1 Introduction

Esbern Friis-Hansen

Towards Implementation of Adaptation to Climate Change in Rural Africa

Climate change is widely acknowledged to be one of the fundamental challenges facing Africa and the entire world in the 21st century. In its fifth assessment, the United Nations Intergovernmental Panel on Climate Change (IPCC) presents overwhelming scientific evidence that human-induced emissions of greenhouse gases are changing the global climate (IPCC, 2013). Climate change mitigation of CO_2 emissions is a global challenge, and the narratives of how to conceptualize climate change mitigation and adaptation and how to act on this knowledge are being negotiated in the Conference of the Parties (COP) under the United Nations Framework Convention on Climate Change (UNFCCC).

During the 21st COP held in Paris in 2015, global agreement was reached on a new clear roadmap for reaching US$100 billion of international finance for climate change mitigation and adaptation for developing countries by 2020. Influenced by the UNFCCC process, many African countries have recently (2012–2013) developed National Climate Change Policies (NCCPs) that set out policy frameworks for the implementation of climate change mitigation and adaptation nationally. NCCPs have centralized governance structures, and international and national support for rural climate change adaptation has until now been limited compared with support to urban centres.

With increasing financial resources on track to become available for climate change adaptation, the attention is now on moving from the COP 21 agreement and National Climate Change Policies to action at the subnational and community levels. Engagement with subnational governments in support of climate change adaptation involves more than capacity-building and finance: it requires a strong focus on multiple governance levels for climate change adaptation, particularly the role of subnational institutions (Nalau *et al.*, 2015; Vogel and Henstra, 2015; Christoplos *et al.*, 2016), and on how support for climate change adaptation can be provided at the level of those who are vulnerable to climate change hazards (Conway and Mustelin, 2014; Lesnikowski *et al.*, 2015).

Yet our understanding of how subnational institutions are responding to climate change, and how they interact with the central state and local communities in practice, is limited. Climate Change and Rural Institutions (CCRI) is a multi-partner research programme (2012–2016) being coordinated by the Danish Institute for International Studies (DIIS) in collaboration with partners in Nepal, Vietnam, Uganda and Zambia. The programme examines how subnational institutions are responding to climate change in

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Africa and Asia (Christoplos *et al.*, 2016). This book builds on results from the CCRI research programmes from Africa, supplemented with complementing case studies from Tanzania and Ghana.

A crucial focus throughout this book is the extent to which actors and institutions are relevant for implementing rural climate change adaptation and to which the voices of those who are vulnerable to climate change hazards and accountability towards them are being included in these governance arrangements.

How national policies are translated into action depends on the extent to which the sector concerned is part of the decentralization. Many barriers for action occur when there is an insufficient balance between the devolution of responsibility and the devolution of fiscal and human resources. It is important to gain a deeper understanding of how subnational institutions respond to the challenge of climate change at the 'meso-level' between the central state and local communities. There is a disconnect, and an absence of administrative guidelines, regarding the level of devolution within the climate change policy arena, which again leaves a space for considerable ambiguity over how national climate change policies are to be implemented when, as promised, they will be financed by international communities. Because of the lack of clarity about governance mechanisms in NCCPs and the international pledges of significant financial support for climate change, there are widespread expectations among local government politicians and technical staff that local government is to be a key player in facilitating an enabling environment that allows local communities to adapt to climate change. These expectations have contrasted with the experiences of international climate investments until now, where central ministries have shown themselves eager to exert centralized control over political and fiscal resources. The ambiguity over how to deal with climate change and over the administrative level that should have the mandate to do so has turned climate change into a new arena for both policy-making and intra-government institutional infighting over fiscal resources, authority and legitimacy.

Vogel and Henstra (2015) emphasize that the roles and responsibilities assigned to local government in decentralization reforms are well suited to subnational levels of government, which can play a central role in providing services that permit local climate change adaptation. However, although the challenge of enabling local citizens to adapt to climate change is well suited to local government, as discussed in Chapter 2, national climate change policies in Africa seem inclined to favour a highly centralized and project-based mode of implementation, which until now has failed to address the decentralization process at all seriously.

