



The Multiplicity of Climate and Rural Risk

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ABSTRACT

This paper looks at rural risk in relation to climate change, globalisation and other factors, with a focus on how these risks are perceived and managed within different policy frames and among local institutions involved with agriculture and rural development. The changing and multidimensional landscape of risk is analysed in terms of how it impacts on natural resource management governance, strategies and decision-making. Pro-poor growth and community-based risk reduction policies are contrasted so as to highlight their implications for local actors struggling to deal with climate variability and market volatility. Food security is presented as an example of an area where policy coherence in responding to these multiple challenges is lacking, but where rural people and institutions are adapting in their own ways. The study suggests a number of entry points for further research that could be used to better align climate change efforts with the perceptions and priorities of rural populations at risk.

I. INTRODUCTION

I.1 Overview

Situating multiple risk in the post-COP15 agenda

Recognition is increasing of the risks associated with climate change for the rural poor. However, this has not been sufficiently matched with recognition of the interplay between these climate-related risks and the wider web of risk factors related to other causal factors. There are dangers that the impact of climate change on the day-to-day risks faced by the rural poor will be exaggerated, distorted or dismissed due to tendencies to focus narrowly on one set of risks at a time. This working paper looks at the wider web of risks with the intention of contributing to a more contextually-grounded perspective on the multiplicity of risk in relation to climate change, with particular attention to risk perceptions at local level in rural areas. The objective is to provide a framework for developing better empirically-grounded analysis of how the changing landscape of risk, due in part to climate change, impacts on natural resource management perspectives, strategies and decision making, primarily at local levels in rural areas and in agriculture. Risk multiplication related to food security is analysed as an example of how these factors come together in the lives of vulnerable rural populations. The focus is on the ways that institutions within rural localities are responding to the range of risks that impact on access to food. Special attention is given to the meso-level institutions that link local people to national and global structures of governance and markets.

This paper has been drafted in the aftermath of COP15. As such, it reflects the uncertainties about the future agenda around climate change in a period when the grand

hopes of COP15 have been dashed, but before an alternative future climate agenda falls into place. The ‘trust deficit’ between those primarily focused on climate change and those who see climate change adaptation and mitigation as part of a wider development agenda is widely recognised as having been a critical factor in the failures of COP15. A basic assumption of this paper is that this trust deficit relates in part to a failure to embed plans to address immediate and long-term climate risks in the considerably more complex range of risks facing the rural poor, particularly as related to food security. If climate risk is to become an integral part of how the vulnerabilities of the rural poor are addressed, then those raising attention to these risks will need to more clearly recognise and reflect on the other factors that are faced by the rural poor.

This is particularly pressing as the failure to achieve consensus in Copenhagen may actually discourage efforts to find greater coherence between climate and other risk reduction agendas. Many fear that the post-COP15 political processes could dissolve into an assortment of ‘coalitions of the willing,’ i.e., groupings that are struggling to find limited agreements that are less reliant on broad-based trust and policy coherence. The objective of this working paper is to suggest ways to avoid such fragmentation of climate and development agendas by mapping some of the conceptual terrain that will need to be traversed if climate risk reduction policies are to become better aligned with the concerns of rural people, the meso-level organisations that link them to wider governance and market structures, and the politicians that represent them.

Double and multiple exposures

In the climate change discourse it is widely recognised that climate change is a ‘risk multiplier’ with respect to a range of risks that are

not directly related to climate factors. There is nonetheless a dearth of empirical analysis of the nature of this multiplication process. The links between climate and other forms of risk are often portrayed in the climate change discourse as primarily being a matter of a “double exposure” of populations to risks related to both global environmental change (largely related to climate change) and globalisation. These two sets of changes have significant implications in terms of generating new forms of inequality, but there is also a high level of uncertainty about the ways that these factors will come together (Leichenko & O’Brien 2008). Awareness of double exposures has been important as a heuristic device for drawing attention to the social, political and economic forces related to both the causes and the effects of climate change. It has highlighted that both global environmental change and globalisation are highly “transformative” in that profound changes are underway. There will be new “winners and losers” as some vulnerabilities will be reduced and others exacerbated due to the interplay between these two sets of factors (Leichenko & O’Brien 2008).

