



**DIVISIONAL AGRICULTURAL
EXTENSION OFFICER**

UNDERSTANDING SUB-NATIONAL CLIMATE GOVERNANCE

Findings from Nepal, Uganda, Vietnam and Zambia

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INTRODUCTION

The importance of sub-national organisations in climate change adaptation

Understanding the sub-national dynamics of climate governance is critical if individual nations and the global community are to move forward in implementing the COP21 agreement and make effective use of associated global climate funds. One important aspect of this is to understand the institutional conditions and dynamics that influence how sub-national organisations respond to climate change. This includes organisations such as local governments and deconcentrated state agencies that operate at the 'meso-level' between the central state and communities, in the administrative spaces encompassing districts, municipalities and provinces.

From a strategic point of view, such meso-level organisations are by no means insignificant, and ideally they can play a strong role in supporting households in climate adaptation: They are often responsible for implementing national climate change policies and interventions in practice, while at the same time being accountable to the local population. At the same time, their decisions about how to interpret and implement climate policies in practice have direct and often substantial impacts on livelihoods and the risks faced by climate-vulnerable people. Meso-level organisations inhabit an often opaque 'twilight' area between the central state and the community (Lund 2006), where mandates and everyday actions are often open to interpretation and where public authority and 'reach' are sometimes fragmented, ambiguous and contested.

Understanding the role and agency of meso-level organisations therefore cannot merely be surmised from a quick review of organizational charts, but requires more in-depth study. However, while there is a rapidly growing attention to the role of urban local governments in climate change action, very few studies have examined how meso-level organisations in rural areas respond to climate change.

The scope of this report

The Climate Change and Rural Institutions (CCRI) research programme has sought to address this knowledge gap by examining how local governments, agricultural advisory services, natural resource-management agencies and farmers' organisations are responding to climate change in rural areas of Africa and Asia. The programme represents a five-year multi-partner research effort that commenced in 2012 and is now working in Nepal, Vietnam, Uganda and Zambia. It is funded by the Danish Research Council for Development Research, with additional support from the CGIAR initiative on Climate Change, Agriculture and Food Security (CCAFS).

As part of its work, CCRI has conducted workshops and produced reports and policy briefs aimed at national and meso-level stakeholders in the individual participating countries, and is also in the process of producing a series of joint academic articles. The current report presents a selection of more cross-cutting findings from the four countries involved in a research report format. In doing so, it focuses on four key themes that have emerged in our research:

- how the global climate change agenda is downscaled and reproduced in national and sub-national processes
- the disconnects and ambiguities that characterise the relationship between national climate change policies and meso-level practices
- the role of climate change in social contracts and state legitimacy, with particular attention to disaster risks
- the frequency with which adaptation to climate change is emerging as an arena for struggles over authority and resources

This report provides a discussion of our findings on these themes in the four countries examined here. The thematic analysis is not exhaustive, but aims at providing an overview of four topics that have been insufficiently explored in social-science research on climate change. The research in all four countries has involved the following main steps:

- Analysis of the political, economic and institutional contexts of adaptation to climate change nationally
- Institutional mapping of key institutions, actors and issues at the meso-level in each study site
- Case studies of particular climate change events
- 1-2 PhD projects in each country, exploring a particular topic in-depth (table 1)
- National analysis in each country
- Cross-cutting analysis of the involved countries

The case studies have provided a means of exploring and tracking the institutional dynamics related to particular climate change events over time, including the short- and long-term institutional responses and the interplay of meso-level actors with other actors, such as communities, civil-society organisations, donors and the central government. The case studies explored both extreme climatic events such as typhoons, floods and landslides, and more gradual change due to shifting patterns in rainfall and temperature or other biotic factors such as salinity.

The purpose of this report is to provide a comparative analysis across the four country contexts examining what is similar and different between the specific country findings and what broader lessons might be learnt.

BOX 1. THE COP21 AGREEMENT AND THE CRITICAL ROLE OF NATIONAL AND SUB-NATIONAL AGENCY

The COP21 agreement in Paris in December 2015 established a new framework for global climate governance, which to a large extent rests on the actions of the individual member states and sub-national actors.

Seeking to overcome the failures of past COPs, the Paris agreement is based on a largely voluntary 'bottom-up' approach and is essentially built around national pledges set out in the Intended Nationally Determined Contributions (INDCs). The INDCs, which include both mitigation and adaptation measures, are not binding in themselves, but are subject to regular reviews and transparency measures, as well as a so-called global ratchet mechanism, whereby countries meet at intervals to scale up their individual and collective ambitions towards the longer-term goals of the agreement. This approach, which would ideally work as a form of 'progressive incrementalism' (Levin et al. 2007), places considerable emphasis on and trust in individual countries to act on climate change in ways they themselves judge to be important.

The COP 21 agreement furthermore emphasizes that central governments cannot and should not be the only movers on climate change. A range of other actors, including cities, local governments, civil society and the private sector, are key to making both mitigation and adaptation happen in terms of actual implementation, maintaining the pressure on national governments to meet their pledges in the INDCs and addressing climate change generally.

The Paris agreement also affirmed the long-promised financing to developing countries, set at USD 100 billion annually by 2020. Uncertainties remain, and there are disagreements over the actual amount that has been allocated so far. Nevertheless, in late 2015 the Green Climate Fund commenced operations and – along with a replenishment of other global climate funds at COP21 – further emphasised the need to turn attention now towards implementation and the issue of how these funds will be accessed and utilised in practice. In this respect also, the role of sub-national actors has increasingly come to the fore.

The experience of climate change and disaster risk

A major finding that emerges from all the country case studies is that both extreme climate change events and gradual climate change effects are generating major risks and uncertainties for rural populations, who bear the brunt of climate change and are in the weakest position to address it. Climate change vulnerabilities, however, do not just fall from the sky (Ribot, 2014): household vulnerabilities to climate

change have to be seen within the wider context of vulnerability, including why these households are vulnerable in the first place. This relates to the social and political determinants of why poor people are at risk. Our research has found that the interplay of climate change and disaster risks is central to how climate change is perceived and responded to by meso-level organisations and their constituencies.

In bureaucracies, and even in much of the academic discourse, disaster risk reduction and disaster risk management have for some years been treated as a somewhat ill-fitting sub-division of the emerging climate change architecture. Despite over a decade of calls to integrate these two domains (Field et al. 2012), they remain uneasy bedfellows (Bikman and Pardoe 2014). The humanitarian imperative of responding to disasters today has been accepted as a necessity, but it is often portrayed as a mere palliative and an obstacle to the ‘transformations’ that are called for in much of the climate discourse. The threat of climate change is portrayed as demanding a departure from ‘business as usual’, and the humanitarian system and politicians’ concerns about immediate crises are portrayed as reinforcing the path dependencies of business as usual.

Despite broad acknowledgement of the importance of finding synergies between climate change and disaster risk reduction efforts, overlapping but separate bureaucratic organisational structures and policy frameworks prevail. The disaster risk reduction agenda has been under the mandate of the UN Office for Disaster Risk Reduction (UNISDR) and two international declarations – the Hyogo Framework for Action (2005-2015) and the more recent Sendai Framework for Disaster Risk Reduction (2015-2030) – which have sought to address disaster risk reduction and develop capacities and resilience to disasters. As described in Box 1 above, a separate UN Framework for Climate Change was agreed in Paris in December, building on earlier meetings and agreements.

The empirical evidence suggests that the separation between natural hazards, extreme climate change events, adaptation demands and their consequences in international conventions are out of sync with with national and meso-level incentives and capacities for action, as well as structures for actual response. Governments tend to perceive climate change as a new and only somewhat modified dimension of their past roles in responding to disasters (Christoplos et al. 2016, forthcoming). Norms anchored in this historical experience drive responses to disasters and shape adaptation priorities. Disasters such as the earthquake that hit Nepal in April 2015 or extreme events such as the typhoons in Vietnam may be critical junctures in stimulating government action and response, including deeper

and durable changes in behaviour in relation to wider risks associated with climate change, but these changes in the game emerge out of long-standing trajectories. The long-standing 'business as usual' of responding to disasters is thus a fact on the ground on which national, meso- and local-level actors base their understanding of the scope, priorities and necessities of responding to climate change.

The country context matters

The four countries where this research was carried out differ in terms of their commitments and capacities to address the well-being of their citizens, their competence to do so, and the extent of their legitimacy and accountability. Vietnam could be seen as the most competent of the states, with a relatively strong social agenda and a level of accountability for ensuring the physical security of its citizens. In contrast, Nepal's state has been historically weak, subject in recent years to major conflicts and characterised by an elite politics with a very limited social agenda, with major patterns of social exclusion as a consequence. Zambia and Uganda lie somewhere in between these two extremes, with forms of durable patrimonial politics that provide some degree of accountability, but that also reinforce patterns of social exclusion. In sum the four countries behave in different ways.

They also face different types and levels of risk in relation to climate change. Vietnam, with its extensive seaboard, low-lying coastal areas and exposure to extreme climate events such as typhoons, has a long history of catastrophic floods and storms. Its intensive agricultural systems, which are reliant on complex systems of hydraulic control, have historically been exposed to risks that are being multiplied due to climate change and demographic shifts. The need to protect the population and their production from floods and storms have been foundational in the forging of relations and expectations between its inhabitants and the state.

Nepal, as a mountainous and landlocked country in the Himalayas, has had less of a history of large-scale extreme climate change events. However, global warming has been seen to pose particular, as yet unrealised threats of glacial lake outburst floods (GLOFs). Furthermore there has been a long history of floods in the plains and landslides in the hills and mountains. However, it is the changing temperature and rainfall regimes that are seen as having particular consequences for agriculture, and these may be of longer term significance.

Climate change effects in relation to rainfall patterns are likely also to be of particular significance in both Zambia and Uganda, and drought is also increasingly being experienced. During the period of our research, it has been the experience of river floods that have been of most significance recently and which is becoming part of the changing political arena.

It could be argued that the climate agenda is most pressing or evident in Vietnam, given the climate change risks that it faces. However, the significance of the climate change agenda has to be seen in relation to other demographic risks and pressing policy priorities related to high expectations of state-led economic development. In Nepal climate change has to compete for policy space with more fundamental issues related to state legitimacy and constitutional arrangements. In Zambia it has become a resource to be deployed in the context of overt political processes. In Uganda concerns appear to be greater at the local level rather than nationally.

Thus country context is a significant variable in accounting for the ways in which the climate change agenda is played out, the processes of policy formulation and the funding regimes to support climate change agendas at the national and sub-national levels.

Climate change policies, funding and decentralisation processes

Each of the four countries has developed policies and mobilised funding to address climate change, but consistent with the variable nature of the state, these have been done in different ways reflecting distinctive policy processes and national agendas. In the cases of Nepal, Uganda and Zambia, international funders and players on the climate change agenda have been active and influential. National Adaptation Plans for Action (NAPA), a planning process driven by UNDP, have been developed in Nepal, Uganda and Zambia. External funding has created funding processes for climate change actions which run separate from government in Nepal, and this has also happened to some extent in Zambia. In contrast, despite considerable international support, in Vietnam the government has been strongly in control of its climate change agenda, although expectant of external resource flows to help fund activities.

The ways in which climate change agendas and practices play out in their translation to the sub-national level are intimately connected and influenced by the existing politics of decentralisation and forms of accountability. These are country-specific. In the case of Vietnam decentralisation is significant, but contested,

uneven and opaque. Nepal remains highly centralised in some respects, but with certain democratic practices in place, district-level politics in the absence of any form of representation remains opaque and rent-seeking. In Zambia and Uganda (see Chapter 4) climate change adaptation has become another resource in broader struggles over authority between centre and district. Even in Vietnam there may be subtle forms of resistance to the central state's actions.

Climate change actions

Yet what governments do, particularly in response to extreme events, appears to be heavily influenced by their historical repertoires of response. In the case of Vietnam, engineering (dykes and dams) and resettlement have been the stock policy responses of the past and remain so in the present. Resettlement in Zambia and Uganda has been widely used in the past, but is in some respects being reinvented as a key tactical political response to the effects of major recent flooding. In Nepal there has long been a tendency for the state to treat floods and landslides as acts of God that require tokenistic relief and nothing more. That has remained the practice. While in the past major landslides in the hills led to the resettlement of affected people to the plains, those possibilities no longer exist. Furthermore in Nepal, where international and national NGOs have long been the major vehicle for intervention at the sub-national level, their old repertoires of village-level planning exercises and a standard stock of aid interventions (from fish ponds to vegetable cultivation) have been recast to meet new climate change needs.

IS THE GLOBAL MEETING THE LOCAL?