Meso-level Actors and Climate Change

This study will focus on the contribution that local government has made to the implementation of programmes for climate change adaptation in rural Africa. Climate change adaptation needs institutional anchoring at the local level, in local communities, if national policies are to succeed. The study reviews relevant experiences gained in this field by international agencies, national governments and international NGOs.

Local governments in Africa are mundane and bureaucratic subnational institutions that carry out everyday administration and service delivery. They are very ordinary and may be considered insignificant for international climate change forums. There is, however, a slow but growing recognition within such forums, such as the IPCC and COP, that it is not enough to rely on Central governments alone to implement climate change actions. In recent status reports from the IPCC, the emphasis is on the role of local governments in addressing climate change.

Although international support for climate change in Africa is beginning to materialize, very little of this support has reached subnational government institutions. In spite of this lack of financial support, local governments have often engaged in real actions to deal with climate change. Incentives to act on the part of locally elected councillors include the largely popularly driven pressure of their constituents, who are frequently confronted with climate change hazards such as extreme floods and droughts.

Now that national climate change policies have been developed across Africa, international attention is increasingly turning to how these

policies can actually be implemented. While there is a great deal of ambiguity about the content of climate change adaptation, attention is shifting to how support for adaptive action can be implemented and which administrative units should take decisions and control access to funds.

District and subdistrict local governments make up the institutional 'middle ground' between the central state and the local community. Local governments have been thus uniquely positioned to support the adaptation efforts of individual citizens, as well as to mediate policy and funding processes between local and national levels (Funder *et al.*, 2014).

For the past decade, the world's mega-cities have been a central driver of climate change adaptation, are well organized globally, and have had significant influence on the international climate change agenda. As yet, however, local governments in rural areas are not playing any significant role as representatives of this political and administrative level or as actors in their own right. In part, they are an extremely varied group with regard to the degree of fiscal and human resource devolution they enjoy, as well as the extent to which they are democratically representative and downwardly accountable (Funder *et al.*, 2014).

Decentralization reform has dominated most African countries in the past two decades, and in most countries a range of basic services have been devolved by law to subnational political and administrative units such as local government. Decentralization can take three forms: devolution, deconcentration and delegation. In practice, decentralization reforms typically involve a mixture of all three forms across sectors. In its 'true' or full form, decentralization is devolution, which consists of 'central government's transfer of administrative and financial decision-making authority to local governments that have clear and legally recognized jurisdictions within which they provide public services to constituents they are accountable to' (Yilmaz *et al.*, 2008, p.1). Under the deconcentration form of decentralization, local government staff come under the central parent ministry in respect of their salaries, professional conduct and employment careers, and to the chief administrative officer (CAO) for their day-to-day work. Fiscal resources are also typically controlled by the parent ministry in the case of deconcentration. The delegation model is the weakest form of decentralization, where specific tasks or services are delegated to local governments by seconding staff or implementing projects. In this model, local government serves the role of agent rather than partner.

In theory, devolution creates stronger pressures on government performance by improving both upward and downward accountability. 'Decentralization reshapes power relations among the local residents, local governments, producers of local government services, and higher levels of government (including central government). It sets new rules of the political game, helping new local leaders to emerge in the political competition. It thus redefines the interactions between local leaders and their constituencies' (Yilmaz *et al.*, 2008). Devolution can therefore potentially have a considerable positive impact on improving access to service delivery and on its quality. The underlying explanation for such improvements to services is that decentralization shifts the interactions and contractual relationships between local governments (as the providers and producers of services) on the one hand and communities and non-governmental organizations on the other.

The level of devolution of political, fiscal and human resources varies between sectors. Primary education, primary health care and municipal roads typically make up the bulk of the local government budget. In many African countries, natural resource management and agricultural sector services have also been devolved to local government.

It can, however, be a long road from theory to practice, and the success of decentralization in Africa has been mixed, for example, not necessarily leading to greater accountability or greater access to and quality of services (Yilmaz *et al.*, 2008). The explanations for these mixed results are many, including inadequate human resource capacity and poorly functioning political processes. In part, this mixed result can be understood as an effect of incomplete or skewed decentralization reforms, as when responsibilities are devolved to local government, but without a similar devolution of human resources and/or fiscal resources. Another major problem with some local governments is the poor level of downward accountability to citizens in-between elections.