Although a major share of the multiplying factors of risk can be related to exposure to environmental change or globalisation, there is a danger that the double exposure framework may hide the complexity of a range of factors under these rather amorphous labels. The polemics that often accompany references to globalisation can generate more heat than light in terms of understanding on-the-ground processes of dealing with multiple risks. Both climate and globalisation are highly emotive categories that can elicit impressions of grand, inevitable processes that impact on a helpless rural population. Conceptual frameworks that start by analysing “exposure” can draw attention to the range

of hazards that are likely to impact on a given population. But this can come at the expense of analyses of their capacities to respond.

This paper is intended to provide a framework for unpacking these issues from more of an actor-oriented perspective, highlighting the local and meso-level institutional processes by which people are struggling, with some success, to manage these multiple risks. The objective of this paper is not to reflect on whether or not globalisation is benign, beneficial or detrimental to environmentally-related risk and resilience. Nor is the intention to map how growing inequality due to these double exposures is leading to greater risk (although this is certainly a central aspect of the background to this review). Instead, the intention is to propose a rudimentary conceptual framework for understanding the capacities and efforts of those who are resigned to globalisation and environmental change as the context of their lives and livelihoods. This includes both the rural poor and the meso-level institutions upon which they rely. The local characteristics of double exposures are presented as a potential entry point for future empirical research that can bring a deeper understanding of how climate risk in particular is likely to manifest itself within a complex and multifarious set of risks and risk management strategies at these scales.

This paper illustrates these perspectives within the specific nexus among climate, market and rural food security risks. At global level, and within many national policy frameworks, responding to climate change, promoting market development and ensuring food security are the three main current development priorities. However, ‘coherence’ among these policies is often lacking. Most notably, many new food security initiatives fail to take into account the ways that the rural poor and local governance structures are

responding to both market trends and climate change in an integrated or perhaps fragmented manner. An assumption of this paper is that one way to find greater policy coherence is by recognising that the rural poor are managing these risks simultaneously. This means that if poverty alleviation is to contribute to vulnerability reduction, a better understanding of the management strategies of the rural poor is essential.

While focusing on the double exposures of climate and globalisation risks, it is important to stress that even these broad labels do not encompass many of the risks faced by the rural population. Over the past decade seismic risk has been the primary cause of disaster-related fatalities, compared to other natural hazards (IRIN 2010), as exemplified by the December 2005 South Asian earthquake and tsunami and the January 2010 earthquake in Haiti. These hazards are also part of wider risk multiplication processes, since the impacts of earthquakes and volcanoes relate to demographic strains, pressures on and competition over natural resources, changing technologies and shifting levels of political commitment to addressing these factors. This paper focuses primarily on climate and globalisation aspects of risk as a point of departure for understanding rural risk multiplicity in relation to food security, but this is acknowledged as being only part of a bigger and more complex set of factors.

Perceived risk

This paper maps how different aspects of risk are perceived and addressed at different levels, with a focus on the implications of wider policies for local action in rural areas. The intention is to identify where there may be entry points for using research to increase understanding regarding what cli-

mate change as a 'risk multiplier' means for development policy at local level. This alternative approach to risk thus explores entry points for a different kind of discourse on climate risk. It is hoped that a shift from vague and emotive labels and claims of attribution to analyses of how diverse risks are (and could be) managed locally, can reveal opportunities for greater understanding and ownership of climate adaptation goals by a range of actors in local government, farmer organisations and others who are not currently in the climate loop. Opportunities are also identified for how to better relate current thinking within environmental circles with local development agendas, i.e., where there are needs and opportunities to better align environmental governance with broader local governance associated with economic and agricultural development and risk management.

This is a very different point of departure than that applied in most of the current discourse on environmental and climate governance. Much current research on local environmental governance tends to concentrate on the interfaces among (a) environmental/climate science, (b) legal/regulatory reforms, (c) monitoring, reporting and verification (MRV) of payments for environmental services, and (d) local democratic and participatory processes specifically associated with environmental management. The conclusions and recommendations emanating from such research frequently consist of lists of directive statements about tasks to be undertaken by local government, civil society and local service providers. An underlying (but flawed) assumption with the prevailing environmental governance discourse is that these local actors are expected to be accountable to environmental authorities and are presumed capable of a radical

readjustment of their day-to-day responsibilities to address climate change. This paper pays particular attention to the ‘facts on the ground’ regarding meso-level governance in order to critically reflect on these unsound assumptions.

