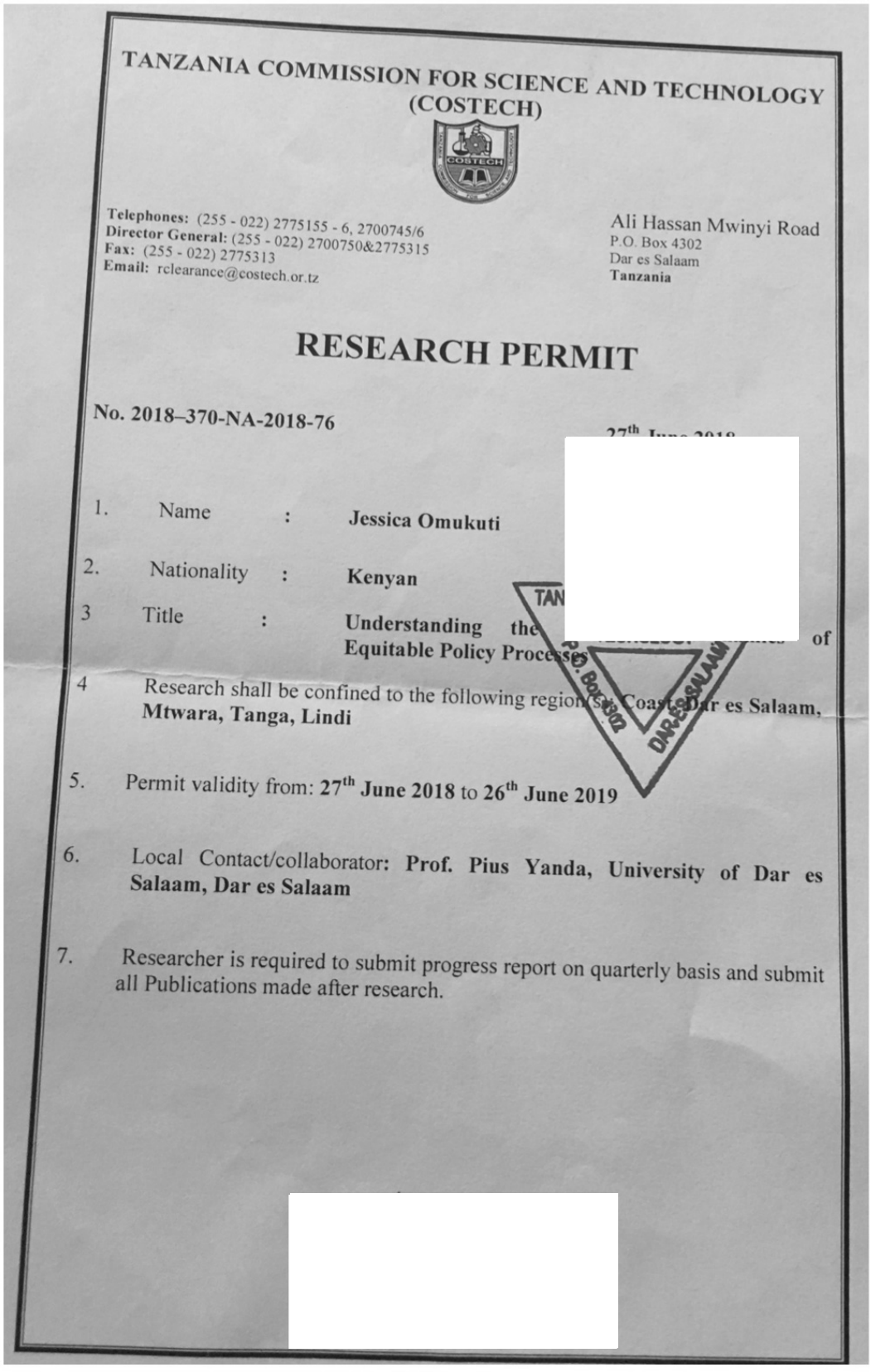
| Participation-community convened meetings | Community members convened their own meetings in either small or large groups with attendance/audience from the CBO/BMU and/or local government representatives | Respondents were asked to say whether they had attended any village-convened meetings (as opposed to village government convened meetings) where project-related issues were discussed. (in the presence of project representatives). Those who participated were scored 1 while those who did not were scored zero. |
| Participation-voting | Voting on some issues was conducted during some meetings. For example, in PM, community members were able to vote on who would constitute the BMU. | Respondents were asked to say whether they had voted on any issue relating to the project in any forum. Those who voted were scored 1 while those who did not were scored zero. |

**Appendix 6**

**Research permits**



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**Fax:** (255 - 022) 2775313
**Email:** rclearance@costech.or.tz

Ali Hassan Mwinyi Road
P.O. Box 4302
Dar es Salaam
**Tanzania**


# RESEARCH PERMIT

**No. 2018–370-NA-2018-76**

**27th June 2018**

1. Name : **Jessica Omukuti**
2. Nationality : **Kenyan**
3. Title : **Understanding the ... of Equitable Policy Processes**
4. Research shall be confined to the following region/s: **Coast, Dar es Salaam, Mtwara, Tanga, Lindi**
5. Permit validity from: **27th June 2018** to **26th June 2019**
6. Local Contact/collaborator: **Prof. Pius Yanda, University of Dar es Salaam, Dar es Salaam**
7. Researcher is required to submit progress report on quarterly basis and submit all Publications made after research.