There are three dimensions to devolution in decentralization reforms that provide local government with a discretionary space: political, administrative and fiscal. In most decentralization reforms, a process of devolution that provides a larger discretionary space for local government is always followed by more upward public accountability mechanisms to safeguard against the misuse and abuse of this local discretion. However, legal and institutionalized reforms that provide downward social accountability mechanisms enabling citizens to have the ability and opportunity to demand accountability are not as frequent. Recent research indicates that downward institutional accountability mechanisms that provide local governments with the means and incentives to respond to citizens' demands result in better accountability and better service delivery (Yilmaz *et al.*, 2008; Friis-Hansen and Kyed, 2009).

Methodology

Most of the authors in this book have taken part in the CCRI programme coordinated by DIIS and supported by the Danish International Development Agency (DANIDA). The CCRI programme took place in the period from 2012 to 2016 in collaboration with partners in Uganda and Zambia. Africa (Uganda and Zambia) as well as Asia (Vietnam and Nepal). With the books focus on Sub Saharan Africa, two additional fieldwork countries were added (Tanzania and Ghana). The book draw empirical evidence from ten rural local governments. These were chosen using the following three criteria: (i) they each represent contexts in which a range of climate-related hazards exist and constitute a significant development concern; (ii) they represent shifting vulnerabilities, with prevailing livelihood systems being undermined by gradual climate change, or situations in which increasingly recurrent extreme climate events are posing significant challenges to rural institutions; and (iii) contrasting institutional settings and themes have been chosen to represent differences in terms of the underlying governance patterns and social orders that may influence institutional responses.

The primary data for this book have been collected through qualitative data collection in the field, face-to-face interviews, mainly semi-structured, and focus-group discussions with key stakeholders. These stakeholders range from high political officials to the local community level, including local government technical staff, district council politicians, opinion formers, staff from non-governmental organizations, civil society and local community organizations, and different categories of rural citizens, both the poor and the better off, men and women, the young, etc. The interviews were supported by frequent field visits that allowed for participant observation and a deeper understanding of climate change effects and the adaptation measures taken in individual countries. In many cases follow-up interviews were conducted to clarify selected issues and explore them further. These follow-up interviews, along with the triangulation of different methods, have ensured the validity of the collected empirical material. In some cases, qualitative interviews were recorded, transcribed and coded using NVivo qualitative data analysis software. Desk-based reviews have been undertaken to complement empirical fieldwork, including comprehensive literature searches on climate change and local government policies, implementation frameworks, and legal acts within the respective countries, as well as on both the regional and international levels.

Outline of the Book

The book comprises 13 chapters divided into four sections. The first section explores the cross-sectorial aspects of climate change governance, with a focus on the disconnect between the central and subnational levels of governance and on how climate change has become a contested policy arena. Section 2 explores three different empirical experiences by engaging with the subnational level of governance and using a central government-governed approach, an international non-governmental organization (NGO)-facilitated approach, and a local government-driven approach. Section 3 takes a political ecology view of climate change adaptation in rural areas and seeks to understand the dynamics of such adaptation where governance structures are weak or absent. Section 4 discusses two

new trends that are under-explored in the climate change literature, namely mobility and regional agricultural trade. Finally a concluding chapter seeks to draw conclusions across the rich empirical material in the case studies.

The first section of the book addresses the governance of climate change adaptation at the global, national and subnational levels, with an emphasis on the last of these. The section examines how the formulation of NCCPs in Africa is influenced by the global climate change narrative and funding opportunities. It further seeks to understand the government mechanisms associated with NCCP and current attempts to operationalize its implementation at the subnational level. The ambiguous understanding of government officials at multiple levels of governance is giving rise to widespread uncertainties over the mandates, roles and responsibilities for implementing climate change action and providing space and fuel for contestations over authority between the national and subnational administrative and political levels.