People acting within local institutions have other things to worry about and have little contact with or accountabilities to environmental actors. It is therefore at these meso-levels that the mismatches between climate and the broader risk agendas are likely to cause serious dysfunctions in the coming years. The discussions around COP15 regarding Reduced Emissions from Deforestation and Forest Degradation and Carbon Stock Enhancement (REDD+) exemplify how plans to address complex natural resource management regimes, including those with profound impact on food security, are being inappropriately subsumed under mapping exercises and schemes for MRV of environmental services. This paper assumes that local actors have other priorities and that their accountabilities related to food security, poverty alleviation and economic development are not likely to be overturned in the short-to-medium-term, regardless of the scale of new investments in climate change mitigation and adaptation. This paper therefore suggests that environmental governance may be more effectively pursued by finding ways that it can be integrated into broader governance related to food security and agricultural markets. Elements of a framework are presented for defining what such environmental governance might consist of, based on an understanding of if and how rural service providers, local government and the authorities/management structures they are accountable to, can be expected to act in response to new demands and information flows.

1.2 Potential research directions

Five entry points for aligning climate and development research on risk

The fragmented outcomes of COP15 can be interpreted as an indication of a failure to align climate policies with local development priorities. It is not possible to understand how people are likely to deal with new hazards if there is a lack of awareness about how this response is embedded in existing strategies to access food, to influence political processes, to sell products and to find employment. This working paper is intended as a contribution to developing a research agenda that will improve understanding of how ‘new’ climate risks are embedded in how people are responding to ‘new’ risks related to, for example, market access and conflicting claims on natural resources. Research into these topics needs to start with digging deeper into how ‘double exposures’, and even more multiple forms of exposure, are perceived among those actors who were not at the table in Copenhagen. Understanding and respect for the way that local actors are weighing and prioritising their responses to different forms of risk can contribute to bridging the trust deficit by aligning policies with the concerns of the people for whom those policies are being designed. The following are some points of departure for a potential future research agenda that can make such a contribution.

Knowledge about multiple risks in rural development and natural resource management should inform the discourse on the *possibilities and limits to local populations and local organisations as they adapt to climate risks by highlighting how they are already managing a range of risks*. An increased awareness of how addressing one set of risks (while perhaps ignoring others) could raise appreciation of how, despite new investments, the rural poor will still be at risk. This

is important now due to growing tendencies among researchers and some policy makers to present sweeping and simplistic normative statements about putting climate change at the top of the agenda. Research that reveals people's hopes and fears related to (a) responding to a range of hazardous events, (b) managing dwindling access to natural resources, and (c) dealing with increasing market demands, may suggest more constructive alternatives to climate policies that are predicated on a *tabula rasa* at local levels.

A useful structure for empirical research into multiple risks would be to take a territorial approach by focusing on a range of factors within specific *areas experiencing disaster risk, stress and potential collapse of livelihoods*. Hotspots such as the Bangladesh chars, the coastal areas of Vietnam, areas reliant on agricultural products that are expected to become unviable (coffee in Uganda) and various arid and semi-arid lands would be obvious options for such research. In the Mekong Delta, for example, research could compare local and national response to increasing recurrent droughts and floods (interior provinces), the mounting salt-water intrusion (coastal provinces), and increasing livelihood stress in the new residential areas that have been built in response to these risks. These factors could be juxtaposed against the rapidly expanding urban economy wherein globalisation-driven migration may be the most important way that households are managing risks.

An example of a research area that could yield deeper insights into the ways that the policy discourse could be better aligned with local perceptions of risk would be to look at *questionable 'win-win' policies that ostensibly combine different development and risk reduction paradigms, with a focus on how they are perceived and managed within meso-level institutions*. This could include, for example, analysis of how agricultural ex-

tension services react when confronted by directives that assume synergies between environmental protection and food production goals, or when they are assigned tasks to promote new 'sustainable development models' that need to be adapted to the different forms of resource access that diverse groups of the rural poor require for managing different risks. Such a multiple risk (and multiple opportunity) frame of analysis could also help to overcome flawed policy assumptions that portray community-based natural resource management interventions as presenting 'no regrets' in relation to goal fulfilment, or as constituting easily implemented "low hanging fruit" (Frühling & Warfvinge 2008). Such research could link new empirical analysis of these forms of programming to past findings from research into natural resource management and environmental governance in relation to conflict, fragile states, inequitable power relations, corruption and (above all) limited local capacities.