## REVOLUTIONARY GOVERNMENT OF ZANZIBAR

SECRETARY
ZANZIBAR RESEARCH COMMITTEE
P. O Box 239
Tel: 2230806
FAX: 2233788

### RESEARCH/FILMING PERM

(This Permit is only Applicable in Zanzibar for a duration specified)

[redacted]

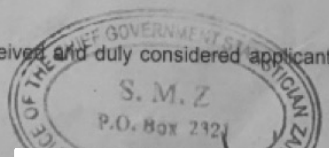
SECTION

[redacted]

| | |
|---|---|
| **Name:** | |
| **Date and Place of Birth** | |
| **Nationality:** | |
| **Passport Number:** | |
| **Date and Place of Issue** | |
| **Date of arrival in Zanzibar** | **13/04/2018** |
| **Expected date of departure** | **31/03/2019** |
| **Duration of stay** | **12 Months** |
| **Research Tittles:** | **Understanding the Dynamic of Cross-Level equitable adaptation policy processes case studies of coastal adaptation through mangrove protection in Tanzania** |

**Full address of Sponsor:** **5AH 6AR Reading United C.Mckinnon@reading ac.uk**

This is to endorse that I have received and duly considered applicant's request I am satisfied with the descriptions outlined above.




[redacted]

**Name of the authorizing officer:**
**Signature and seal:**
**Institution:**
**Address:**

**Date:** **17/04/2018**

**Appendix 7**

# A power-influence model for assessing equity in country-owned adaptation processes within states.

A version of this chapter was submitted to *Ethics, Policy and Environment* on 17 August 2019.

## Abstract

This chapter presents a framework for understanding intra-state equity in country-owned climate change adaptation. Local level equity should be the ultimate goal of country-owned adaptation, with equitable actions seeking to empower local level vulnerable populations to influence adaptation decision-making through participation. While participatory approaches can create spaces for particularly vulnerable groups to influence decision-making, these spaces can re-create or reinforce existing inequalities. Relational empowerment is proposed for achieving intra-state equity. It is guided by patterns of differential vulnerabilities and inequalities and seeks to ensure that vulnerable and marginalize groups develop agency to influence adaptation decision making.

## Introduction

Addressing climate change is a conditional precursor for sustainable development. Sustainable development is essential for Least Developed Countries (LDCs), which have to make trade-offs between achieving economic growth and sustainable development (Gupta & Vegelin, 2016). The Sustainable Development Goal 13 on climate action is expected to fast-track progress towards sustainable development by enabling populations to adapt to, and mitigate climate change and safeguard development gains. Country ownership of adaptation is essential for LDC's progress towards sustainable development. Country ownership enables externally funded adaptation initiatives to be led by country institutions and address country adaptation priorities and delivering on equity. Equitable adaptation generates processes and outcomes that respond to the adaptation priorities of local level populations who are vulnerable to climate change. However, existing research and policy pay little attention to the intra-state equity implications of country ownership. This chapter presents a framework for understanding intra-state equity of country-owned adaptation actions and discusses some of the conceptual issues that emerge when thinking about intra-state equity in country ownership.

The international climate change regime recognises the multi-level and multi-stakeholder nature of climate change adaptation. For instance, UNFCCC structures underscore the importance of multi-stakeholder engagement in achieving climate justice and pursue country ownership to ensure engagement of LDC stakeholders in climate change adaptation (CCA). Country ownership aligns itself with the normative expectations from CCA, where allocation of climate change resources is to those with the greatest need (Grasso, 2007). Country ownership presents opportunities for achieving macro and micro-justice in CCA. Macro justice is through the allocation of climate finance to countries that are most vulnerable to climate change (Schalatek, 2012). Country ownership also intends to ensure that CCA is country stakeholder-led, as opposed to donor-led (GEF, 2014). Micro-justice is achieved when

country ownership enables intra-state actors, especially those at the local level, to identify and prioritise CCA options (Persson & Klein, 2008). This generates CCA that is 'contextually sensitive and politically realistic' (Duus-Otterström, 2016; Lesnikowski et al., 2017, p. 827).

The operationalisation of country ownership has met challenges. For example, there have been delays in the disbursement of finance, the mismatch between finance needs and available finance, and the inability of developing country institutions to meet the strict fiduciary standards necessary for accessing climate finance (Atteridge & Canales, 2017; Bowen, 2011; Schalatek, 2012). Another challenge emerges from how country ownership is framed. Conceptions of country ownership frame nation states as single independent entities (Biermann & Dingwerth, 2004). This can result in the inaccurate conflation of country ownership for government control (Shankland & Chambote, 2011), where state governments are assumed to be democratic with a desire of addressing their populations' needs (Booth, 2012). The assumption that local level needs inform country owned actions may also be incorrect, as experiences from development-based country-owned projects suggest that donor control is still possible even when funds are claimed to be country-owned (Dijkstra, 2011). These aspects need to be clarified for country ownership to achieve its intended goal of supporting LDCs to adapt to climate change.

These assumptions are linked to the gaps between country ownership and equitable adaption. Policies emerging from country ownership processes are criticised for being technocratic and averse to long-term adaptation planning objectives and requirements (Hardee & Mutunga, 2010; Kalame et al., 2011; Kissinger et al., 2013). These policies are likely to be ineffective in reducing vulnerability (Nagoda, 2015). It is also possible that LDC actors are disincentivized from pursuing equitable CCA. For example, an unsupportive institutional environment discourages private sector actors from supporting adaptation in LDCs (Pauw & Pegels, 2013). Additionally, historical experiences from adaptation decision making indicates has overlooked solutions that generate local level benefits in favour of international benefits (Winkler & Dubash, 2016). These mean that even though country ownership may deliver inter-state climate justice, their contribution to intra-state equity is not guaranteed (Colenbrander et al., 2018).