Downscaling global climate change frameworks into national and sub-national processes

This chapter summarises the findings from the CCRI research on the ways in which global climate change policy and science are being downscaled into national policy frameworks and what the consequences of this are. The term ‘policy’ is seen to include the notion of policy process (McConnell, 2010) and the politics and debates in both policy-making and its implementation. Central to the examination of policy-making is exploring how climate change policy is framed, how adaptation policy is constructed and who is represented in those debates. Developing countries face challenges in assessing the implications of global science for their own national political dynamics and the task of downscaled global frameworks into ongoing sub-national processes. Within national processes, climate change policies and the funding associated with them can also become a resource to be contested and negotiated.

Architectures past and present

Apart from the broader Millennium Development Goals and their recent successors, the Sustainable Development Goals (SDGs), climate change policy-making has arguably been the most dominant policy concern on the international development agenda in recent decades, in many respects supplanting the Poverty Reduction Strategy Process (PRSP) of the 1990s. As with the PRSPs, which closely tied funding resources – or at least significant debt relief – to a global masterplan of how poverty could be reduced by technocratic means, for many developing countries climate change policy-making at the national level has been closely tied to accessing global funding to support national-level climate change actions dominated by technical solutions.

In multilateral terms, global climate change frameworks have so far had two distinct dimensions. The first has been the United Nations Framework Convention for Climate Change (UNFCCC) and its associated Conference of Parties (COP), which have been meeting since 1992 trying to reach agreements among member states on global actions to address climate change. The scientific knowledge and narratives of the UNFCCC have, in principle at least, rested on the work of the Intergovernmental Panel on Climate Change (IPCC), which was established in 1988 and since then has been issuing a series of reports on the science of climate change and estimates of its dimensions.

The second dimension has been the establishment of global funding mechanisms which countries can draw on to undertake relevant climate change response activities. These have taken on various forms, some nestled within the UN framework, such as the Green Climate Fund, the Adaptation Fund and the Least Developed Countries Fund, while others have been anchored in other multilateral frameworks, such as the World Bank.

Access to such funding, as with access to debt relief, has often explicitly or implicitly required the enactment of specific national-policy requirements to meet the eligibility criteria for funding. For example, access to funding from the Least Developed Countries Fund has been tied to the preparation of NAPAs. The NAPAs, sponsored under the UNFCCC, were seen as providing a process for Least Developed Countries (LDCs) to identify and develop project proposals to address what were characterised as immediate and urgent climate change adaptation needs and vulnerabilities. These then provided a basis for soliciting funding from international and bilateral funds. To date, fifty such NAPAs have been prepared, three of them (as noted above) for our study countries: Nepal, Uganda and Zambia.¹ A second example has been the national Pilot Programmes for Climate Resilience (PPCRs), which aim to help developing countries prepare climate change response strategies and integrate climate resilience into development planning by offering additional funding to pilot new public and private-sector solutions to pressing climate-related risks.² Nepal and Zambia have already received funding from this source for several years, and a PPCR is under development in Uganda.

The close linkage between global climate-funding mechanisms and national climate plans and strategies in developing countries provides a vehicle for global mechanisms and actors to influence national climate plans. So far, developing country governments have to a large extent accepted this. However, it would be a mistake to

see the governments of developing countries as mere puppets of international climate financing, as will be discussed below. Moreover, national contexts vary, not only in the nature and severity of the climate change risks, but also in terms of the positioning of climate change as a policy issue within broader national policy priorities. These include, among others, on-going debates and contested processes surrounding decentralisation.

Global meets national: global climate policies and national disaster risk reduction agendas

Distinctions and overlaps between disaster risk reduction (and related frameworks) and actions for dealing with processes of climate change adaptation have been subject to considerable analysis (Schipper 2009; Birkman and Pardoe 2014). An implicit tendency within the international climate change community is to characterise disaster risk reduction as largely a component of the larger climate change agenda. Although there is a recognition that the fields of disaster risk reduction and climate change do not entirely overlap (not least with regard to financial flows), the latter is largely framed by experience with the former.

By contrast, our research shows that there is a clear lineage and connection to be made wherein addressing disasters is central to conceptualising and responding to climate change, i.e., climate change adaptation is seen as part of broader efforts to manage disaster risk. All four countries have histories of disasters caused by floods, extreme storms, landslides or drought. Accordingly, they developed disaster management policies and actions prior to the emergence of a strong climate change policy agenda. As such, pre-existing policy narratives have framed how climate change is perceived and addressed.

The strongest example of this is Vietnam, which has had a history of severe flood and storm damage. Linked to the need of a 'hydraulic' state to maintain water management structures for rice production, this history has been foundational in contributing to the strong role of the state in responding to such disasters (Christoplos et al. 2016, forthcoming). A Central Committee for Flood and Storm Control (CCFSC), for example, has long been established (Ngoan et al. 2013). Both Zambia and Uganda have historical experience of extreme floods and droughts (see Funder et al. 2013; Friis-Hansen et al. 2013). These have not only laid the foundations of disaster risk management frameworks and policies, they have also increasingly been seen as linked to climate change. Nepal has a history of disasters, including major earthquakes (in 1934, 1988 and 2015), as well as recurring landslides and floods, so fears of disaster have long been present in the public psyche. However,

disasters have long been popularly understood as ‘daivi prakop’³ –divinely caused disasters, reflecting a cultural disposition that downplays the significance of human agency in causing and responding to disasters. A National Disaster Relief Act was passed in 1982, but it was limited to the provision of relief, with no aspects of risk reduction or effective response in place (as found in the Nepal landslide studies; see Pain et al. 2016) and as the April 2015 earthquake revealed.

A clear distinction can be made between Vietnam and the other three CCRI study countries in their development of policies and actions in relation to climate change (see Table 1). In Vietnam the government has led in developing its own policies in responding to climate change, drawing on its history of dealing with natural hazards and a strong social contract with its citizens that requires the state to provide basic security at times of crises (Ngoan et al. 2013; Christoplos et al. 2016, forthcoming). Accordingly, its national and especially its provincial climate change policies and action plans primarily emphasise responding to the increasing risks of extreme climate change-related events. Climate change adaptation needs related to the rapidly commercialising agrarian economy are also considerable, but compared with responses to extreme events this remain a grey area. Vietnam is likely to be one of the countries most affected by rising sea levels and changes in rainfall, and in 2010 it was the single largest recipient of international climate change adaptation funding (Ngoan et al, 2013). Nevertheless this level of funding only amounted to some 0.1 percent of GDP, reflecting in part Vietnam’s position as an emerging middle-income country.

Table 1. Key climate change policy statements of Nepal, Vietnam, Uganda and Zambia

COUNTRY	YEAR	POLICY	NOTES
Nepal	2009	Kalapathar Declaration	Prior to COP15
	2010	National Adaptation Programme of Action (NAPA)	UN-led
	2011	National Policy for Climate Change	Linked to Kyoto
	2016	Intended Nationally Determined Contributions (INDC)	Submitted to UNFCCC (Feb. 2016)

COUNTRY	YEAR	POLICY	NOTES
Vietnam	2008	National Target Program to Respond to Climate Change (NTPRCC)	Ministry of Natural Resources and Environment (MONRE)
	2008	Action Plan Framework for Adaptation and Mitigation of Climate Change of the Agriculture and Rural Development Sector	Ministry of Agriculture and Rural Development (MARD)
	2009	Scenarios for Climate Change and Sea Level Rises	MONRE
	2010	Action Plan to Respond to Climate Change for the period 2011-2015	MONRE
	2011	National Strategy on Climate Change (NSCC)	Led by MONRE, but now being decentralised through Provincial Climate Action Plans
	2012	National Action Plan on Climate Change for the period 2012-2020	Led by MONRE, but now being decentralised through Provincial Climate Action Plans
	2015	Intended Nationally Determined Contributions (INDC)	Submitted to UNFCCC (Sep. 2015)
	Uganda	2010	National Policy for Disaster Preparedness and Management
2007		National Adaptation Programme of Action (NAPA)	UN-led
2012		Draft Climate Change Policy	
2015		Intended Nationally Determined Contributions (INDC)	Submitted to UNFCCC (Oct. 2015)
Zambia	2005	Disaster Management Policy (Revised 2015)	UNDP/World Bank-supported
	2007	National Adaptation Programme of Action (NAPA)	UNDP/GEF-supported
	2013	Draft National Climate Change Response Strategy (NCCRS)	World Bank/PRSP supported
	2015	Intended Nationally Determined Contributions (INDC)	Submitted to UNFCCC (Oct. 2015). UNDP/UNEP/USAID-supported.

In contrast, in the other three CCRI study countries, while there have been histories of varying levels of state response in relation to disasters, the UN-led NAPA process was the first visible step in the development of any form of national climate change-relevant policies. This has to be seen in the light of the more general influence of donors on national policy-making through foreign aid.

In Zambia UNDP and the World Bank in particular have played a key role in supporting the development of climate change and disaster management policies through funding and technical assistance. Indeed, all major developments in the institutional and policy framework around climate change since 1992 have been funded and significantly influenced by donors (Funder et al 2013). For example, the UN supported the development of the NAPA which identified priority sectors for action, but this appears to have been something of a stand-alone exercise which has not contributed to individual sector plans (Funder et al. 2013). The influence of donors on the policy process and institutional framework is evident from the example of Zambia's PPCR programme (Box 2). Levels of funding for climate change actions are difficult to estimate, but according to one source (GRZ/SPCR) some USD 700 million is expected to have been pledged for climate financing in Zambia by 2019.

BOX 2. THE INFLUENCE OF THE WORLD BANK ON THE DEVELOPMENT OF THE NCCRS IN ZAMBIA

Zambia's Pilot Programme for Climate Resilience (PPCR) is funded through the Climate Investment Funds and managed through the World Bank. The programme has played a key role in shaping the developing national framework for government action on climate change. For example, although the formal focal point for climate change has rested with the ministry responsible for the environment (in its various guises) since 1992, the PPCR has actively sought to shift the emphasis towards the ministry responsible for planning and finance and to create a cross-cutting National Climate Change Council. This has been justified on the basis that authority and impetus in climate action must rest with a ministry that has the power to plan and allocate budgets, as well as sufficient authority to mainstream and coordinate across sectors. Although the ministry responsible for the environment retains the formal role as the UNFCCC focal point, it has resisted what it saw as an undermining of its authority. However, the PPCR programme has persisted and at the time of writing appears to have succeeded. The programme has also played a pivotal role in developing the national climate change strategy.

Source: Adapted from Funder et al. 2013: 18-20

In Uganda, donor assistance has accounted for a large but declining share of the country's budget. As a percentage of the total budget it declined from 52.3% in the Ugandan fiscal year 2003/4 to 30.4% in fiscal year 2008/09 and is now less than 20%. As with Zambia, international agencies have played a major role in the development of policies in relation to both disaster risk reduction and climate change. With UN support Uganda developed a NAPA in 2007, which was seen to be an externally driven policy process designed largely to attract funds from the LDCF (Least Developed Country Fund) under the Global Environmental Facility. Donors also played a major role, both financially and through the provision of technical support, in the development of a Climate Change Policy in the Climate Change Policy Unit (CCU) in the Ministry of Water and Environment (MoWE) (Friis-Hansen et al. 2013).

Of the four CCRI country case studies, Nepal is possibly the one in which donor influence is the greatest, and it stands in stark contrast to the developmental state of Vietnam. The Nepalese state has long lost its legitimacy, has a poor record of service delivery and has been subject to major conflicts which show no signs of being resolved. It has been captured by a political elite that persists through patronage mechanisms, and that appears neither interested in nor capable of addressing the deep structural inequalities in the country. A failing rural economy has driven a significant external migration of labour to the Middle and Far East, thereby supporting a significant remittance economy that contributes somewhere between 25% and 30% of GDP (World Bank, 2010). In 2010 donor funding contributed about 80% of capital expenditure and 28% of the overall budget (World Bank, 2010), indicating the major influence that donors play within the country.

The example of the development of the NAPA in Nepal strongly illustrates the influence that donors have had in Nepal in climate change policy-making (see Box 1.2). Although there were claims by both the donors and government officials that this was a participatory process with wide consultation, most observers of the process saw this more as a top-down process where consultation was essentially a ritual in which the agenda had already been set (Ojha et al. 2015).