The areas of research proposed here concentrate on the political economy of risk management within the governance of natural resources. This will inevitably lead to a focus on *the centrality of resource access and tenure in understanding multiple rural risks*. An example of an entry point for such research could be to reflect on the experience with using disaster risk mapping within local development processes. A common weakness in these efforts has been an imbalance in the ways that risk is portrayed in these maps. Hazards are usually clearly presented, but considerably less attention tends to be paid to the diverse forms of vulnerability experienced by men and women, different ethnic groups, different age groups, and (especially) between the rich and the poor. Vulnerability is ignored due to the complexities of analysing differences in resource access and how this impacts on

the risk-poverty nexus across scale, sectors and timeframes. This area of research would be a way of highlighting both the need and the challenges that are likely to be faced in efforts to take into consideration the shifting landscape of risk, including climate change, trends toward commercialisation, land grabbing, etc., which are changing the way that resources are accessed and managed.

Another related research area would be to *map the implications of the ways that agriculture is being resituated in new climate and other policy frames*. The tendency in the new climate architecture to primarily situate agriculture as an add-on in REDD+ modalities seems to treat opportunities and risks-related food security as an externality, just as commercialisation policies portray environmental management as externalities. The potential for synergy exists, but achieving these synergies will rely on closer attention to how these externalities are framed in national policies and how (or even if) the local and non-state actors that dominate agriculture are themselves able to combine different sets of incentives and manage the potentially high transaction costs in these alternative development models simultaneously. National-local case studies could provide greater insight into what the calls for synergy mean in practice.

Research on risk management as a cornerstone of environmental governance

A research programme built on these different but related areas of analysis would contribute to a better understanding of the institutional and human resource constraints for local governance in relation to multiple risk. Given the increasing array of policy directives placing arduous demands on local actors, particularly in climate ‘hot spots,’ this would be an opportune time to synthesise and analyse these demands and their implica-

tions for the decentralised capacities that will be required for addressing climate adaptation, together with adaptation to market and other risks. This would also involve consideration of if and how the emerging climate adaptation architecture is likely to change these dynamics. A range of sectors and agencies could be included in order to synthesise lessons of governance in decentralised natural resource management for risk reduction and climate adaptation. Case studies are needed to understand how environmental governance is manifested in the roles of, for example, local development committees, agricultural extension services, agencies engaged in community forestry, those responsible for mitigation programmes, farmer organisations, insurance companies and others. This would be a way of contextualising the prevailing hubris about the tasks that local actors are expected to implement. Comparative case studies could bring out how seemingly unrelated policy priorities, such as value chain development and commercialisation, impinge on multiple risk management. The results of such research could thereby better situate climate change adaptation policies within an understanding of what factors are already dominating the priorities of rural municipalities, businesses and civil society.

1.3 Structure of this paper

The second chapter of this paper presents a brief overview of basic concepts relating to climate and other rural risks and an admittedly partial typology of types of risks facing the rural poor. One reason that emotive and amorphous labels have taken the forefront in discussions of risk is that the imperative of responding to ‘crisis’ can gloss over the very different types of risks and crises that are occurring (perhaps simultaneously) and

the differing capacities and motivations of those people, organisations and institutions that are dealing with these risks. Given prevailing pressures to rapidly scale-up response, the typology in this paper also frames risk management within consideration of institutional capacities and vulnerabilities, in both so-called fragile states and even in the more fragile institutions within countries that are not generally categorised as such, most notable in isolated rural areas.

The third chapter presents a framework for understanding how risk and development come together at local levels from an actor-oriented perspective and looks at 'pro-poor growth' and 'community-based' paradigms for rural development and vulnerability reduction. The former is the locus of most government policies for pursuing benefits from globalisation. The latter is the preferred modus operandi for those organisations that frame response to climate risk within a concern for the negative effects of globalisation. The assumptions behind these approaches regarding rural risk are contrasted in the chapter. Also, ideas are put forth for analysing how these approaches intermingle within local development praxis. The intention is not to suggest that a new paradigm is emerging, but rather to provide a better understanding of how seemingly contradictory policies are together impacting on how risk is conceptualised and managed within meso-level institutions.

The fourth chapter looks critically at how the food security-climate nexus has been portrayed and managed in development research, policy and practice. In the response to the 2008 food price crisis, climate risk has been primarily portrayed as being related to agricultural production and productivity levels. This is different from how food security is framed in most discussions of local economic and agricultural development, where

entitlements to food through livelihoods are generally the primary concern. These livelihood factors are in turn related to the risks and opportunities inherent in the globalisation side of the double exposure dichotomy. As such, food security is a clear illustration of how risks are multiplied, and also how the response to food security crises may be out of touch with the ways that these factors come together in decisions about accessing employment and having enough to eat. The discussion of food security in this paper thus contextualises production issues in relation to the entitlement and livelihood-related risks facing the rural poor. This includes how climate, as a multiplier of both production and a range of other risks, is linked to the relation between food production and livelihood security.