Examples of the gap between country ownership and equitable adaptation are demonstrated in the design and implementation of National Adaptation Plans of Action (NAPAs). These embody country ownership within the UNFCCC and are considered unable to address local level vulnerability. In Burkina Faso, NAPAs did not incorporate the needs of local level vulnerable populations (Kalame et al., 2011). Analyses from Nepal also show a superficial involvement of local communities in policy design, resulting in plans that frame vulnerability as apolitical and technocratic, thereby failing to capture and less likely to address the root causes of vulnerability (Nagoda, 2015; Ojha et al., 2016). Gaps in city-level implementation of Bangladesh's NAPAs also emerged from the limited sub-national consultations by national governments during NAPA preparation and implementation (Araos et al., 2017). Yet, other than the NAPA, LDCs have been involved in a variety of initiatives that are considered country owned, e.g. through the UNFCCC's climate finance mechanisms via direct access of multilateral climate finance by the AF, GEF and GCF.

These concerns necessitate a consideration of whether country ownership can be used to achieve intra-state equity. Existing conceptual and empirical understandings of equity in CCA are internationally biased (Bulkeley et al., 2013b; Klinsky et al., 2016). These cannot be used to judge the state of equity within states because the extent to which lower levels of governance achieve equitable adaptation is dependent on intra-state contextual factors (Huq, 2006). Most of existing empirical literature on CCA equity below the international level solely conduct analysis at single levels of governance such as the national, sub-national or the regional levels (e.g. Bulkeley et al. (2014); Pinto and McDermott (2013)).

By analysing adaptation equity at these single levels, emerging literature poorly captures the multi-level linkages of equitable adaptation. Recognition of the multi-level nature of climate actions is therefore necessary, with equity understood as an 'accumulative multi-scalar *process*' (emphasis in original text) where equity drivers at one level create feedbacks to drivers at other levels (Barrett, 2013b, p. 216). The application of equity principles also differs across levels (Bulkeley et al., 2013b). For example, actors at different levels may have varied perceptions of what is equitable (Loft et al., 2017). Hence, there is a limited understanding of how multi-level CCA processes affect intra-state equity (Shi et al., 2016). A multi-level treatment of equity enables the inclusion of politics from different levels, inviting alternative understandings and claims for equity (Fisher, 2015). This can be a starting point for conceptualising the linkages between country ownership and intra-state equity.

This chapter builds upon these gaps in the existing literature and proposes a framework for understanding the intra-state equity in country ownership of CCA. Adaptation is considered as intentional and planned, and made up of multi-level and multi-stakeholder interactions, as opposed to autonomous (Moser & Ekstrom, 2010). This chapter makes a theoretical contribution to the literature on climate justice and equity. By focusing on country ownership within states, the chapter advances knowledge on the multi-level politics of adaptation that affect equity and climate justice outcomes at the local level. This chapter is structured as follows. Section 3.2 builds on the concepts presented in the introduction and presents a working definition of equity. Section 3.3 presents the power-influence framework, while the last two sections highlight some of the conceptual and practical issues emerging from the proposed framework and present the conclusions.

## Generating a working definition of equity

Equity relates to social justice and defined as 'the way that social and political institutions distribute both goods and bads among constituent members' (Vanderheiden, 2008, p. 47). 'Just' systems are expected to treat people equitably (McDermott et al., 2013). Equity highlights the social choices and trade-offs involved in determining the object of equity and who it should be shared amongst (Shrestha, 2005). Equity determines equivalence of process and outcomes. Equivalence of outcomes is based on distributive justice, which determines how benefits (and risks) associated with CCA are allocated (Fraser, 2009; Grasso, 2010). At the international level and local levels, distributive justice involves allocations of mitigation burdens and climate finance between states and the allocation of benefits and adverse effects of climate change and action respectively (Graham et al., 2015; Meyer & Roser, 2006). Equivalence of process enables procedural justice through fair access to decision making by individuals

or groups (Young, 1990). Recognition of actors and their interests, prioritisation of actors in decision making and awareness of patterns of power that determine access to decision-making processes contribute towards procedural justice (Paavola et al., 2006).

Equity can be understood through a political ecology lens. This highlights the factors that mediate between the costs and benefits of climate change impacts, the effects of adaptation actions and the extent to which actions contribute to vulnerability reduction (Robbins, 2011). Power is central to political ecology and is determined by socio-economic and political factors. The inequalities manifest through marginalisation and poverty, which produce differential vulnerabilities and capacities to respond to climate change (Azmanova, 2018; Bryant, 1998; Sheller & León, 2016). Addressing vulnerability requires transformations in social and political structures that cause power inequalities (Tschakert et al., 2013). Transformation, as a concept, however, only involves a certain amount of change in the social and political systems but does not inform the pathways to and breadth of transformation (Pelling et al., 2015). Consideration of equity when engaging in transformation, through considerations of power inequalities can inform the whom, how and why of transformation in adaptation. These principles of justice will be used to conceptualise intra-state equity.