This can be clearly seen from the way in which the concept of climate change vulnerability was deployed. A reading of the NAPA shows that what characterised the discussion, analyses and proposed responses to climate change was a view of vulnerability that firmly framed it as 'outcome vulnerability' (O'Brien et al. 2007). Thus, vulnerability was seen as a property of locations or districts in relation to what were identified as the main climate hazards. In Nepal the possibility of GLOFs and landslides featured prominently in the weighting and ranking procedures for district

vulnerability to climate change, which led to the identification of nine districts as highly vulnerable to climate change, although the April 25th 2015 earthquake notably failed to cause a single GLOF.⁴

These nine districts included two of the CCRI study districts, Dolokha and Lamjung. Field evidence shows that the communities that were visited disregarded the risk of GLOFs and were much more concerned with landslides. Moreover field studies showed that being vulnerable to landslides was more an outcome of poverty, livelihood insecurity and patterns of systematic exclusion (Pain et al. 2016) – what has been termed ‘contextual vulnerability’ (O’Brien et al. 2007) – in which social processes underlie specific vulnerabilities to risk. Thus not only did donor-driven processes drive the policy-making exercise, but knowledge frameworks, derived from a specific technocratic climate science, framed the understanding of the problems and determined the appropriate responses. This not only excluded those affected by climate change effects from the debate but ignored other determinants of vulnerability.

BOX 3. THE DEVELOPMENT OF THE NAPA IN NEPAL

The process of NAPA development was steered by international agencies from the beginning. A lack of agreement between the Global Environmental Facility (GEF) as the donor, the UNDP (acting as facilitator) and Nepal’s Ministry of Environment (the implementer) on funding and consultancy services caused delays. The NAPA document was drafted by a team of consultants hired by the project working to an advisory board composed of government officials, donors and one academic and civil-society representative. No social scientists, activists or politicians were involved, nor any representatives from the districts. Consultations were held, mostly in Kathmandu, and although the document was finalised and validated through somewhat scripted consultation meetings, given that the entire process was conducted in English it effectively excluded many Nepalese.

Adapted from Ojha et al. 2015: 7-11.

This account of NAPA development also raises the question of the government's ability to implement and manage climate change risk programmes. This was a key focus of the SPCR (Climate Investment Funds, 2011) assessment in Nepal undertaken by a joint mission of ADB and the World Bank in February 2011. The funding itself proved controversial since the costs of USD 110 million for the SPCR have been divided between a concessional loan and a grant (60 million loan and 50 million grant). The assessment pointed to 'considerable limitations in climate change risk management capacity at the systematic, institutional and individual levels, at the national, sectoral, district and local level, and within the public sector and civil society' (CIF, 2011:33).

The example of the development of the NAPA in Nepal illustrates the way in which global climate change policy engages with national contexts and how a technocratic framing of climate change vulnerability is asserted in national contexts. However, even in Vietnam, where donor influence is considerably less, there has been a strong tendency to focus on technical and infrastructural responses to climate change impacts, in part reflecting a past history of infrastructural response to natural hazards and risk.

Climate change agendas in national and sub-national processes

Two main issues arise with respect to how global climate change agendas become intertwined with national processes. The first is the positioning and significance of the climate change agenda in national policy processes, and the second is the way in which climate change policy engages with ongoing processes of decentralisation. In Vietnam there is no doubt, given the nature of the social contract, that addressing climate change is of enormous significance to the government. In relation to flood and storm control, historical experience of these events has led to the development of specific policies, regulations and clear accountabilities. The occurrence of extreme events such as the 1999 flood in Thua Thien Hue Province (see Box 4) have provided reminders of these responsibilities, and the lessons to be drawn at both the national and provincial levels are taken seriously.

BOX 4. 1999 FLOOD IN THUA THIEN HUE PROVINCE, VIET NAM

During the period of 2nd to 11th November 1999, an extreme flood affected Thua Thien Hue Province. Floods of this magnitude are referred to in Vietnam as 'historical floods'. Flooding was severe throughout the coastal areas, including Hue City. In excess of 1,000 mm of precipitation per day was recorded for some days. This raised the water levels of major rivers in the central region to unprecedented heights. Perfume River flood levels reached nearly 6 metres above average – about 0.46 metres higher than the water level in the last historical flood in 1953. At almost 1.4 metres, rainfall in Hue City on November 2 was the second heaviest recorded rainfall in the world. In this historical flood 352 people died, over 25,000 houses collapsed or were washed away, as well as over one thousand schools.

All CCRI research informants described this flood as being an event that led to major changes in both attitudes and institutional systems. It revealed to all levels of government that existing state institutions responsible for flood and storm control had deteriorated and were in urgent need of renewal and strengthening. It was clear that this event, together with the massive floods in the Mekong Delta in 1999 and 2000, stimulated the central government to mandate the creation of many of the strengthened disaster response systems that exist in Vietnam today.

Source: Ngoan et al. 2013: 11.

However, the significance of climate change adaptation policies in Vietnam also have to be understood in the light of the shifting but still important food-security agenda. The foundational experience at the unification of the country in 1975 was acute food insecurity, and ensuring food security has remained a state preoccupation. Liberalisation reforms from the 1980s onwards have gradually opened up processes of crop diversification and commercialisation of the rural economy.

Linked to this, although formally mandated processes of decentralisation are in place, their implementation is moving in 'fits and starts' (Westcott 2003: 24). On the one hand the state seeks to maintain central authority, but on the other hand provinces retain an important planning and implementing role, and even lower levels recognise that new policies provide far greater local autonomy (Ngoan 2013: 16). Thus provinces still have targets for rice production enforced through directives and control over many aspects of the irrigated production systems. But provincial officials are learning to accept actual practices by farmers that are not consistent with rice production targets. A case in point is where rice farmers have moved into ratoon cropping of rice, which breaks the production maximisation oriented rules,

but makes sense for managing uncertain rains (Christoplos et al., forthcoming). While local authorities recognise that climate change adaptation practices tend to be context- and time-specific, these do not fit well with the central planning regime that has characterised Vietnam.

In line with broader decentralisation processes, the development of provincial-level Action Plan Frameworks for Adaptation and Mitigation of Climate Change (or Climate Action Plans or CAPs for short) is shifting planning authority to the provinces. However, there are clear differences between provinces in terms of the competencies and resources they can draw on. Thus in the words of one observer:

The first round of provincial Climate Action Plans in Vietnam are consistently weak in relationship to implementing recommendations. This is a crucial problem because the purpose of the CAP is not to report to MoNRE, it is to clarify and support local government action. The CAP is not an objective in itself; it is merely a tool to support the local government to implement economic and social development effectively in the face of climate uncertainty. But it is apparent from our comparative study that there is currently no significant connection between the CAP and local government development planning. (Nam et al. 2014: 37)

Paradoxically, despite the evident contrast between state capacities in Vietnam and Nepal, even though they are both centralised states, a similar mode of technocratic planning in relation to climate change is in operation within Nepalese districts. It is equally divorced from local government and the risks of either extreme climate change events or adaptation needs (Paudel et al. 2013). However, the reasons for this and the nature of the parties involved are entirely different from Vietnam. In contrast to Vietnam, and as noted above, the climate change agenda is not a particularly pressing policy concern in Kathmandu (Ojha et al. 2015). Rather, constitutional matters and deep political conflicts have set the scene for the last decade.

At the time of writing, Nepal is involved in a stand-off with political parties in the Terai or plains bordering India that at times has become violent. These parties are protesting against a new federalised constitution which was passed in September 20th 2015 and which they see as discriminatory. As a result, Nepal has been under an undeclared blockade from India. The constitution was passed in a brief moment of activity that stands out from the political lethargy and stalemate that has dogged constitutional talks since 2007. This movement was in part activated by the fallout

from the April 2015 earthquake, which caused over 9,000 deaths and major destruction and which found the state unprepared and unresponsive. Shortages of fuel and other imports due to the blockade have not brought Kathmandu to a halt, but the economy has slowed. In food-insecure districts of western Nepal there are already signs emerging of acute food insecurity, and relief and recovery operations from the effects of the earthquake have been slowed.

The inter-relationship between the political impasse and a decentralised climate change agenda can be seen in a number of ways. First, with the restoration of multiparty democracy in 1990 and the passing of a Local Self Government Act (LSGA) in 1999, there is formally a three-tier system of political representation in Nepal, with the center, District Development Committees (DDCs) and Village Development Committees (VDCs). However, since 1999 there have been no further elections to the local bodies (DDCs, or VDCs), and their terms of office expired in 2002. Out of the representational vacuum an all-party mechanism (APM) arose that was first formalised in 2008 but then dissolved in 2012, as evidence of corruption and abuse of authority emerged. Nevertheless, as CCRI Nepal research has found, confirming what has been widely reported, APMs are still informally in place, and major political parties in the districts have significant influence on district-level decision-making in development planning and resource allocations. The empirical evidence suggests that the APMs operate without accountability and serve to ensure that resources are distributed to maintain rural support for the parties and extract rents in relation to contracts, particularly around rural road construction. The effect is a paralysis of district government development activities.

Secondly, once the NAPA had been developed, a need was recognised to develop Local Adaptation Plans of Action (LAPAs). This led to the elaboration of a national framework so that LAPAs could translate NAPA priorities down to the district level. It was intended that these would be anchored in local government (Ojha et al. 2015) but this has not happened. Districts remain without resources even to begin to address adaptation needs, let alone more effective responses to extreme events such as landslides.

Thirdly, bilaterally funded climate change adaptation projects have been implemented largely in parallel with district government structures and often involving the creation of Community Adaptation Plans, which are project-devised planning frameworks that lie entirely outside of any government framework. Although these projects have also taken steps to develop LAPAs, an analysis of these LAPAs (Khatri et al. 2015) shows that the content tends to be formulaic and often identical from

case to case (presumably copy-and-pasted), and they remain largely unfunded. There is a strong tendency to use existing structures of community organisation, notably the community forest-user groups, in a highly instrumental way to make plans that justify pre-conceived project interventions. In turn these project interventions draw on an existing repertoire of actions from NGOs and INGOs that are repackaged to claim relevance for addressing climate vulnerability

BOX 5. IMPLEMENTATION OF DONOR-FUNDED PROJECTS IN THE THREE DISTRICTS OF NEPAL

Assessment of climate change relevance in three donor-funded projects from three districts in Nepal showed that the donor organisations or implementing agencies (primarily the INGOs) have heavily influenced the design of the projects and that government involvement in project design processes has generally been limited. The projects, particularly those driven by donor-led processes (i.e. in Lamjung and Dolakha Districts), have been implemented through parallel structures to the government that has had limited authority over them. Irrespective of the design process, the three cases clearly demonstrate that the projects' framing of climate change adaptation needs and interventions is primarily driven by donors or implementing agencies. The development of local adaptation or disaster risk management plans, which are a key intervention, are primarily driven by technocratic processes and externally driven templates and standards with limited understanding of local climate-related risks and institutional capacity. Moreover, the community organizations are mobilized in instrumental ways to fulfill the project achievements.

Source: Khatri et al. 2015.

In Uganda, processes to develop sub-national government capacities and roles have been in place since 1993, when the Decentralisation Act was passed (Friis-Hansen et al. 2013: 18). By 2009 all of Uganda's eighty districts had approved three-year development plans. However, against this move to decentralise there has also been an impulse to recentralise, associated with the personalised rule of the president. This, in the view of one observer (Jones 2008), has contributed to the retreat of the Ugandan state, leading to severe doubts about the impacts of government reforms and those of western development agencies. Indeed Jones argues that it is at the local level, the village and above, that one must look to find the most significant sites of innovation and social transformation. In the case of the climate change agenda, NAPA development in particular clearly did not engage with the Decentralisation Act or take account of existing local government structures. Furthermore, central government funding for climate change adaptation has not

featured in District Development Plans, such activities essentially being top-down and implemented in parallel to district programmes. Despite the very different nature of their states, there are parallels between Nepal and Uganda in terms of the influence of donors on climate change policy-making, and the limits of government actions to adaptation needs and disaster risk management.

The climate change debate and policy-making in Zambia has also seen a major engagement by donors, but it would clearly be mistaken (Funder et al. 2013) to see climate change interests as entirely externally imposed. The Zambian state is a hybrid system in which neo-patrimonial dimensions, clientalism, a semi-functioning legal system and relatively free elections co-exist.

The emergence of this hybrid system has a historical dimension. After independence a strong central developmental state emerged with a relative monopoly of power down to the local level. In the multi-party elections of 1991 a new political order emerged and, combined with structural reform, the state retreated, market-led development emerged and a more contentious politics arose. The result has been a more complicated and fragmented political landscape (Funder et al. 2015). Thus, although there has been a formal decentralisation policy in place since 2002, with elected district councils and sub-district structures, fiscal decentralisation has been slow. With limited revenue, district councils have had to rely on the technical line agencies of central government, but have had limited effective authority over them

Disasters, and in particular recurrent floods, are a political issue which demand a response. The national Disaster Management Mitigation Unit (DMMU) comes under the Office of the President, and it is notable that disaster response has been prioritised and is more effective than efforts to address adaptation needs and long-term climate change. Food prices are also a sensitive issue (see Box 6), and although these have not been explicitly linked to a climate change agenda, the linking of disasters to agriculture and food security have also provided a point of political engagement. This may be changing in the face of the El Niño drought.