Chapter 2, *Implementing African National Climate Change Policies* by Esbern Friis-Hansen, aims to identify the drivers behind climate change policies, the intentions connected with their implementation, and the balance between the national and subnational administrative levels with regard to control over finance, decision making and action. International climate change forums such as the UNFCCC have agreed on a joint policy framework for climate change mitigation and adaptation. This chapter first traces the links between the international climate change agenda and the formulation of NCCPs in Africa. It then goes on to examine the governance mechanisms associated with national climate change policies in Africa and their implementation in practice, particularly the role of subnational institutions (Nalau *et al.*, 2015; Vogel and Henstra, 2015; Christoplos *et al.*, 2016). The chapter then analyses rural climate change adaptation using the principle of subsidiarity. It argues that support for climate change action is likely to be ineffective when fiscal resources and decision making are disproportionally located within central administrations that are not ideally placed to deliver an enabling political and technical environment in which rural communities can adapt to climate change hazards, particularly when they lack the human capacity to do so. The chapter ends by assessing the balance between decision making and implementing power as this affects national and subnational government institutions, respectively.

Chapter 3, *Contemplating Climate Change at Local Government: On-the-ground Politics of Adaptation Delivery in Tanzania* by Sarah Ann Lise D'haen and Jonas Østergaard Nielsen, explores how Tanzania's National Climate Change Strategy (CCS) is one of operationalization at the subnational level. The discourses of adaptation are traced across, within and between different departments and tiers of the Tanzanian government at the subnational levels. A particular focus is how tasks and responsibilities in delivering adaptation within local governments are organized.

On the basis of qualitative interviews with civil servants about their discourses on climate change issues, Chapter 3 examines whether particular discourses can be linked to particular actors, their understandings, interests and (struggles for) power or influence, and, if so, which ones. The chapter focuses on the role of local government in national adaptation action plans and shows how local government bureaucrats navigate and contemplate their mandate in the context of the national adaptation agenda. The chapter also reflects critically on these political processes of adaptation at the local government level in Tanzania and relates them to wider trends, processes and implications of adaptation politics in developing countries. The analysis in the chapter seeks to generate a deeper understanding of the social processes and struggles over authority that are taking place as part of the implementation of climate change strategies at the subnational level in Tanzania.

In Chapter 4, *Climate Change Adaptation and the Politics of Decentralization: the Case of Local Governments in Rural Zambia* by Mikkel Funder, Carol Mweemba and Imasiku Nyambe, the focus is on the importance of rural local governments in Africa as important players in implementing climate change adaptation. Although African cities continue to grow at a faster rate than rural areas, a large proportion of Africa's population continues to live and sustain their livelihoods in rural settings, where many are dependent on the use of natural resources and are thus highly vulnerable to climate change hazards. International and national support for climate change adaptation in rural areas has until now been limited

compared with that in urban centres. Most African countries have undergone decentralization reforms implemented over the past two decades, and the administrative and political structures are in place to allow rural local governments to create an enabling environment for adaptation and support to specific activities.

Chapter 4 thus examines the 'real-world context' in which rural local governments in African countries operate in terms of climate adaptation, showing the conditions and constraints they face, and how they respond. The chapter further contributes to our understanding of these issues through a discussion of selected findings from two rural districts in Zambia, drawing on research conducted in 2012–2016 as part of the research programme on Climate Change and Rural Institutions (Christoplos *et al*., 2016). The focus is less on specific capacity and funding issues, and more on the underlying institutional and political dynamics of which rural local governments form a part. In particular, the chapter discusses how the relationship between the central state and local governments and the associated politics of decentralization influence subnational climate change adaptation.

The second section of the book is concerned with the extent to which the climate change agenda is compliant with the decentralization reforms of the past two decades, and in particular how local governments are engaging with implementing climate change adaptation. The section presents three very different empirical scenarios that each represents a particular current trend. The first is the implementation of centrally governed but decentralized projects. It represents one end of the spectrum, with a centralized project implementation unit and implementation through project institutions operating in parallel with local government institutions, thus being least compliant with decentralization reforms. The project model is an old-fashioned, out-dated and much criticized model for development interventions, but at the same time it is representative of the current trend for how the Global Green Fund and other UN and development agencies involve themselves in support for climate change adaptation. The second trend is implementation facilitated by an international NGO using a rights-based approach that simultaneously supports communities in formulating climate change action plans and building the capacity within local government to include these plans with the district development plans and to request funding from central government. The third trend consists of a local government authority politically and administratively addressing climate change adaptation on its own within the local government legal framework and without any financial and human resource support from central government or international donor agencies.