Why not use existing atmospheric justice principles to understand intra-state equity? Atmospheric justice principles, such as the polluter-pays and the common but differentiated capabilities principles, are concerned with the inter- and intra-generational allocation of costs and values of emissions (McKinnon, 2015). These principles are also internationally-biased towards nation states as the main actors and overlook distribution of benefits and costs of adaptation within states, thus making them unsuitable for generating an understanding of 'justice beyond burden sharing' at other scales within states (Vanderheiden, 2016, p. 27). The operationalisation of cosmopolitan justice, which is now emerging as a principle of justice along existing atmospheric principles of justice, is slow. For instance, it is just until recently that sub-national actors started participating in UNFCCC negotiations (Zeppel, 2013). Atmospheric principles of justice are unsuitable for conceptualising intra-state equity as these do not adequately capture the multi-level element of CCA.

Existing research on equity and climate justice is based at the international level. Recent work has focused on international climate change policy (Lyster, 2017) and climate adaptation finance (Ciplet et al., 2013). While these highlight the importance of equity in intra-state adaptation actions, they also create new knowledge gaps that relate to intra-state equity. Research emphasises that local level equity in climate actions requires multi-scalar interventions (Thomas & Twyman, 2005), climate finance allocations need to be made at sub-national levels (Colenbrander et al., 2018) and that ethical trade-offs may result from pursuing equitable intra-state adaptation (McManus et al., 2014). However, these do not identify the right balance of actions nor the approaches to identification of an appropriate balance at and across different scales. They make assumptions regarding intra-state actor interests and willingness to support decentralised adaptation finance allocations. Lastly, this research does not highlight appropriate approaches to addressing these ethical trade-offs. The framework presented in the following

section (3.3) attempts to address these gaps by conceptualising intra-state equity from country ownership of CCA as a factor of power and influence.

## The power influence model for understanding intra-state equity

Power underlies all multi-level CCA processes. Interactions between formal and informal institutions and state and non-state actors across different administrative and political boundaries characterise multi-level CCA processes (Pahl-Wostl, 2009; Vedeld et al., 2016). These processes are considered to be discourses, where 'analytical attention is turned to the webs of power underlying the practices of different actors in the policy process, as well as the invested practices in policy negotiation and contest' (Keeley & Scoones, 2014, p. 24). Power differences between actors determine the needs and priorities that get represented in and addressed by CCA (Adger et al., 2009a; Sova et al., 2015a). For example, at the local levels, power differences determine whose voice and needs are heard and addressed respectively (Naess, 2013). Understanding the characteristics of power in CCA processes contributes towards understanding the nature of relations between actors in CCA, thereby enabling a conceptualisation of the nature of equitable adaptation. This section presents power as a core element of CCA processes and highlights the characteristics and role of power in equitable adaptation processes.

### Power in adaptation processes

Many definitions of power exist (see Barnett and Duvall (2005), Raven (1993) and Van Tatenhove et al. (2010)). This chapter defines power as the ability or potential to influence adaptation decision making and outcomes, achieved through the ability to constrain or expand the choices or resources available to actors. This definition combines the 'power to' and 'power over' concepts of power, where the former relates to the capacity to influence behaviour while the latter relates to the capacity to control resources and outcomes (Fiske & Berdahl, 2007). This definition emphasises the relational nature of power, emerging from inequalities in historical resource distribution and exclusion of some groups (Azmanova, 2018; Mosse, 2010). Power cannot be measured but is observable when exercised (Apkarian et al., 2013; Markovsky et al., 1988). It can be intentional or unintentional (Wrong, 2017). It varies across space and time, implying that an actor being less powerful in one relationship does not mean that they are entirely powerless as they may be powerful in another relationship (Wrong, 2017).

Influence is the outcome of the exercise of power (Thorelli, 1986). Powerful actors within CCA processes can modify/influence behaviour, interests or decisions of the less powerful, with or without the other parties' knowledge (Digeser, 2015; Thorelli, 1986). Actors who cooperate (e.g. through multilevel adaptation processes) seek to have their interests met (Andresen & Agrawala, 2002). Interests are linked to perceived or actual benefits (Krott, 2005; Van Schaik & Schunz, 2012). In CCA, examples of benefits can include addressing vulnerability and achieving adaptation co-benefits such as attracting donor and peer support. Interests are achieved through negotiations (Brockhaus et al., 2014). CCA processes create political arenas for the negotiation of political interests, where the most powerful have more influence on the outcomes of these processes (Schusser, 2013). The variety of interests represented

in these processes, the nature of negotiations and outcomes achieved are a factor of type and range of actors involved.

A power-based approach to influence is intrinsic to adaptation processes. As noted by Adger et al. (2005, p. 80) , 'the choice of how an environmental governance problem is handled within a jurisdiction reflects the strength of the interests and power of the actors who define the problem'. CCA processes inherently involve the exercise of power (Eriksen et al., 2015). Even technocratic adaptation actions are not power-neutral (cf. Ojha et al. (2016)). For example, actors supporting top-down managerial approaches believe that scientific knowledge possessed by governments and international actors is more important than lived experiences and contributions from local actors who experience climate change impacts. By implementing top-down adaptation actions, technocrats also exercise power over adaption decision making. Adopting these technocratic approaches legitimises the unequal power relations between local level communities and actors possessing technical knowledge (Kesby, 2005). Power also emerges from knowing how processes work.