BOX 6. THE POLITICAL SIGNIFICANCE OF FOOD SECURITY IN ZAMBIA

In a relatively peaceful country, the riots and dissatisfaction with escalating food prices in the late 1980s and 1990s are well remembered in the national memory and by national politicians. This is exemplified by a comment made by President Sata in 2012:

'Kaunda's government was overthrown because of food riots. I do not want food riots.'
(Quoted in Daily Mail January 8th 2012)

Adapted from Funder et al 2013: 27.

There is also an instrumental reason for the government to be interested in the climate change agenda in that it has provided a source of additional resources to be directed to the districts. As Funder et al. (2013) observe, many districts budgets are poorly funded, and donor funds related to climate change can make a significant contribution, at times substituting for government funding. Thus there is evidence in Zambia of a coming together of both donors and government around the climate change agenda and the funding it provides, although with rather different interests. As Chapter 4 discusses, the climate change agenda has also become part of the politics of contestation between the Zambian state and its formal and customary authority in the districts.

The growing role of the South and of sub-national actors in the global climate agenda

Our studies thus highlight the fact that, while there has been a clear tendency for global climate funds and donors to influence climate policies and implementation in some of the study countries, this does not necessarily mean that the climate agenda is isolated from national and local politics in developing countries, nor that it does not have emerging endogenous national forms.

It is therefore important to avoid tendencies towards determinism in understanding the developing relations and dynamics between global, national and sub-national actors in climate change policy. This is also evident if we 'reverse' the perspective and consider the ways in which national and local actors in developing countries are influencing global climate policy and financing mechanisms.

For example, in recent years developing countries have become increasingly vocal in their push to situate funding mechanisms within the UNFCCC framework, rather than within non-UN mechanisms such as the World Bank, which tends to be perceived as being controlled by donors rather than the participating countries. It has thus been key for the G77 group to anchor the Green Climate Fund (which is envisaged to become a key vehicle for meeting the USD 100 billion annual funding to developing countries by 2020) closely to the UNFCCC and to ensure that a 50/50 split between adaptation and mitigation funding is maintained over time. Likewise, the UN G77+ China group has sought to keep climate financing separate from general ODA in order to avoid the risk of double-counting by developed countries (Funder 2016).

A review of the INDCs on which the Paris Agreement is built – and which include both mitigation and adaptation – also suggests that the climate financing game can be played both ways. It is thus notable that many developing countries have used the INDCs as a strategic opportunity to pressure the North on climate financing by making their stated aims conditional on major external financial support. As Box 7 below demonstrates, this was the case for all of the four countries in our study, including Vietnam.

BOX 7. GOVERNMENT STATEMENTS ON CONDITIONS FOR THE IMPLEMENTATION OF CLIMATE POLICIES

The Government of Uganda will continue to commit resources to climate change-relevant strategies. However, the full implementation of these actions is conditional on the support of the international community coming from both climate finance instruments and international market mechanisms. As set out in the Uganda National Climate Change Policy and its Costed Implementation Strategy, national sources are assumed to cover approximately 30% of incremental costs of the activities in the next 15 years, with 70% assumed to originate from international sources. ”

INDC, Uganda, submitted to UNFCCC October 2015, p. 2

“Nepal will make efforts to implement its INDC and contribute to the global efforts of reducing GHGs emissions and helping life and life-support systems to adapt and build resilience to climate change impacts. However, Nepal requires bilateral and multilateral grant support in the following priority areas to meet both qualitative and quantitative targets...”

INDC, Nepal, submitted to UNFCCC February 2016, p. 12

"It is estimated that over USD 50 billion is required for both mitigation (USD 35 billion for Domestic efforts with substantial International support) and adaptation (USD 20 billion) actions across the programs up to 2030. Of this, USD 15 billion will be unconditional support provided by the Zambian Government and USD 35 billion will be conditional support to be sourced externally. Zambia will require international support in form of finance, investment, technology development and transfer, and capacity-building to fully realize its intended contribution".

INDC, Zambia, submitted to UNFCCC October 2015, p. 11

"It is estimated that the national budget will be able to meet approximately one third of the financial needs to implement adaptation measures in this period, and will seek international support and private sector investment for the remainder."

INDC, Vietnam, submitted to UNFCCC September 2015, p. 2

The extent to which these 'conditions' in the national INDCs of developing countries will in fact be met remains to be seen, and despite some gains, the outcomes of COP21 were by no means entirely favourable, especially for the Least Developed Countries. What is clear, however, is that the voluntary nature of the Paris Agreement and its emphasis on individual national plans places the onus in global climate agency firmly on national governments and sub-national actors.

In this respect, it is also important to note the growing influence and agency of local governments on the global climate change scene. At recent COPs the various international climate networks of cities and local governments, such as ICLEI and C40, have been increasingly prominent and have demonstrated that they are at the forefront of tangible climate action in many respects. Indeed, it could be argued that climate action is one of the areas whereby urban governments are increasingly moving beyond the nation-state framework to become global actors in their own right.

These developments underscore the need for a dynamic understanding of global – local institutional relationships in climate change. Nevertheless, structural imbalances persist, especially for sub-national actors in the rural areas that are the focus of this report and where adaptation efforts are as critically needed as in urban areas. So far, the emergence of local governments as independent actors in global climate politics is almost exclusively the preserve of large cities, whose access to capital, human resources, media and decision-making power is often formidable. The situation of rural local governments and other meso-level actors in Africa and Asia is very different, despite their critical role in enabling adaptation through their responsibilities for managing natural resources.

AMBIGUITIES AND DISCONNECTS BETWEEN NATIONAL CLIMATE CHANGE POLICY AND MESO-LEVEL PRACTICE

At the launch of the IPCC synthesis report, U.N. Secretary General Ban Ki-Moon was quoted as saying: 'Science has spoken. There is no ambiguity in their message. Leaders must act. Time is not on our side'.⁵ In clear contrast to these claims regarding 'science', ambiguity is widespread among the perspectives of politicians, bureaucrats and technicians at the international, national and local government levels, as well as among households and local civil society over the nature and implications of climate change. From an actor-oriented perspective there are overwhelming uncertainties regarding the implications of 'science' for institutional roles and responsibilities for climate change adaptation.

This chapter discusses five aspects of ambiguity and disconnects in relation to climate change adaptation at different levels of governance in the four CCRI study countries. First we discuss the understanding of climate change among district-level authorities and show how this understanding is contested. Secondly, we analyse the institutional anchoring of climate change, as a relative new set of policies, in relation to the more established policy areas of disaster risk reduction and response. Thirdly, we explore the fiscal and institutional disconnects between national and meso-levels of governance and discuss the consequences of this for effective support for rural climate change adaptation. Fourthly, we focus on the uncertainties that arise when climate change action is driven by internationally funded programming rather than national policy and local aspirations. Finally, we discuss how institutions are responding to these ambiguities and disconnects.

Uncertainty in understandings of climate change adaptation

There is a well-established consensus among the majority of the scientific community and development institutions that climate change is triggering profound transformations of social and ecological systems that would cause significant dislocation and stress among affected populations (IPCC 2007). Climate change adaptation has increasingly been mainstreamed into a wide spectrum of policies and programming within both national and international development agencies. The dominant discourse of climate change adaptation relates closely to narratives of climate change produced by a few key international institutions, such as the IPCC, UNDP and World Bank, which are the leading producers of knowledge and strategies on climate change adaptation. The aim of much of this mainstreaming is to make existing development investments more resilient to climate variability and extreme weather pattern events while simultaneously improving the impact of development itself in the present (World Bank 2010a). The SDGs are anchored in assumptions that, without adaptation to climate change, the gains of development could be lost, while without development, societies remain vulnerable to the impacts of climate change.

Despite this seemingly self-evident premise, CCRI research reveals a high degree of uncertainty about the implications of climate change for the existing development agenda among meso-level politicians and government authorities. Interviews in Zambia and Uganda found that some meso-level government staff remain sceptical about climate change. Moreover, the possible link between climate change and extreme floods and droughts is a relatively recent part of the public discourse at the local level.

The pursuit of clarity about 'what to do' about events that can clearly overwhelm local capacities leads to a focus on a technical process of planned social and physical engineering to guard against hazards. This technocratic agenda for responding to hazards is implicitly based on a dichotomy between nature and society, which tends to overlook questions of power and of how rural climate change hazards are co-produced through interaction between society (most notably agricultural production) and climate change events (Taylor 2015: xiii).

During numerous discussions over a five-year period with district and sub-county government staff, NGOs and farmers in Uganda, the CCRI research team found that climate risk has gradually come to be recognised as being bound up with the interaction between changes in agricultural land use and rainfall. For example, the

first time climate change was discussed openly across local government departments was at the CCRI district inception workshop in 2011, where most participants articulated first-hand personal experiences with extreme floods and drought, but were uncertain how this related to climate change. At the end-of-project conference in 2015, district staff critically reflected on how the flood-related risks were reinforced and re-produced by expanded settlement in vulnerable areas, the silting up of dams and the encroachment of rice cultivation into the wetlands that serve as buffer for flood water.

Complementary or competing national institutional anchoring of disaster management and climate change adaptation?

The policy and institutional dynamics and accountabilities of climate change adaptation and disaster risk management are very different, and the two sets of policy areas are generally loosely coordinated at best. Disaster risk reduction policies in the four CCRI research countries build on a longer tradition of practice than climate change efforts and are anchored in a politically strong ministry (sometimes the office of the prime minister, e.g., in Uganda) and/or one with strong operational capacities locally (e.g., the Ministry of Agriculture and Rural Development in Vietnam or MARD). Climate change policies, on the other hand, are still in their infancy, receive little or no public funding and are typically anchored in politically weaker environmental ministries with little field presence. National climate change policies tend to be influenced by international aid agendas and expectations of aid flows (as discussed in Chapter one) and do not command the same political attention from government as disaster risk management.

In Vietnam there are clear contrasts in clarity between disaster risk reduction and climate change adaptation. Given the prevalence of water-related disasters and the relatively strong presence of MARD on the front line of responses to climate variability and uncertainty, disaster risk reduction has primarily been the preserve of agricultural authorities at all levels of government. Strong and well-defined chains of command have been developed among agricultural authorities and between these authorities and other officials, civil-society and private-sector actors. By contrast, plans for climate change, ostensibly led by the Ministry of Natural Resources and the Environment (MoNRE), are almost universally perceived by provincial and district authorities as being nebulous. The overall goals may be defined, but people do not know who should do what, how to prioritise among a jumble of different proposed actions, or what budget lines are likely to be available to finance these initiatives (Christoplos et al. 2016, forthcoming).

While climate change and disaster risk reduction are siloed and uncoordinated nationally, their practice tends to overlap at local government level. This overlap is a source of uncertainty for the politicians and officials involved in responding to extreme events such as droughts and floods, and there are few signs that the new climate change agenda is being significantly mainstreamed into the more established disaster agenda, much less the broader landscape of local development. In Uganda, the Teso region has experienced four floods over the past decade, though only one of them (2007) was declared to be an emergency and received support coordinated by the Ministry of Relief and Disaster Preparedness. The remaining three floods, which were all more localized and less visible in the media, were eventually understood by local government staff as extreme climate events subject to the National Climate Change Policy. However, as the Policy has no budget line with local government, its implementation varies greatly depending on the local context. Disaster Risk Reduction Committees ostensibly exist at community level throughout the country, but are typically dormant and only activated by the Ministry of Relief and Disaster Preparedness when an emergency is declared. Adding to the confusion, these committees are often reactivated by local government as part of their support for climate change adaptation and often used in very different ways than originally intended.

The disconnect between national policy and local government practice

Within the context of nation states, the principle of subsidiarity states that quality and access to services are highest when functions of government are allocated at the lowest levels that are competent to handle them (World Bank 2010a). CCRI case studies indicate that meso-level institutions are unavoidably involved in mediating between international and national policies and investments and local practices. However, they are doing this within institutional frameworks that are poorly suited to subsidiarity. Decentralisation is relatively well established in Vietnam, but has in-built tensions. It is well established legally, but weak in practice in Uganda, and even weaker in Zambia, where the devolution of fiscal and decision-making authority is limited. Decentralisation is least established in Nepal, where the authority and capacity of local government have yet to be reconstituted after years of conflict.

Uganda is an example of a country where district councils are well-placed political institutions that set the goals for local government administration and its efforts to support an enabling environment that allows rural citizens to adapt (Friis-Hansen, Bashaasha, Aben and Okiror 2015). Uganda undertook a comprehensive decentralisation reform in 1993 and has since built up government units at

the district and sub-county levels, with elected councillors and technical and administrative staff providing a range of services. Since 2000 a second wave of reforms aimed at deepening democracy has also been implemented (Friis-Hansen, Bashaasha and Aben 2013).