Chapter 5, *White Elephant in a Changing Climate: a Territorial Approach to Climate Change Adaptation in Uganda* by J.J. Okiror, Esbern Friis-Hansen, Bernard Bashaasha and Isaac Nakendo, examines how a UN-financed project implemented by the Ugandan Ministry of Water and Environment engages with local government. The project reflects a common approach among internationally financed projects, namely the *planned climate change adaptation approach* that seeks to draw expertise from science and that uses external consultants to consult the population and formulate the climate change plan of action. The chapter reveals that the project was implemented using parallel structures to those of local government, which assigned local government staff and elected politicians roles as implementing agents rather than as partners. The chapter analyses the effects of such a model in creating a perception of ownership among local government staff and politicians and in ensuring the project's institutional sustainability.

Chapter 6, *Creating Political Space for Climate Change Adaptation in Northern Ghana* by Julie Fogt Rasmussen and Esbern Friis-Hansen, explores how an international NGO (CARE Denmark) and its national sister organization (CARE Ghana) can become significant players in forging downward accountability links between local communities and local government. Through its Adaptation Learning Programme (ALP), implemented in four African countries since 2010, the programme seeks to create new local political spaces where rural people can discuss the climate change hazards they face and agree on possible adaptive action.

Climate change is a problem that spans multiple scales from the local to the global spheres, making it a challenge across scale. The chapter focuses on how the ALP seeks to create spaces for local-level participation in

practice and how it addresses those at whom the participatory approaches are aimed. This chapter aims at revealing the role that NGOs can play in reconfiguring this political space and creating new spaces by showing how participatory approaches are integrated in and received by local communities and local governance in the context of enabling sustainable multi-level and cross-scale governance structures for climate change adaptation.

Chapter 7, *Local Politics of Climate Change Adaptation in Uganda* by Esbern Friis-Hansen and Charles Aben, is concerned with how adaptation to climate change is articulated politically at the subnational level, in particular by local governments. A discussion in 2013 among politicians from nine districts affected by floods in eastern Uganda revealed that climate change was generally not discussed at the district council level and was perceived as a 'lose–lose issue', that is, an issue that does not easily win votes and one with no central government financial resources attached to it. There was one exception, however, among these nine districts: Amuria District, where a politician had been elected as District Council chairman on a climate change adaptation platform. The chapter seeks to understand how it was possible to put climate change on to the political agenda of local government in this case. It goes on to explore how political 'will' after the election, despite a lack of additional fiscal resources, was transformed into the enacting district environmental ordinance and the formulation and implementation of wetlands management plans. The chapter further explores how political will within local government can translate into socially inclusive and institutionally sustainable climate change adaptation. The study concludes that local government political support is important in stimulating the emergence of new local institutions capable of enforcing regulations that restrict harmful natural resource management by the local elite.

The third section focuses on political ecology and climate change adaptation at the subnational level in a context in which the rural population is affected by climate change hazards, but where at the same time state institutions are weak in terms of both human and fiscal resources. Local government frontline bureaucrats are among many actors and not necessarily the strongest. With an emphasis on institutional dynamics, the political ecology of climate change is explored through three chapters based on empirical studies from Teso Region in Uganda. Local formal watershed governance is constrained by inadequate human resources and insufficient national budgetary support under the decentralized local governance framework. However, local groups organized around the use of natural resources exercise power in a variety of arenas and at multiple scales, thereby influencing the implementation of regulations for the protection of natural resources.

Chapter 8, *Political Ecology of Climate Change Management in Rural Uganda* by Charles Aben, discusses the concept of political ecology in climate change management in the context of decentralized natural resource governance in rural Uganda. The presentation of the concept draws a connection between political, economic and social drivers and alterations to traditional access rights, livelihood systems and social relations within the Awoja watershed. The study draws on the views of other scholars on climate change management and brings together an array of views and contexts for the clear understanding of the concept of political ecology.