Normatively, those who are most powerful and less vulnerable to climate risks are more likely to influence adaptation processes (Nagoda & Nightingale, 2017). A positive feedback mechanism generates growing inequalities that further exacerbate vulnerability, making adaptation inequitable. Figure 1 strand (a) represents this process where power is an enabler for the influence, allowing those who are more powerful to have their interests represented in the adaptation process. Sub-section 3.3.2 discusses how power and influence are represented in equitable adaptation.

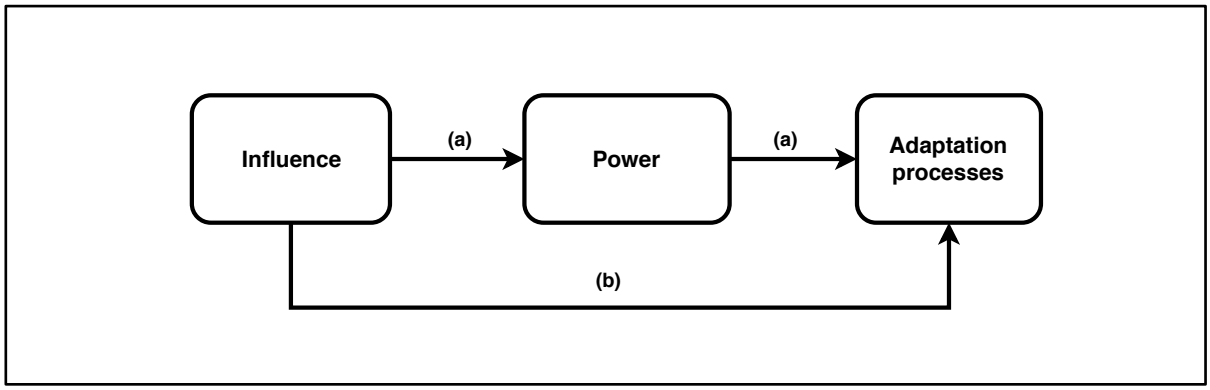



Figure A-1: Influence in CCA processes.

(a) represents influence that is driven by dominant power structures, while (b) represents influence that circumvents and/or contests existing and dominant power structures and enables the least powerful to influence adaptation processes. Contesting power structures enables those who are more vulnerable to engage in adaptation processes, thus producing positive feedbacks through vulnerability reduction.

Source: Author

**Equitable adaptation processes, influence and empowerment**

Equitable adaptation ensures that those who are most vulnerable to climate change can contribute towards decision making in adaptation. Equitable adaptation challenges the role of power as a determinant of actor influence (see figure 1 strand (b)). Power relations are not eliminated. Instead, equitable adaptation *circumvents or contests existing power relations*. Emerging shifts in power are in favour of those who have been historically marginalised and disadvantaged. This creates opportunities for less powerful groups to influence decision-making processes. Contesting power structures enables adaptation processes to re-evaluate who is considered vulnerable and uses this knowledge to determine who contributes towards decision making and they type of knowledge that is used in adaptation decision-making (Eriksen et al., 2015).

Enabling vulnerable groups to influence decision-making requires a transformation in social and political structures that mediate access to decision-making by groups. As people control institutions, empowerment is required to generate transformation. Empowerment emerges through behaviour change by those who are vulnerable and marginalise and by the gatekeepers to decision making (i.e. powerful and advantaged groups). While other behaviour change approaches can be used to achieve transformation (for example using economic incentives), empowerment is considered the most effective in addressing underlying vulnerabilities and enabling access to decision making as it involves choice as opposed to manipulation (Ferreira, 2013). Behaviour change can also generate empowerment and transformation.

Empowerment refers to a ‘process by which those who have been denied the ability to make choices acquire such an ability’ (Kabeer, 1999, p. 437). It is a factor of the capacity to act on one’s own goals and the context in which an actor is operating, which allows disadvantaged groups to have a set of choices that they can act on to achieve their desired goals (Pratto, 2015). Capacity to act on one’s goals is linked to an actor’s agency. Agency is defined with a specific set of goals, meaning that one actor can

have agency in one sphere and none in another (Pratto, 2015). Agency encompasses the capacity of actors to influence decision-making processes, the rules governing these processes and their outcomes (Benecke, 2011; Biermann et al., 2010; Newell et al., 2012) and the capacity to promote some decisions and block others (Dingwerth et al., 2013). Structural factors, such as characteristics of physical spaces for interactions, allocation of rights and responsibilities, existing rules and norms and their enforcement determine the agency possessed by actors (Rydin & Pennington, 2000). Existing power relations determine which actors become agents. For instance, while actors propose actions and facilitate their implementation, agents shape the broader ideas, norms and values that are related to the issue (Biermann et al., 2009; Dellas et al., 2011). Agency by itself does not produce empowerment (Drydyk, 2013; Pratto, 2015). Actors still require sets of choices through which to exercise agency. The exercise of agency occurs via resources through current allocations and future claims to choices (Kabeer, 1999). Rules and norms determine the extent to which actors have access to resources (Kabeer, 2005).

The links between empowerment and equity are not straightforward (Thomas & Twyman, 2005). Local level empowerment can result in active local level participation and organisation for the most vulnerable (Eriksen et al., 2011). However, in some instances, empowerment can reinforce elite control by creating opportunities for those who are least vulnerable and more powerful to seize (more) control of adaptation decision making, thus compromising equity principles (Thomas & Twyman, 2005). It is therefore essential to couple empowerment with principles of distributive and procedural justice, which create an awareness of who is vulnerable and most in need of support to adapt, thus contributing to empowerment. This can be achieved through a choice to pursue a relational or non-relational approach to empowerment. The relational and non-relational approaches to empowerment have different implications for equity.