However, experience from the four CCRI study countries reveals poorly defined links in institutional and fiscal procedures between the central ministerial and meso-levels of government. Decisions and control over financial resources for many aspects of climate change adaptation are highly centralised, while climate change action takes place at the meso-level. This disconnect is particularly apparent in countries where public financial resources for climate change adaptation are very limited and funds for climate change activities are therefore highly donor dependent, such as Nepal, Zambia and Uganda. Such a disconnect is less apparent in Vietnam, where more national resources are invested in climate change adaptation at the local government level.

In the case of Uganda, an analysis of the 2012 implementation framework for the National Climate Change Policy reveals that the entire proposed budget of 3.9 billion USD over a fifteen-year period has been allocated to the central ministries (Ministry of Water and Environment 2012). Power and finance are centralised, while the administrative capacity to address climate challenges is located at the local government level. Such an implementation strategy, where the central ministry creates projects and controls finance, while districts are reduced to becoming implementing partners, is not compliant with the intentions of the Local Government Act that governs decentralisation.

Climate change action: driven by policy or project funding?

Climate change adaptation programming initiated by international agencies (and even local agencies which are well attuned to the international discourse) tends to reflect these agencies' own interpretations of local government rules and regulations. When several projects are being carried out in a particular location, representing the only financed climate change adaptation action, they have a strong fragmenting influence on local government's ability to coordinate activities and set political priorities. As a result, climate change action is likely to be determined by external international actors and/or project staff, rather than being the outcome of a district-based democratic political process. This skewed decision-making process creates additional uncertainty among local government politicians, authorities, civil society and the rural population who should benefit from the climate change actions. This

is true even where these norms are formally absorbed into public policies, such as in NAPAs and LAPAs in Uganda and Nepal and in modalities such as community-based disaster risk reduction and climate change adaptation policies in Vietnam.

In Nepal, projects designed by international donor agencies are implemented through institutional structures that are parallel to local government. Local government and local NGOs are reduced to the status of implementing partners delivering project activities. The development of adaptation or disaster risk management plans by local government gives more voice to local people during the implementation process. However, this invited political space is not fully used, as the planning process is a technocratic process detached from local climate-related risks and institutional capacity (Khatri, Pain, Ojha and Adhikari 2015).

Local government responses to ambiguities and disconnects

CCRI case studies show that, despite uncertainty and institutional disconnects, local authorities are far from passive when it comes to climate change action. Indeed, case studies from Uganda indicate that, when the political will exists, climate change action can take place with minimal financial allocations through the participatory planning and regulation of natural resource management.

Despite standard national policy frameworks, adaptation to climate change has tended to be uneven across decentralised local government structures. New mechanisms for resource management and collective action can be borrowed or constructed from existing institutions, styles of thinking and social relationships in a process of bricolage. Cleaver (2002) distinguishes between bricolage by actors, which is about innovating with the means available, and institutional bricolage, which is when new regularized enduring practices are formed over time by merging elements from different institutional domains into something new. Different power constellations at the district and sub-county levels are evident and tend to define the dynamism and political will needed to address climate change as a local council agenda.

IS CLIMATE CHANGE SHIFTING THE BASIS FOR SOCIAL CONTRACTS AND STATE LEGITIMACY?

Social contracts, state legitimacy and implications for adaptation to climate change

The preceding chapters have alluded to the importance of unpacking the norms and incentives that may generate or obstruct commitments to address climate and disaster risks. This chapter starts with reflections on the implications of our findings in relation to the prevailing international discourse on social contracts for climate change adaptation. This is then considered in light of the different forms of social contract and sources of state legitimacy that have been found at the national, meso- and local levels. The chapter continues with analyses of the contested forums in which social contracts are being reformed, most notably as national policies are rolled out in meso-level planning exercises. This leads to a review of how 'all social contracts are not created equal', as some risks are inevitably given greater attention than others. Looking at these factors together suggests that path dependencies generate the preconditions for the search for legitimacy, but that extreme climate events do constitute critical junctures for institutional change. However, our research has found that these changes are uneven. Little evidence has emerged of the conditions for the grand 'co-evolutionary' transformations called for in much of the international climate discourse.

One of the main ways in which states maintain legitimacy is through social contracts with their citizens. The concept of the social contract is generally perceived to have been introduced by Rousseau in 1762 (drawing on concepts from Hobbes and Locke) to describe how citizens choose to give up a measure of their freedom to the state in return for benefits from the 'progress' that accompanies civilisation. The social contract concept has emerged as relevant to our research due to the fact that

responses to climate change (or decisions not to respond to climate change) can be seen as anchored in some distinct features of the social contract. In order for the state to maintain a trajectory towards progress, this may include commitments to disaster risk reduction as one of the underlying responsibilities of the state. It may also include a preference for (potentially maladaptive) economic development if those tangible and material aspects of progress are given a higher priority than responding to the amorphous risks associated with climate change.

The discourse on climate change often draws attention to the need for (or lack of) 'political will'. But this political will is generated by the different sources of legitimacy and social contracts for different aspects of progress, as conceived by both citizens and their politicians. In Vietnam, there are clear (but not necessarily mutually coherent) social contracts for both disaster risk management and economic development. As such, social contracts can be an ambiguous and shifting commodity. Climate change has raised concerns about whether long-existing social contracts have led to a path dependency wherein state legitimacy is associated with delivering economic development at the expense of environmental sustainability (Christoplos et al. 2016, forthcoming). Alternatively, protection against the dangers of extreme climate events (i.e., disaster risk reduction and disaster management) is often seen as a 'make or break' feature of state legitimacy. Failures to manage disasters can lead to politicians, and even whole governments, being removed from power (see Box six above).

Pelling refers to climate resilience as being related to 'the significance of shifting political and economic relations between nation states, citizens and private sector interests' (2011: 91-92). The interplay between these sometimes competing relations are particularly important at the meso-level, as local bureaucrats and politicians are the most visible representatives of the state, and they also bear the brunt of the blame (rightly or wrongly) for a range of failures in climate change adaptation and disaster risk reduction. The nature of the social contract may therefore be acutely and concretely questioned at the meso-level.

The climate change discourse is often implicitly (and occasionally explicitly) imbued with fears that the social contract for economic development is at the core of the problem of maladaptation. Claims are made that we need a 'transformation' since 'business as usual is not good enough', i.e., path dependencies embedded in the existing social contract must be broken and a new social contract must emerge (O'Brien and Sygna 2013). Hayward and O'Brien describe how the social contract in large democratic systems is 'at best a quaint optimistic hope; at worst a misleading,

obfuscating ambition that disguises the very power inequities it purports to control and enables the undermining the socio-ecological systems to continue unchecked' (2010: 201). This has led to calls to 'manage' new and radically different social contracts to promote resilience (O'Brien et al. 2009).

A central underlying question in our research is whether the attitudes and incentives of 'street level bureaucrats' (Lipskey 1980) who are trying to make sense of the implications of climate change in their roles and position in society can be 'managed' through climate change efforts. Are there indications that those calling for a more decisive climate change agenda can muster the moral and political authority to undertake such a managerial approach, given often weak commitments to addressing climate change locally? Adger et al. (2013: 332) found that social contracts are changing in the face of the extreme effects of climate change, as 'Fairness, blame and liability therefore become dominant discourses among citizens who may be made more vulnerable by shifts in responsibility of states.' This may be so, but our research has found that this does not automatically support these authors' subsequent assumptions that new social contracts can be 'fruitfully negotiated through enhancing collective responsibility and citizenship.' (2013: 333). It is perhaps obvious that the basis for state legitimacy differs among different regimes. Strong and developmental states, such as Vietnam, base their power on demonstrating results. Legitimacy is central to maintaining power, and this involves fulfilling the social contract for either economic development or protection from climate change. In many weaker or fragile states, most notably Nepal, the legitimacy of the state has so profoundly deteriorated that expectations are low and states are tolerated rather than seen as legitimate. In other states, fear replaces legitimacy as a motivation for citizens to accept their rulers.

Furthermore, the social contract may be different for different groups of citizens. Gaps often exist in social contracts for marginalised (and often climate- or disaster-vulnerable) populations. In Vietnam the social contract for managing disaster risks has long been focused on the irrigated lowlands rather than the more marginal highlands, though in some cases climate change adaptation initiatives are being used to integrate marginal populations into mainstream society and state planning (see Box 8 below). Some states are more concerned with 'climate-proofing' the neighbourhoods and livelihoods of the wealthier or urban populations. The growth in the engagement of cities in the international climate negotiations (see Box 1 above) may be seen as an indication that these local authorities, who are savvy enough to recognise the implications of climate scenarios for their legitimacy, are quickly waking up. Sometimes populations (often ethnic minorities or even non-citizens) in

the hinterlands, such as the African drylands, are excluded from the social contract, as they do not adhere to accepted livelihoods (e.g., if they are pastoralists or farmers practicing swidden agriculture), religions or the political mainstream. This has often led to a downward spiral in which the most climate-vulnerable populations are labelled a 'problem' for politicians or even a threat to national security, and therefore marginalised further. This growing political exclusion of climate-vulnerable populations from the prevailing social contract lies behind the factors that are increasingly presented by politicians and the media as the threat of mass movements of 'climate refugees'.

BOX 8. ADAPTATION AND INTEGRATION OF MARGINAL PEOPLES IN VIET NAM

In Thua Thien Hue province in Central Vietnam, the (re)settlement of climate-vulnerable populations is being implemented by the provincial, district and communal authorities levels and portrayed as adaptation. Some of these resettlements target coastal villagers threatened by increasingly severe erosion, which the authorities link to climate change through rises in sea level, storms and changing tidal flows. Officials distinguish clearly between these resettlements and mandatory settlements of historically marginalised 'Sampan people' living on flat-bottomed sampan boats, who they perceive as increasingly vulnerable in the light of projections of more severe or more frequent storms. Both resettlements and settlements are communicated as supporting the integration of poor and marginal populations into provincial development planning. This is especially the case with sedentarising sampan boat-dwellers; settlements are portrayed not just as an adaptation and disaster risk reduction intervention, but as a way to integrate a mobile population into mainstream society. Climate-related (re)settlements can thus be linked to a long history of government involvement in migration and sedentarisation in Vietnam (see Hardy 2005), as well as the social contract around disaster risk reduction

(Christoplos et al. 2016, forthcoming).

Social contracts and legitimacy at different scales

Our research has shown that the nature of state legitimacy and social contracts has different but inter-related dimensions at the national, meso- and local levels. National politicians have long recognised the potential political benefits of being seen to respond to extreme events. Some have even drawn attention to climate change, but apart from adaptation related to extreme events, our research has uncovered limited

evidence of major efforts to base legitimacy on climate policies. Rather than being a reflection of a move towards a new social contract between states and citizens, climate policies tend to appear more oriented to international (donor) audiences.

Furthermore, at the national level different ministries are able to compartmentalise their different responsibilities in such a way that those responsible for economic development policies, for example, are not held to account for the negative impact of their policies since climate is seen to be an 'environmental' issue or one related to natural hazards, that is, the responsibility of a different ministry. Coherence is rarely demanded at the national level.

At the provincial and district levels this compartmentalisation may begin to unravel as policies must be turned into programmes, for example, resettling climate-vulnerable populations or building infrastructure that can have both positive and negative effects on climate risks and economic opportunities. The mixed affects of a given programme on climate risks, livelihoods and the 'winners and losers' of a given investment cannot be so easily avoided on the front line of policy implementation. Due to the visibility of such difficult trade-offs, national politicians (and the media) may even try to place the blame for failures with meso-level authorities in ways that often portray poor implementation, corruption, etc. as the problem, even if the real culprit is policies that are poorly formulated, unrealistic or lack coherence across sectors.

At more local levels, such as municipalities or villages, this convergence is even greater, as local government is in direct, daily contact with the local population and is therefore more likely to be held to account. Local authorities often have multiple responsibilities as well, with the same official tasked with a range of programmes and projects to implement. If these are anchored in non-compatible social contracts (i.e., for risk reducing climate change adaptation or risk augmenting industrial development), this lack of coherence comes to the fore. Finally, locally officials are frequently tasked with explaining policies and programmes to the population, even though they may lack the capacity to understand, let alone implement, these policies.

That said, it is also notable that climate change is emerging as an arena whereby non-state actors at the meso-level may challenge or pressure the central state on its perceived obligations within the social contract. In Zambia, for example, our studies show how chiefs and local governments seek to pressure the state (through the media and otherwise) to 'live up to expectations' in responding to droughts and floods. Implied in this criticism is also a questioning of whether the central state is

actually the most effective and legitimate responder to disasters and climate change. Such actions highlight how the nature of the social contract may wane without ongoing 'maintenance' by the state and how it can be a site of contention and efforts to renegotiate what it actually consists of (see the following chapter).