Chapter 9, *Local Political Processes and the Management of the Awojo Watershed in Eastern Africa* by Charles Aben, Esbern Friis-Hansen, Jacob Godfrey Agea and J.J. Okiror, explores the political character of natural resource management in a changing climate and, in particular, the local political process that influences the management of natural resources in the Awoja watershed in eastern Uganda. Using a cross-sectional survey design that involves both qualitative and quantitative approaches, the study explores the changing relationship between the well-being of rural people living within the watershed, their dependence on natural resources and processes of environmental degradation. The study further questions how the inadequate human resource and national budgetary support for local government staff constrains and influences formal watershed governance at the lowest level of action. The chapter further explores how the weak presence of the state at the community level gives rise to locally autonomous natural resource management

groups and how these groups exercise power at multiple scales with the aim of influencing the implementation of natural resource protection regulations.

Chapter 10, *Competing Interests over Natural Resources and Adaptation to Climate Change: the Case of Rice Cultivation in the Gweri Wetlands* by Charles Aben, Esbern Friis-Hansen, Bernard Bashaasha and J.J. Okiror, analyses the extent to which, and how, the combination of two trends are responsible for the increased tension between different land-use groups that has emerged over the past decade: climate change and the commercialization of rice cultivation. The chapter aims to examine the interactions of different institutions and enterprises and the consequences for climate change adaptation in the Awoja wetland system. By studying the contestation among local groups over ownership of the wetlands, the chapter shows how conflicts over wetlands resources are being exacerbated by fuzzy land property rights and weak local governance institutions. Examining what roles are played by business people, local government bureaucrats and the political and economic elites of local communities shows how elite capture of weak local public wetland management institutions has accelerated the degradation of the Awoja wetland system.

Section 4 explores two new current emerging themes for climate change governance. Common to both themes is that they are important phenomena that interact with climate change. Further, for both internal mobility and trade, the character of the interaction with climate change in Africa is empirically underresearched. Meanwhile the two themes receive very different attention at the international level. Migration is currently one of the hottest issues on the international agenda, although with a strong bias towards cross-border climate migration. In contrast, the relationship between liberalized markets and extreme climate change events such as droughts receives little or no international interest.

Chapter 11, *Social and Institutional Dynamics of Mobility as an Adaptation to Climate Change* by Charles Aben, Esbern Friis-Hansen and Isaac Nakendo, seeks to understand how the relationship between climate change and mobility has evolved during the past two decades, from an understanding of climate change as a direct cause of mobility to a more complex understanding that includes multiple factors that are unrelated to climate change. The chapter examines mobility as an adaptation response to climate change hazards and analyses how climate-induced changes to settlement patterns influence livelihoods, as well as socio-economic and political processes and outcomes. The chapter empirically explores the role of climate change on mobility in the cross-border areas between Teso and Karamoja regions. Specifically, the study seeks to identify and document the causes of mobility and the changing mobility patterns, as well as identifying those who become more mobile. Secondly, the study sets out to document and analyse the consequences of mobility: how new forms of social organization have emerged, how resources are shared between immigrants and locals, the conflicts that have arisen, and how they have been solved. Thirdly, the research seeks to determine to what extent mobility affects the environment and its effects on production and marketing systems. Finally, the research will assess the implications of mobility for service systems, culture and socio-economic benefits.

The final chapter before the conclusion is Chapter 12, *Hoarders as Saviours: the Performance of Regional Grain Traders During and After Extreme Drought* by Godfrey Suubi and Esbern Friis-Hansen. Although in theory the market liberalization of trade in agricultural grains contributes positively to climate change adaptation by lowering the hazards associated with drought, empirical observations in Soroti District during the 2012–2013 drought suggest that the absence of trade regulations increases these hazards. This chapter examines the relationship between trade and climate change, showing how the regulation of trade can be a tool for climate change adaptation. The purpose of this study is to bring to the forefront some critical issues related to food commodity hoarding that are related to extreme climatic change effects requiring the attention of local and meso-level institutions. The chapter focuses on the extent to which climate change hazards associated with drought are exacerbated by the behaviour of the private sector (traders).

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