Pratto proposes a non-relational understanding of empowerment, where power is defined relative to actors' individual goals or what an actor can do for themselves instead of what an actor can get other actors to do for them (Batliwala, 2007; Pratto, 2015). Pratto (2015, p. 12) notes that 'by specifying the implications of each kind of action for each party's well-being…we avoid the implicit presumption of whose point of view and well-being should get the most attention'. This non-relational view signifies an equal treatment of actors during the empowerment process, with disregard for historical inequalities. While the non-relational pathway to empowerment can result in transformation, it does so non-discriminatorily in the hope that those who are least powerful will be empowered. This favours those who are already advantaged. For example, actions that solely consider exposure to climate change risks as the primary determinant of whether individuals need climate change protection also fail to consider differential vulnerability within exposed groups and capacity to adapt, both of which are determined by historical patterns of inequalities (Graham et al., 2018; O'Brien et al., 2007).

A relational approach to empowerment proposed by Cornwall (2016) has better alignment with the definition of equitable adaptation presented in this chapter. It combines Pratto's non-relational approach with the need for addressing inequalities and the root causes of vulnerability to climate change. The relational approach addresses '*why* people are vulnerable and *what* mechanisms create and sustain their vulnerability' through 'seek[ing] to identify the underlying social, institutional, economic and political

structures and processes that prolong inequality, prior to conceiving of the possible solutions' (Tschakert et al., 2013, p. 344) (emphasis in original text).

Social change, power and politics are at the core of a relational-based view of empowerment, where actors strive to achieve collective goals in a political and power-based environment (Batliwala, 2007). Empowerment involves building critical consciousness to powerlessness and engagement with 'culturally embedded normative beliefs' that relate to power (Cornwall, 2016, p. 245), thus linking empowerment to increased political power (Corbett & Keller, 2004). Increase in individual and collective political power contributes to an increase in agency (Hall et al., 2009). This type of empowerment challenges entrenched power structures while enabling long-term changes that create a redistribution of power (Kabeer, 2005). Transformation is initiated and driven by local actors who are vulnerable to climate change (Chung Tiam Fook, 2017). By paying attention to inequalities and vulnerability, this pathway to empowerment avoids domination by those who are powerful and enables those who are most vulnerable to have their adaptation needs addressed by adaptation actions.

In summary, this section has laid out the characteristics of power that make it an essential element of adaptation processes. Power is intrinsic to adaptation processes, where the most powerful actors influence adaptation processes and outcomes. Equitable adaptation processes employ relational approaches to empowerment to challenge or circumvent power structures that drive inequalities, thereby enabling particularly vulnerable groups to influence decision-making processes. The following section discusses some of the conceptual implications of considering intra-state equity in country ownership. Section 3.4 discusses the implications of this understanding of equity to the operationalisation of intra-state equity.

## Implications of addressing intra-state equity in country ownership

The framework presented in section 3.3 proposes that equitable intra-state processes are those that engage with existing power structures to enable local level populations to influence adaptation policy processes to address local level vulnerabilities. This is achieved through a relational approach to empowerment with considerations for the who and why of vulnerability. However, the framework brings into focus issues relating to the trade-offs emerging from intra-state equity through empowerment, the measurement of equity and whether it is possible to identify a minimum level of equity in country-owned actions and the role local vulnerable groups and external actors can play in identifying patterns of inequalities and vulnerability. These concerns are discussed in the following paragraphs.

### Trade-offs from intra-state equity in country ownership

Adaptation processes, even though multi-level should eventually be assessed based on their local level impacts. Preston et al. (2015, p. 474) note that 'adaptation is local, adaptive capacity is not'. Therefore, while vulnerability can be measured and addressed at different scales, it should eventually contribute towards addressing local level vulnerabilities. Adaptation that fails to address local level vulnerabilities is maladaptive, as it can generate new or reinforce existing inequalities and vulnerabilities (Barnett &

O'Neill, 2010). This implies a normative 'do no harm' expectation for adaptation, where adaptation should 'engender socio-political transformation and foster opportunities to build sustainable societies' (Okpara et al., 2018, p. 37). However, this signifies an expectation of reductions in inequalities and vulnerability. Magnan et al. (2016) recommend an ex-ante approach to evaluate the risk of maladaptation, where adaptation planning anticipates the possibility that planned actions will generate maladaptation and therefore implements mitigation measures. This is one of the steps towards achieving equity.

Three questions that relate to trade-offs from equitable adaptation emerge –should adaptation address local level inequalities or injustices or settle for not harming? Would a do-no-harm or non-relational approach to empowerment in adaptation be legitimate? Who decides whether approaches are relational or non-relational? These questions discussed in the following paragraphs.

In practice, equitable adaptation involves making trade-offs between competing priorities, some of which fail to reduce inequalities. Equity, as a concept, is multi-faceted and dynamic (Klinsky & Winkler, 2014). This suggests that the politics of scale and the multi-level governance factors that affect CCA determine how equity is defined and its links to sustainable development. Trade-offs in equitable outcomes occur across spatial and temporal scales in the same way adaptation at one scale has implications at another (Magnan et al., 2016; Tschakert & Machado, 2012). The relational empowerment of one group results in (absolute or relative) disempowerment of another comparatively advantaged group. Policy actors are advised to consider policy actions in relation to how they may affect or be affected by future risks (Dilling et al., 2015). Section 3.4.2 discusses the extent to which country ownership policies and structures recognise these trades-offs and addresses them.