Social contracts in different forums

The most formal and perhaps most self-evident way in which climate change is entering into the social contract between states and citizens is in planning processes. As described above, in all four countries (albeit less so in Vietnam) these processes are being initiated in order to access donor funding. However, even though accessing external resources may have been the main trigger to start these processes, subsequent developments reflect how funds and information are then integrated into ongoing national and meso-level socio-political struggles. Two key starting points for understanding these processes are (1) whether climate change plans have subsequently evolved into more genuine social contracts with the general population, and (2) if and how the commitments in these plans reflect or conflict with other plans for disaster management, economic growth, urbanisation, etc.

Regarding the first question, our research shows that, when politicians use these plans (and the financial resources that they generate) as part of their own agendas, climate change planning can become a genuine vehicle for elements of a social contract, albeit not necessarily in the manner intended by the planners. The following chapter explores these suggestions.

A problem with many climate change plans is the tendency for them to be so all-encompassing, vague and unprioritised as to confuse and overwhelm meso-level authorities (as discussed in the preceding chapter). As such, plans are often more of a starting point for a process of defining and negotiating responsibilities rather than a roadmap. In some instances this can be contrasted with the more formal procedures associated with disaster response (Vietnam), even though even these can be taken over by national and meso-level politicians looking for benefits (Zambia, Uganda).

Regarding the links to the legitimacy associated with other government policies, our research has uncovered few formal linkages. However, the basic tools of the state are readily reemployed in climate change adaptation. This includes the use of infrastructural 'bricks and mortar' to symbolise the preeminence of the developmental state (Vietnam) or development-induced resettlement as a tool for modernisation (Zambia).

A relatively new actor influencing the accountability of different authorities is that of the media. Climate-related disasters are becoming big news, with conventional and social media reporting bringing news about climate change to the capitals and bringing spontaneous responses to disasters to local levels. In Vietnam this has meant that local authorities, who previously had a monopoly on responding, are increasingly uncertain about the extent of their social contracts. In Vietnam they are pondering what their role is if a Facebook group from Hanoi is prepared to relieve them of their responsibilities by handing out relief supplies. There are also signs of the media acting as a watchdog in relation to maladaptation resulting from malfeasance by meso-level authorities. Examples of officials turning a blind eye to extensive illegal removal of sand from riverbanks and coastlines, which aggravates the impacts of heavy rains, have been widely reported in the Vietnamese and even international media.

Different social contracts for different risks and vulnerabilities

Very different social contracts exist for extensive and intensive climate-related risks. There is a range of interrelated factors that have a bearing on these differences.

The first and in some respects the most obvious of these factors is if and how the state has traditionally had responsibilities for protecting different parts of the population from climatic variability. In Vietnam there are clearly high levels of engagement where maintaining irrigation and drainage and the protection of densely populated rice-producing areas have a long history. This is part of the foundation of Vietnam's identity as a developmental state. By contrast, Nepal lacks traditional commitments to hydraulic management, especially in upland areas, where the very presence of the state is tenuous. The major role of international humanitarian agencies in Uganda has meant that the state has had little need to establish a social contract for protecting the population from natural hazards, as this has been delegated as "somebody else's" responsibility.

In Nepal the cumulative death toll due to landslides over time is likely to be comparable to those caused by the infrequent earthquakes. But landslides, although frequent, are generally localised and small-scale, making them relatively invisible in government disaster risk management planning. Nevertheless they are a key cause of risk and uncertainty in the daily lives of many poor Nepalese rural households. These are not the large extreme events that drive climate change action plans, and response by government has been limited. This reflects a vacuum in both mandates for action and competence and the authority to respond, together with a persistent tendency to see a response to landslides as simply requiring a minimal technical response or tokenistic relief.

Furthermore, different hazards generate different social contracts. In all of the cases analysed, flooding generates considerably more expressions of state responsibility than smaller, scattered recurrent disasters such as landslides, or extensive incremental hazards such as drought. This is different, however, at the national and meso-levels respectively. At the national level social contracts for such risks are weaker due to the fact that small recurrent events and incremental changes do not create a 'disaster' in the sense of overwhelming the capacities of the state. At the meso-level, by contrast, in some cases (but not all), these authorities are confronted with the demands of their constituents that they deal with seemingly small hazards that nonetheless overwhelm their capacities to maintain constituents' livelihoods.

A notable exception here is when hazards relate to new livelihoods, where there is no defined role for the state and where private investment dominates. In Vietnam this contrast can be seen between rice, which is at the core of the state's food-security commitments, and aquaculture, which is firmly in the realm of private investment and risk, and where there is therefore very little of a social contract to intervene to manage climate risks.

This exemplifies how failures to manage some risks represent a threat to the state's legitimacy, whereas, with the growing privatisation of other risks, such legitimacy does not always come into question. This is a fluid area, however. The ability of politicians in Uganda and Zambia to situate some types of disaster as a responsibility is being used as a way to build their own legitimacy and call that of opposition politicians into question.

In Vietnam, the uncertainties of the dramatic shifts in the economy have raised concerns that the traditional basis for the state's legitimacy in directing economic development is no longer equally relevant. As a result, it can be concluded that the great attention that has been given to reviving disaster response capacities is due to this being seen as an opportunity to (re)establish greater legitimacy during this period of uncertainty.

ADAPTATION AS AN ARENA FOR STRUGGLES OVER AUTHORITY AND RESOURCES

In global climate change negotiations, developing countries have typically emphasised financing and technology as the pivotal issues. However, our studies show that, in the domestic politics of developing countries, climate change is about more than that. Central and local governments, CSOs, customary authorities and private actors engage in climate adaptation as part of a range of agendas. This includes investment, technology transfer and infrastructure, but also natural resource control and the pursuit of legitimacy and authority. This chapter discusses how climate change adaptation is emerging as an arena for struggles over broader issues of institutional authority, and how this differs across our four study countries according to different historical and political contexts.

Adaptation as state formation

State authority is never a given: it requires ongoing reproduction and is continuously challenged, sometimes explicitly, sometimes implicitly. In some settings, the state itself is fragile, as was the case in Nepal both during and after the civil war. In other settings, the state may be well established centrally, but in practice has incomplete 'reach' on the ground and sees its legitimacy being challenged by local institutions, as in the cases of Zambia and Uganda. Even where the state has traditionally had a relatively broad reach and limited competition, as in Vietnam, the growing role of the market has generated new contestations when searching for ways to maintain and reproduce the social contract on which its legitimacy is based. Contesting, asserting and reproducing state authority is thus a continuous process carried out in multiple domains of society, including less obvious ones. Our research shows how climate change and associated disasters are emerging as arenas for state formation in some of the countries studied, while this is less obviously the case in others.

In Vietnam, rising sea levels and disasters such as typhoons and flooding are testing the ability of the state to fulfil its social contract and protect its citizens (see the following chapter). Many of the state's responses can be seen to follow directly in the footsteps of the hydraulic bureaucracy (see Box 9 below) that has characterised Vietnam's historical development in areas such as infrastructure development and social engineering (e.g. resettlement; see Box 8 above). From this perspective, government adaptation efforts in Vietnam can be seen as the most recent expression of a long-term process of state formation (Christoplos et al. 2016; Lindegaard in preparation, a, b).

BOX 9. HYDRAULIC INFRASTRUCTURE AS ADAPTATION IN VIETNAM

Water-management infrastructure is being used as an adaptation tool by sub-national state officials – with support from the central government – in Vietnam. In Thua Thien Hue Province, for example, plans to demolish and rebuild a critical salinity prevention dam at the mouth of the Perfume River received central funding after changes in precipitation patterns led to droughts and severe salinity intrusion affecting agriculture, industry and domestic water use in the province into the early 2000s. The use of water-management infrastructure as adaptation is also evident in provincial planning more generally, as evidenced by the water-management infrastructure projects prioritised in the Climate Change Action Plan and the acknowledgement of climate change in the irrigation master plan. Down to the local level, projects to optimise irrigation systems – for example, by concretising soil canals and trenches – are helping manage a changing water environment, even when not explicitly identified as climate change adaptations. Such interventions are the latest in a long history of water management as a key development tool and organising principle of the Vietnamese state, which has led to it being termed a 'hydraulic bureaucracy' (Wittfogel 1957) and 'hydrocracy' (Benedikter 2014).

In Zambia, the climate change agenda is increasingly becoming an arena for state engagement and intervention. Political elites see climate financing as a means to fund energy security and infrastructure development, while efforts to address floods and droughts have become a platform for demonstrating commitments to food security and public service delivery (Funder et al. 2013, Funder 2016). At the same time, interventions such as the resettlement of flood-prone communities serve to establish inroads for the central state in marginal rural areas where it has limited de facto presence and where customary authorities tend to have stronger legitimacy (Funder et al. 2015).

In Uganda, the central state has assumed a more ambivalent stance in the climate change arena. Mandates and resources for addressing disasters have been exempted from decentralization, reflecting an interest on the part of the central state to retain control over emergency responses more generally. Due to Uganda's history of civil conflict, the authority and legitimacy to declare emergencies is a politically sensitive issue over which national political elites wish to retain control. Beyond specific security interests, however, the central state has been content to leave disaster responses to donors and humanitarian agencies (Wairimu et al. 2015). It has engaged multilateral and bilateral climate financing opportunities with some reluctance, and has not involved itself widely in driving adaptation on the ground. In a country where the political leadership has a firmer grip on power, and where the civil service is stronger and the resource base more diversified than in Zambia, climate change adaptation is seen as relatively irrelevant by national political elites in terms of both votes and funds.

In Nepal, the central state is undergoing a fundamental restructuring to address calls for inclusive democracy, following on from the Maoist war that ended in 2006. In this process, climate change adaptation has remained almost entirely depoliticized and has not emerged as an arena for political contestation or state assertion, unlike other closely related topics such as agricultural development and protected areas (Ojha et al. 2015). This can be seen partly as an expression of a state that has been preoccupied with reinventing its core features, and partly as an expression of a strongly technocratic framing of the climate change agenda, leading to its domination by donors and expert culture.

The extent to which climate adaptation is employed to assert state authority and legitimacy in our four study countries thus varies. There is no clear link here to the overall nature of the state (e.g., strong or weak). Rather, it seems to be a question of the state's particular historical trajectories and the current conditions and context in which the state finds itself. In Vietnam, adaptation is part of an effort to adapt and revive a slimmer version of long-standing hydraulic responsibilities. In Zambia it is a means to assert authority and reach in rural hinterlands where traditionally its reach has been limited and where earlier structures of central control (party structures and civil service) have collapsed or been cut back. In Uganda and Nepal, however, adaptation is a less obvious arena for the pursuit of state authority, and (with some exceptions) it is deemed to be politically insignificant compared to other arenas and concerns. As an extension of this, it is worth noting that, among the four study countries, the perceived threat to the national economy from climate change and

public support appears to be higher among policy-makers in Vietnam and Zambia than in Uganda and Nepal, even though the four countries are all generally categorised as facing very high levels of risk.

Struggles over public authority

However, efforts by the central state to assert authority and legitimacy through adaptation interventions are not always successful, nor are they the central elements in broader struggles over authority in our study areas.

In Vietnam, the provincial authorities have long been strong sub-national actors, and in decision-making their autonomy from the central level is greater than is sometimes realised. At the same time, disasters such as typhoons have led to the mobilization of civic groups and private actors through social media and other means. This has resulted in an ambiguous relationship between the state, civil society and the private sector in disaster response, with which the central Vietnamese state is uneasy and unaccustomed (Christoplos et al. 2016, forthcoming). In Zambia, attempts by state agencies to resettle communities away from flood-prone areas have met with resistance from chiefs, while local MPs have sought to position themselves against the central state by carrying out their own 'vulnerability assessments' in competition with formal assessments.

Significantly, such actions are not just reactive responses to central state interventions, but illustrate how adaptation also provides an opportunity for meso-level actors to make demands on or compete with the authority of the state.

In Uganda, one of our case studies showed how climate change served as a platform for personal leverage among local government politicians, while at the same time discrediting the central state and promoting the role of the district council in addressing food security and adaptation (Friis-Hansen et al. 2015). Hence, the absence of the state in the climate change arena is exploited as an 'unoccupied' space for local governments to position themselves, in relation to both adaptation specifically and the wider role and legitimacy of district councils in development. There is a similar situation in Zambia, where local government politicians are employing climate change as a narrative to press for general devolution vis-à-vis both the central state and 'customary' authorities. They argue that local governments are best positioned to address floods and droughts, that chiefs lack the capacity to act on climate change, and that the country's long-stalled decentralisation process needs to be carried through if climate risks are to be managed.

Climate change thus offers an opportunity for local governments, chiefs and other meso-level actors not only to counter state interventions, but also to set out their own claims to authority and legitimacy vis-à-vis each other and the central state. One might rightly argue that some of these actors are themselves elements of the state (including local governments, and Zambia's chiefs), but that is part of the point. Being neither fully within nor fully outside the state, they are eager to establish their public authority (Lund 2006). Climate change adaptation is potentially a fertile arena for this. It is, first, an emerging arena where institutional authority and legitimacy are not necessarily fully established already. Secondly, it touches on essential aspects of livelihoods, production and economy of importance to local voters and supporters. Thirdly, it has the potential for narratives of subsidiarity and 'local knowledge' as claims to legitimacy. Finally, it provides a platform for criticism of the state's failure to deliver on the social contract, including the protection of citizens from external threats. In striving for public authority, rural local governments are thereby capitalizing on one of the few benefits that derive from being positioned on the margins of the state by piggy-backing on the state's authority on some occasions, while discrediting it on others.

These aspects are particularly evident and explicit in our study sites in Zambia and Uganda, where they form part of a still early and highly protracted process of decentralisation, alongside more historical struggles between customary and statutory authorities. In Vietnam, assertions of autonomy by district- and commune-level officials are more cautious, but, in the everyday discretion of the 'street level bureaucrat' (Lipsky 2010), they demonstrate that their room for maneuver has been widened by a degree of actual decentralization.

The power of funding, know-how and projects

Climate change adaptation is, despite some initial impressions, more than a mere donor agenda in our study countries. In some of the study sites, it is emerging as an arena for struggles over authority between the central state and 'twilight institutions' such as local governments and customary institutions. However, this does not mean that aid is somehow unimportant in such arenas.

Multilateral and bilateral donors in Nepal, Uganda and Zambia have played a central role in introducing the climate change agenda and in shaping the formal institutional frameworks that surround it. In a context where conventional donors have lost clout as a result of the growth in developing economies and increasing foreign investment flows to and across the South, climate change is an area where western donors have remained relatively influential. In Vietnam there are some indications that one

of the drivers behind the government's interest in international climate finance is the phasing out of much other international development cooperation. By delivering and facilitating global climate financing, donors retain a key role. Furthermore, by framing climate change as a set of technical interventions to roll out 'the science', the need for expert input and capacity development is sustained (Li 2011).

This has implications for national climate change agendas, as well as at the meso-level. An extreme case is that of Nepal, where the fundamental weakening and restructuring of the state since the Maoist war has contributed to a sub-national climate agenda that is more strongly donor-driven than in our other study countries. Donor-funded adaptation projects on the ground in Nepal not only draw strongly on global templates rather than local knowledge, but have also to a large extent remained isolated from formal political spaces (Ojha et al. 2015). Although particularly prominent in Nepal, there are also examples in Uganda and Zambia, where local government representatives complained that interventions under multilateral Climate Investment Funds have been designed by consultants without effectively involving them. The technical bias remains strong in Vietnam as well, but in this case it is led by local consultants, who also adopt a largely template approach.

As an extension of this, international and national NGOs stand out as a strong and influential group of actors in meso-level climate adaptation activities in Nepal, Uganda and Zambia. They possess the powerful twin assets of funding and know-how and have limited internal bureaucracy. This makes them able to initiate community adaptation projects quickly, something local governments and other meso-level actors are often unable to do. This ability to act on climate change through specific projects, to set things in motion on the ground, should not be underestimated. This provides a vehicle for introducing and shaping discourses of adaptation. In Zambia, for example, project activities of international NGOs have played an important role in introducing the discourse of climate change among central and local government staff in the districts studied (Funder et al. forthcoming).

Furthermore, through their work on the ground NGOs gain legitimacy as 'the link with the grassroots'. In Nepal, a variety of climate programmes designed by multilateral and bilateral agencies feature international and national NGOs as the key implementing agencies on the ground (Khatri et al., in preparation). As a result, NGOs play an important role in shaping the way citizens organize themselves around climate adaptation and the particular adaptation practices employed. In Nepal, Local Adaptation Plans for Action (LAPAs) have been formed more by NGOs

and consultants speaking to donor policies than by citizens and politicians (Ojha et al. 2015, Khatri et al. in preparation). In the Zambian study sites, some NGOs prefer organizing adaptation activities around customary village leaders, rather than local government structures. They thereby reproduce the legitimacy of the former, to the detriment of the latter (Mweemba et al. in preparation). They also undertake agricultural extension work that competes with – and sometimes contradicts – government extension activities (Funder et al. in preparation). In Vietnam, the ‘community-based’ methods of the NGOs have now been absorbed into government policy directives, but the NGOs are the only institutions with the human and financial resources to implement these policies, so local authorities remain on the sidelines, with the NGOs better mandated to proceed, but with poor prospects for an eventual ‘handover’.

The aim here is not to point fingers at NGOs, which from a normative perspective often play a significant role in furthering adaptation on the ground and even inform public policies. What is important to consider, however, is that NGOs and the projects they implement also play a role in shaping sub-national institutional landscapes in climate change efforts. This includes their ability to afford legitimacy to some institutional structures over others, as discussed above (see Chomba 2015 for a Kenyan example). This may also involve asserting their own legitimacy in ways that can be seen as claims to public authority similar to that of local governments, chiefs or local branches of the state itself. Sometimes the adaptation work of NGOs is practiced independently of state agencies (or in opposition to them), while at other times they collaborate with them as service providers, with the NGOs filling gaps in increasingly overstretched local government structures. In both cases, however, their perceived legitimacy to act on climate adaptation rests on a claimed role as representatives of the people and an ability to save them from climate change through intervention and service provision. Such roles, ironically, are very close to how government staff in the African and Vietnam cases present themselves during interviews when discussing their own roles in climate adaptation.

These are not just academic abstractions. Reflecting on the many NGO activities in our Zambian study area, one government officer sarcastically commented: ‘These NGOs are behaving like they are the government... [and]... sometimes I almost believe it myself!’ The influence of NGOs on the ground is recognised and coveted by other meso-level actors. In Uganda and Zambia, for example, local governments may criticise NGOs for their approaches in private, but in practice they often team up with them (regarding Uganda, see Wairimu et al. 2015). Moreover, such alliances

sometimes also include local branches of the central state. In Zambia, for example, some district agricultural officers are critical of their own central ministries' bureaucracy and one-size-fits-all policies, and so align with NGO projects in order to 'get something done'.

Access to and control over land, food and water

Adaptation is an arena not only for symbolic struggles, but also for more material contestations over the control of space and resources. Our studies thus show how adaptation may further state efforts to control people, production and territory.

In Vietnam, the state has responded to rising sea levels by building sea dykes and dams to stop saltwater intrusion and by resettling communities, both classic elements of state territorialisation (Lindegaard in preparation, a, b). In Zambia, flood-prone communities are being encouraged by the state to resettle away from the Zambezi river through offers of land-title deeds and extension support to crop farming in resettlement areas. This has the twin effects of sedentarizing traditionally mobile livelihoods, while also removing customary land from the control of chiefs in the direction of a title-based land regime controlled by the state (Funder et al. 2015). Production and property are thereby made more 'legible' and manageable to the state (Scott 1998).

This can also take other forms. In one of our study districts in Uganda, the local government and a state environment officer sought to address flooding problems through a consultative process with communities. As a result, improved wetland management was identified as a means of buffering floods caused by heavy upland rainfall. However, rules of access to wetlands were unclear, and wetland areas had been colonized by local elites cultivating rice and other commercial crops. The local government and state officer accordingly banned the commercial farming activities in the wetlands, but allowed less intensive resource use such as livestock grazing and fishing to continue, thereby also contributing to more equitable access to the wetland resources. Buffer zones were established, and community 'whistle-blowers' were engaged to monitor resource use and report violations. Even in Vietnam, the district authorities have argued for adapting rice production policies to accept and even encourage lower risk ratoon methods, even though these run counter to the traditional sole emphasis on maximising rice output.

From a normative perspective, such cases may suggest modest 'shifts' rather than 'transformations', as they involve less autocratic control and coercion, and facilitate the more equitable and sustainable use of wetland areas. Yet in terms of institutional

change these examples share commonalities with them, as such adaptation interventions re-order relations between people, resources and space into forms that are more legible and controllable by the intervening organisations. In these cases local government plays a major role, highlighting that such processes are not only a feature of central state interventions. Indeed, the NGO-implemented forest carbon projects in Nepal can be seen as a similar process of reconfiguring rules and practices of resource use in ways that shift them into new institutional frameworks (Khatri et al. in preparation). The same can be said of efforts by nature conservation NGOs in our study sites in Zambia, which, in the name of adaptation, work with the state wildlife authority to introduce conservation agriculture at the agricultural frontier. The aim is to contain the spread of traditional extensive farming practices, and instead establish the unsettled areas as wildlife corridors.

Adaptation support may thus serve as convenient vehicles for establishing control over land, water and other resources, not through direct appropriation, but indirectly by shifting resource control into new institutional domains and doing so through ostensibly legitimate (and sometimes sympathetic) means which reconfigure social contracts. Of course, such processes do not necessarily go unchallenged, but are contested by competing institutional actors. In Zambia, for example, the central state's 'resettlement' approach to adaptation in the study areas has been successfully resisted by the chiefs, who refer to traditional knowledge and livelihoods as being superior to those of the technocrats. Meanwhile, some local government councillors have claimed that, as a result of floods and droughts, state forest lands must be de-gazetted and opened for settlement.

Private agency below the radar

Private actors are not mere spectators of these struggles over institutional authority and resources: some navigate them to their advantage, while others act 'under the radar' or beyond the reach of the authorities.

In Uganda, small-scale traders in our study areas are exploiting climate change to their advantage through regularised hoarding strategies. Funded by bank loans, they accelerate grain purchases in expectation of drought. This increases the grain deficit once drought sets in, and when prices have escalated they sell at considerable profit.

In Vietnam medium- and large-scale aquaculture producers are finding their own ways to 'climate-proof' production. As extreme and unpredictable weather events increasingly flood or affect salinity levels in shrimp ponds and fish farms,

producers have experienced substantial losses. In response, they have shifted to more technology- and capital-intensive production methods, typically located in beaches. This has significant negative implications for equity when small-scale producers are marginalised. At the time of writing even these large commercial aquaculture farms are being devastated due to what appears to be industrial pollution, which can be seen as indicating the limits of provincial 'climate-proofing' when priority is given to national strategies for industrialisation.

In Zambia, better-off farmers variously engage and disengage from state adaptation schemes as circumstances and opportunities allow. In one pilot adaptation scheme, government agricultural officers formed a cooperative around a pump-irrigated horticultural scheme for small-scale farmers. The scheme was successful and eventually began marketing vegetables to supermarkets across the border in Namibia. However, once the market links were successfully established, the farmers changed the mode of organisation: rather than a cooperative, they preferred engaging as individual producers instead.

These cases thus illustrate two aspects of the limitations of central state and meso-level institutions in authority and control. First, they show how private actors may navigate in the struggles over authority and resource control. When the arena is contested and unsettled, there is some scope for maneuvering. One particularly clear example of this is the way in which some households have responded to the state resettlement scheme in our Zambian study areas.

Secondly, the case studies illustrate the limitations of meso-level institutions when private actors engage in market opportunities in response to climate change. 'Trader hoarding' in Uganda operates in a sphere where meso-level institutions have virtually no say or experience. In Vietnam, provincial and district authorities grapple with how to influence the activities of aquaculture producers whose technology and access to private advisory services go well beyond the capacity and experiences of government staff. The fact that Vietnamese government policies are themselves shifting towards more market-oriented production only compounds this bewilderment.

CONCLUSION

This report has sought to unpack how and to what extent meso-level institutions are responding to climate change by providing an enabling political, administrative and social environment for adaptation.

Four conceptual lenses have been applied:

- Ambiguous understandings of climate change and how to adapt
- Disconnects between central and meso-level governments with regard to fiscal resources and decision-making powers
- Social contracts between the state and its citizens
- Struggles over authority and resource control

Global meets local (sometimes)

While the global climate agenda speaks to the risks of extreme climate events, long-term climate change and adaptation needs, national priorities and perspectives on climate change draw heavily on a legacy of natural hazards such as floods, disaster response and risk reduction. Extreme events test the relations between the state and its citizens and may be foundational in ensuring the state's legitimacy and response. Food security is one dimension of this.