**Empowerment in country ownership in practice**

In practice, interventions that seek to achieve empowerment of local level vulnerable groups encounter challenges such as resistance by actors (especially those in power), absence of appropriate institutional structures and the lack of agency by those who are the subjects of empowerment. This demonstrates the political nature of empowerment in practice. For example, empowerment is less likely to be successful if local social structures do not see value in it or are strongly biased towards the disempowerment of groups in consideration (Arriola & Johnson, 2014; Fischer, 2006). Resistance may not necessarily be to the empowerment of those who have been historically marginalise, but to disruptive change (Verge & De la Fuente, 2014). Disruptive change can however also create opportunities for those who are more powerful to create and or reinforce power norms and structures (Kamoto et al., 2013). These realities are inadequately reflected in country ownership policies at the international level.

Country ownership structures within the UNFCCC recognise the importance of empowerment as an approach to enabling equitable adaptation. Most are biased towards supporting non-relational empowerment. For instance, even though the AF's design prioritises funding for the most vulnerable communities, there is little specificity on who decides how vulnerability is defined and who is vulnerable, and no procedures are provided to help these country stakeholders make these decisions (Horstmann, 2011; Remling & Persson, 2015). Hence, 'whilst there is some elaboration on drivers of

vulnerability, very little evidence is provided to argue *why* the target region is chosen over another. The question if the project addresses the weakest and socially most vulnerable parties often remains unanswered' (Remling & Persson, 2015, p. 26) (emphasis in original text). Funded proposals only have to demonstrate intent to address the vulnerability, irrespective of whose vulnerability is targeted. GEF projects' 'use of regional experts and consultants from participating countries' are applauded for 'foster[ing] "ownership" of activities and outputs' (Pernetta & Jiang, 2013, p. 141). However, the contribution of these actions to local level vulnerability reduction is not assessed.

The GCF's Environmental and Social Safeguards (ESS) policy also exhibits a non-relational approach to empowerment and vulnerability reduction. The ESS emphasises that actions submitted under the country ownership scheme should first consider whether the proposed projects are likely to cause harm to local populations. The ESS is considered a 'high level' screening activity, where actors engage in a quick consideration of who might be affected by proposed policies and programs (GCF, 2018b). Actors implementing the projects make value judgements on the scales at which these screenings should be conducted. The limited clarity on who the community is, the spatial and temporal scales to be considered in doing the assessments and who should make these decisions remains a critical gap in achieving intra-state equity through country ownership. ESS assessments submitted to the GCF are aspirational, where projects commit to conducting assessments of how their project activities will disproportionately negatively impact some social groups (e.g. see AfDB (2019)). Sherman and Ford (2014) also show a similar non-relational approach in GEF projects. Although GEF projects target vulnerable populations such as women and impoverished populations, they fail to identify whether climate-related risks drive this vulnerability (Sherman & Ford, 2014). This demonstrates the non-relational framing of empowerment in international country ownership policies and structures.

There are examples of projects funded within international country ownership structures that demonstrate relational approaches to empowerment. The few examples are of projects that seek to address gender inequalities. For example, a 2018 performance review of GEF projects found that less than 3% of GEF projects could be classified as having achieved gender mainstreaming and fell short of gender transformation (and hence empowerment) as projects failed to generate behaviour change towards existing norms (GEF-IEO, 2018). Other examples are gender transformative projects. A project being implemented by UNEP in Ghana, Mozambique and Uganda, which seeks to improve women's role in decision making but also plan to engage men in these decisions so that the men understand the rationale (UNEP, n.d.). A mangrove conservation project in Liberia sought to address gender inequalities in resource access by setting up decision making structures that engage both men and women to prevent women's representation from being limited to nominal positions (Conservation International, n.d.). A biodiversity project in Ethiopia built men and women's awareness on gender to enable a mutual understanding on gender and building on the improving awareness to implement activities that support the empowerment of women in communities (GoE, n.d.). In Senegal, increased confidence by women was reported to accompany their empowerment, which enabled them to gain access to better quality farmland and improved income (Roby & Mbengue, 2013).

Who decides which trade-offs are made, or who to empower/disempower is an important question when thinking about equity through relational empowerment. Local level participatory tools and methodologies can generate empowerment (McHenry, 2011; Pahl-Wostl, 2005). Participatory processes can engage local populations in making decisions about who is vulnerable and acceptable trade-offs. For example, bottom-up and participatory city adaptation planning in Quito (Ecuador) generated adaptation plans that were aware of local level inequalities (Chu et al., 2016).

However, participatory processes can also generate or reinforce power imbalances and exclusion. For example, women were excluded from the participatory LAPA development processes (Vij et al., 2019). In Zanzibar, participatory local level consultative processes in a REDD project resulted in the disempowerment of local level landholders and dispossession of land and REDD benefits (Benjaminsen, 2014). Local level participatory processes may also generate short-term priorities that fail to address the long-term climate adaptation needs (Pelling et al., 2015). External actors may also use local ownership and participation as a means through which to validate their agendas which are not in alignment with local needs and priorities (Ervine, 2010).This means that participation cannot be assumed to be a pre-cursor to empowerment, as this depends on how it is done.