However, even though responses are anchored in existing repertoires, the space exists for social and political entrepreneurs who see climate change and disaster risk reduction as useful vehicles for building alternative channels to garner support and legitimacy. National (and some meso-level) politicians see climate change response – especially in the form of disaster response – as a way to act to gain legitimacy, as well as recognising that a poor response to disasters is a recipe for losing legitimacy. The dynamics lead to a preference for addressing the shorter term political opportunities and risks associated with responsibilities for responding to a single dramatic event in the political heartland. This in turn may discount the future risks of longer term climate change and even the current ones of small-scale disasters in the hinterlands such as landslides in the hills of Nepal.

Ambiguity and disconnects

While there is little ambiguity within the science community regarding whether climate change is real, uncertainty concerning the implications of climate change in the policy arena is widespread among politicians and bureaucrats at all levels of governance. In our district-level cases we found widespread indecision over the implications of climate change for institutional roles and responsibilities. Most local government staff were introduced to the idea of climate change relatively recently. The international narrative of climate change that has filtered down to local government staff is dominated by technical and infrastructural investment packages in which their own roles are ignored or undefined. From an actor-oriented perspective there are uncertainties regarding the implications of science-based, externally designed solutions for institutional roles and responsibilities for climate change adaptation.

In recent years, local government staff and politicians have gained experience in applying the climate change concept through projects and activities on the ground. This has reduced some of the initial uncertainties about climate change, but it is still far from resolving the opacity over what this means for their own roles and responsibilities. One can observe an increased understanding among meso-level actors that climate change hazards are not only caused by changing weather patterns, but also aggravated by unsustainable land-use management practices related to economic development policies and investment trajectories. However, they have yet to resolve what this means for their choices of action in the face of fundamental goal conflicts. Nationally these disjunctures can be compartmentalised within different ministries; at the meso-level they are harder to ignore.

All four study countries reveal poorly defined links in institutional and fiscal procedures between the central ministerial and meso-levels of governance. Decisions and control over financial resources for climate change adaptation are highly centralised, whereas climate change action takes place at the meso-level. Such disconnects are particularly apparent in countries where public financial resources for climate change adaptation are very limited and funds for climate change activities are therefore highly donor-dependent, e.g. Nepal, Zambia and Uganda, though this is less apparent in Vietnam, where more national resources are invested in climate change adaptation at local government levels.

Regurgitated repertoires

Common to the climate change planning exercises examined at all levels is the generation of technocratic (and sometimes copy-pasted) documents that range from broad investment plans to simple lists of projects to be funded. They establish what should be done, but have little to say about who will do it, how implementation will be integrated into the 'day jobs' of meso-level bureaucrats, or even how actions will relate to intended outcomes. Financing generally remains in the realm of amorphous hopes for a trickle-down effect from international conventions. They are commonly divorced from existing and actual economic development planning processes. As in Nepal, they can also create additional instrumental planning procedures at the village level that assume competencies and resources that are simply not there. In general, proposed climate change-relevant actions draw on an existing repertoire of intervention responses, both previous disaster risk management interventions and other project practices that have been repackaged to tap new funding resources for climate change.

Perhaps of greatest concern, the contextual nature of vulnerability to climate change scarcely features in the content of climate change policies and interventions. In part this reflects the legacies of the bias towards disaster response (rather than risk reduction) in new climate change planning. In part it also reflects the templates that derive from a generic and technical framing of vulnerability to climate change risks that draws on stylisations of 'the science' and ignores the contextual and socially determined nature of vulnerability. The failures to anchor both climate change adaptation and disaster risk reduction in an understanding of vulnerability is central to the failures to find synergies between the two. Schipper writes: 'the heart of the problem is that neither adaptation nor disaster risk reduction in practice is currently focused sufficiently on reducing vulnerability. Because the main link between the two activities is reducing risk, attempts to create synergies without this common baseline will be futile' (Schipper 2009: 29).

Struggles over legitimacy

Climate change is integrated into existing contracts and struggles for legitimacy, with different dimensions at different scales. Layers of legitimacy exist with regard to scales and sectors, with national and meso-level authorities and agriculture and environmental authorities drawing on different aspects of the social contract.

Where disasters have been foundational in state–citizen relations and the significance of actual and potential impacts of climate change realised, as in Vietnam, the state has been pro-active in developing its policies and actions for response, and donor influence has been minimal. Where it has not, external influence, reflected in part through the significant role of foreign aid through donors, has been profound, as in Nepal or in Uganda. Zambia lies somewhere in between these two positions.

The climate change agenda has hit states in different points of their trajectories of change. These change processes are profoundly political and move slowly and in unpredictable ways. These include the reworking of relations between centre and district, sometimes by overt forms of political representation and democratic process, as in Zambia, sometimes not, as in Vietnam. This defines and constrains the space for state-led climate change adaptation and even the aspects of risk that are encompassed by shifting social contracts. In Zambia's hybrid state, both patrimonial rule and democratic process jostle for space, making the climate change agenda a resource to be deployed for political gain. In Nepal and Uganda, dysfunctional states and moribund decentralisation processes thwarted by neo-patrimonial politics have somewhat orphaned the climate change agenda, giving space to external actors to drive national but parallel processes that speak to the technical agenda and sidestep the political and representational issues.

Linked to these political processes are economic dynamics, which are relevant to matters and policies for adaptation to climate change. In three of the states (Zambia, Uganda and Nepal) the rural economies are primarily subsistence-based, and the agrarian transition that Vietnam is currently undergoing is a distant prospect for them. In Nepal the rural economy in the hills is in decline and largely maintained by remittance income. For Uganda and Zambia, subsistence economies remain, food security is tenuous, and markets underdeveloped. Under such conditions, social protection for those at risk of climate change effects is what might be expected to be provided by the state. In contrast in Vietnam, where capitalist markets are penetrating, climate change risks are strongly linked to market maladaptation risks. Despite this, where a semblance of a social contract exists, authorities at the meso-

level can often more easily be held to account for failures to uphold the social contract than distant politicians at the national level. This is therefore an indication that the meso-level is an important place to start in promoting a more vulnerability-aware social contract.

Is there an emerging social contract for changing risks, or does path dependency rule?

Due to a number of factors, social contracts are related to existing repertoires of what authorities are accustomed to provide and what constituencies expect. As such, path dependencies are indeed present. Campbell points out how cultural and sociological perspectives suggest that in different social and political contexts different 'paths' are accepted as normal or inevitable: 'principles and practices become institutionalized to the extent that they are taken for granted by the actors involved in them' (Campbell 2007: 5). Existing social contracts are thus self-perpetuating, as states emphasise what they know how to do. The 'science' of climate change is inevitably being reinterpreted within this repertoire.

Nonetheless, our research also reveals that this path-dependency is not universal and is being subjected to new pressures. Social and political entrepreneurs exploit gaps between old social contracts and new risks. These bricoleurs reframe past social contracts in new ways. In some ways climate change is an ideal arena for bricolage, as there was no past social contract for climate change per se. Responsibilities that may have existed for disaster response are often a point of departure for meso-level authorities to reflect on their roles, but they are hardly a guide for what this new social contract may consist of.

Extreme events do represent critical junctures in the process of moving towards new social contracts. They reveal fault lines when the often weakened capacities of meso-level public agencies are not able to respond to public expectations, when new types of risks related to climate, market and demographic changes emerge and when new market and media actors enter the scene. The result does not resemble the 'managed' changes in the social contract that have been called for in the climate discourse, but reflect the contexts in which these contracts are anchored. These critical junctures do not reflect 'co-evolutionary processes' in which fundamental paradigms of development are 'transformed'. Furthermore, we have uncovered no indications that these emerging elements of a social contract for climate change adaptation are leading to widespread questions being posed about maladaptive economic development models.

This may be due to the capacity of (especially) national-level politicians to compartmentalise the different risks related to economic growth and climate change. One may even surmise that the 'win-win' rhetoric surrounding green growth may contribute to politicians' abilities to avoid confronting hard decisions about how to manage growing climate risk amid demographic and market transformations (Christoplos 2014).

This may also be due to the lack of political power and voice among the more climate-vulnerable sections of the population. The most vulnerable are likely to be excluded from the social contract if their vulnerability exposes them to the risks associated with, for example, the disappearance of areas for run-off in the wake of urban sprawl or transformations in land use, or being excluded from former livelihoods by the spread of new forms of commercial agriculture or industry. Populations in the hinterlands may not be part of the new emerging social contracts between states and the more 'resilient' and socio-economically mobile sectors of the population.

Climate change as an arena for struggles over authority and meaning

Our studies thus highlight how meso-level institutional change in climate adaptation, as well as the lack of it, is connected to broader processes of state formation and the making and unmaking of social contracts. Likewise, institutional change for adaptation plays into wider struggles over control of and access to natural resources such as land and water, as well as the meaning of changing development agendas more broadly.

Our findings thus emphasize the need to situate and trace how 'climate agency' and 'climate politics' are connected with broader processes of how states produce and reproduce legitimacy, authority and territorial control. This includes domestic political economies, as we have explored here, but it also extends beyond nation states. For example, the efforts by the state in Zambia and Vietnam to employ climate adaptation as part of a broader process of domestic territorial control are not dissimilar to the 'climate opportunism' evident in the current international politics over Arctic resource control in the wake of climate change (Bond 2016). Such a broader perspective on climate policy and implementation is, we suggest, an important path to pursue in future research. This is first and foremost because of its significance for understanding climate responses as such, but also because it offers an inroad to exploring the more fundamental dynamics of state formation and resource politics.

At the same time, our studies highlight the importance of factoring in the pressure and responses from non-state actors and to understand the state as much more than a single monolithic 'adaptation agent'. This includes understanding the ways in which local institutional pluralism and imperfect state legitimacy and reach provide a space for an array of actors – ranging from NGOs to chiefs to the private sector – to engage in and often counter state efforts in adaptation and thereby influence and assert themselves in institutional frameworks for adaptation, or even to bypass state structures that have become superfluous. It also includes understanding the ways in which organisations on the margins of state – such as meso-level authorities – may employ climate change as an arena in which to assert pressure on the central state, and to stake their claim in struggles over public authority and the norms of development. And finally, in discussing the deconstruction of the state it is important to appreciate the role of 'street-level bureaucrats' in interpreting and implementing state adaptation policies and programmes in practice, including engaging in semi-autonomous practices beyond (and sometimes even in opposition to) the central state's policies and strategies.

Implications for policy and practice

These findings also have implications for policy and practice. We have addressed this elsewhere (Mweemba et al. 2015, Christoplos et al. 2016 forthcoming, Friis-Hansen et al. 2015, Funder et al, 2015), but the overall issues include:

- The origins of path-dependency in meso-level institutions are rarely only a matter of addressing 'internal' institutional issues such as those encompassed by technical approaches to capacity-building. Support to meso-level institutions must take broader governance aspects into account, including finding ways to build on broader trends in decentralisation and addressing the real-world practices that link national and meso-level institutions.
- Access to financing matters, but there is a need to pay greater attention to how such financing can be made available to sub-national institutional actors without also imposing global and national climate agendas and priorities on local actors. Experiences from Kenya and Ghana suggest that this is indeed possible (IIED 2014, Rasmussen et al. in preparation), but Cambodian experience is that financing mechanisms are never immune from factors in the broader political economy (Christoplos et al. 2014). In this respect there is a need to take sub-national funding mechanisms more seriously and to approach them as more than just 'the last mile'. Indeed, the means whereby sub-national organisations and actors gain access to climate financing should be approached as 'the first mile' in climate financing debates and designs.

- Finance is not everything. As our study has shown, institutions are critical in ensuring adaptation and include issues beyond organisational studies. Issues such as natural resource rights and institutional legitimacy are thus critical in adaptation efforts and need to be incorporated more into policies and frameworks. This implies the importance of ensuring that policies and programming make sense and contribute to creating meaning for climate change adaptation among 'street-level bureaucrats' who are engaged (or should be engaged) in the services that are expected to address climate vulnerability and exclusion.
- In most (but not all) cases, disaster risk management continues to be the main anchor for social contracts and the search for legitimacy in responding to climate change. Rather than hoping to 'enlighten' local authorities about the broader nature of climate change, a more productive route towards local ownership of climate change adaptation may be found in focusing enhanced attention to vulnerabilities in relation to the small and large hazards faced by different sectors of the rural population. It is better to build on existing social contracts than to expect to 'transform' them when the path-dependencies that reinforce 'business as usual' are not likely to disappear any time soon.

NOTES

- 1 http://unfccc.int/adaptation/workstreams/national_adaptation_programmes_of_action/items/4585.php , accessed 04/02/16.
- 2 <http://www.climateinvestmentfunds.org/cif/node/4> , accessed December 3rd, 2015.
- 3 A 'natural disaster'.
- 4 <http://www.nepalmountainnews.com/cms/2015/06/24/govt-survey-finds-major-glacial-lakes-safe/>, accessed December 23rd 2015.
- 5 <http://www.un.org/sg/offthecuff/index.asp?nid=3707>.

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