This framework recommends an empowerment-alongside-participation approach. Such an approach enables shifts in power relations that enable vulnerable communities engage in participatory decision making without the risk of elite control or exclusion of vulnerable groups. Prior engagement with particularly vulnerable groups and building their capacity to identify, access and use decision-making spaces enables this approach and involves increasing these groups' agency by first identifying who are vulnerable, why they are vulnerable and how participation in decision-making processes could be useful.

External actors have an essential role during pre-engagement with vulnerable local level populations. External actors can support the identification of local level vulnerable groups and their empowerment by informing decisions on potential spatial and temporal trade-offs. However, the presence of external actors in local CCA decision making introduces different preferences and interests, which adds to the complexity of adaptation decision making (Forrester et al., 2015). External actors' roles in interventions should be 'facilitative and supportive' (Kirkby et al., 2017, p. 4). This is in alignment with the concept of 'sovereignty and self determination', which is the basis of country ownership (Williams, 2006, p. 4). However, other than facilitation, external actors need to take lead on the measurement of equitable country ownership outcomes. Section 3.4.3 discusses how equity can be measured.

**Measuring intra-state equity in country ownership**

Based on the framework presented in this chapter, measuring intra-state equity implications of country ownership requires evaluations of the extent to which country owned actions generates empowerment of vulnerable groups. Such adaptation reflects the needs of these groups and generates actions that address their vulnerabilities. Empowerment can be measured at different levels, including the national, sub-national, community/group and local levels (e.g. see Grootaert (2005); Khwaja (2005)). However, what counts as empowerment at one scale may not be at another scale (Tremblay & Gutberlet, 2010; Wahid et al., 2017). Because local level equity is related to empowerment of local level vulnerable

groups, measurement of equity should be through assessment of whether actions at one level can generate outcomes that enable local level vulnerable groups to be empowered to influence adaptation decision making.

In multilevel adaptation processes, empowerment of local level actors emerges from a chain empowerment process, where actors who can advocate for local level vulnerable groups' priorities are empowered. Measurement of empowerment should therefore focus on the extent to which actors at lower levels are able to influence decision making in favour of local level vulnerable communities. For example, measurement of equitable adaptation at the national level can focus on whether sub-national level actors are empowered to influence national level adaptation decision making (Corfee-Morlot et al., 2011). At the sub-national level, empowerment can be assessed based on whether sub-national processes have mechanisms through which local level vulnerable actors can influence adaptation decision making at the sub-national level (Archer et al., 2014).

In summary, this section has discussed the practical issues emerging from operationalisation of the empowerment framework presented in this chapter. The section has identified trade-offs emerging from addressing intra-state equity through empowerment and discusses how these trade-offs can be resolved. It has used examples from international county ownership structures and policies and country projects to demonstrate how these trade-offs can be addressed and how intra-state equity can be measured. Section 3.5 presents a conclusion to this chapter.

## Conclusion

This chapter set out to present a framework for the assessment of intra-state equity within country-owned CCA processes. The framework is based on the understanding that intra-state adaptation processes are power-laden, where the most powerful and least vulnerable actors can influence adaptation processes at the expense of the least powerful and particularly vulnerable groups to climate change. The model emphasises the need for country ownership to contribute towards intra-state equity by enabling local level vulnerable populations to contribute towards adaptation decision-making and have their needs met by the outcomes of these decision-making processes. Equitable CCA occurs when adaptation actions or processes circumvent or challenge existing power structures that create inequalities. This can be achieved through empowerment. Empowerment increases the agency of local level vulnerable groups. It can be realised both relationally and non-relationally, where the former pays attention to patterns of differential vulnerability and inequality at the local level while the latter generalises vulnerability and implements actions without consideration for the greatest need. The chapter endorses a relational approach to empowerment, as this enables groups who are particularly vulnerable to climate change to become equally likely (compared to those who are least vulnerable) to engage in adaptation decision making.

Understanding intra-state equity in country ownership requires engagement with the multi-level politics of adaptation. This chapter notes that equitable actions at the local level generate trade-offs at other spatial and temporal levels. The examples of equitable country owned adaptation within states presented

in this chapter suggest that while current international country ownership structures are unable to adequately deliver on equitable adaptation within states, interventions guided by these structures have the potential to support equitable adaptation by enabling the empowerment of local level vulnerable groups. It proposes that local level participatory approaches can be used to understand and prioritise trade-offs. However, participation can be a means through which those who are vulnerable to climate change are excluded. An empowerment-alongside-participation approach is recommended to ensure that vulnerable populations are able to access participation spaces and contribute towards decision making. External actors are critical in enabling these processes. They can inform the procedures of vulnerability identification, the spatial and temporal scales for consideration of trade-offs and what empowerment means for different groups of people.

This chapter makes a theoretical contribution to the literature on climate justice and equity. First, the chapter engages with discussions on international climate change policy and adds to the understanding of multi-level interactions within the international climate change regime. By framing equity using a political ecology lens, the chapter contributes towards research that underscores the role of historical inequalities and injustices and differential vulnerabilities in determining the extent to which individuals are vulnerable and able to adapt to climate change, thus necessitating their consideration in the design and implementation of adaptation actions. This framework can be applied to assess equity outcomes in the multi-level and multi-actor adaptation process. It also advances knowledge in international climate policy by evaluating the question of whether country ownership should extend beyond international climate justice to address intra-state equity concerns. It concludes that because the concern is for those with the greatest need due to their high levels of vulnerability, then country ownership should also be concerned with those with the greatest need within states.

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