In order to understand how climate multiplies different risks related to food insecurity, this chapter also analyses the ways that some local actors are involved in managing these risks. The discussion reviews the situation of different public, private and civil society actors engaged in marketing, value chain investments, agricultural services, those providing (or expected to provide) market and climate information, and the local organisations involved in promotion of seeds and other forms of assistance in response to food security crises.

The paper concludes with suggestions for how greater attention to the nature of the social contract among local-level actors with regard to risk management could provide a conceptual basis for 'reconnecting the dots' between the discourse on climate-related risk and other aspects of developmental risk. The social contract frame of analysis can provide a way of starting with recognition of the centrality of local social, political and economic relations in how people respond to fears and

pursue high or low risk opportunities. This can offer an alternative to the highly normative discourse about what local institutions 'should do' that characterises much climate-related analysis of these issues.

2. TOOLS FOR CONSIDERING RISK

2.1 Terminology

A starting point for understanding the ways that climate change may multiply risk is to consider the different forms of rural risk and how these are shaped by the relationship between the changing array of hazards and the changing nature of vulnerability. Both hazards and vulnerability are being affected by climate change, but in different ways. In order to understand how risk is constructed amid hazards and vulnerabilities, a broader perspective than climate is necessary.

Hazards are the obvious focus of attention when discussing climate change due to the relative clarity of predictions (albeit with significant margins of error) surrounding trends and prevalence of extreme climatic events. Hazards are easy to map and label as the culprit behind human suffering, and evidence related to climate change, even where that evidence points to uncertainty and variability, make 'flooding' or 'drought' the obvious villain. This, however, is just one side of how risk is multiplied. Over-attention to outside hazards can distract attention from the vulnerability of a given household or population and how they choose to manage their vulnerability. Too much concentration on hurricanes, for example, can obscure the factors that make people vulnerable to these hurricanes and how they try to manage that vulnerability.

Vulnerability is a social, political and economic construction. Vulnerability is about,

for example, the capacities and institutional relations that constrain what crops people can grow and influence their range of livelihood options if those crops fail. It is determined by the social, political and economic factors that determine the benefits they can gain from growing those crops and the likelihood that those benefits can be drawn upon with some degree of reliability in times of stress. Vulnerability is an outcome of how societies and individuals prepare for events that are not part of the standard script of development, such as too much rain or too much production of a crop on the other side of the globe leading to collapsing prices. An acknowledgement of the vulnerabilities of a given sector of the population to different hazards is also an acknowledgement that the development models on offer are not inclusive and that buffers, in the form of social and trade protection, may be weak or non-existent.

Risk is constructed in the interplay of hazards and vulnerability. In the double exposure metaphor, it is seen as being a matter of who can withstand the ravages of global change related to climatic or market hazards. Risk juxtaposes hazards with the nature of vulnerabilities, and perhaps also provides a basis for reflection over the accountabilities of government and other societal actors to do something about these forms of vulnerability.

The realisation that most efforts to manage climate risk take place within localities has drawn attention to the importance of processes of so-called *autonomous adaptation* to climate change along with the *adaptive capacity* of different actors. Before the emergence of concerns related to climate change, similar concepts were commonly labelled *coping capacity*. When autonomous adaptation, adaptive capacity and coping capacities are empirically analysed, it becomes apparent that adaptation to climate change is just part (in many cases a

small part) of how people are likely to adapt to the changing landscape of risk. These concepts are not just important for understanding the range of capacities that people have, but also for understanding why and how these capacities are increasingly overwhelmed. Lessons from past research into coping capacities tended to conclude that people have surprisingly effective ways to survive in the face of extreme risks, but also that many forms of coping involve depletion of resources that are needed for future development. With the increasing levels of risk related to climate change and the ways that climate multiplies other risks, the limits to autonomous adaptation and local adaptive capacities are becoming even more apparent.

These limits to autonomous adaptation and local adaptive capacity are often analysed through the dichotomy between *covariate* and *idiosyncratic risk*. Covariate risks are those facing localities, nations or large social groups and are usually associated with disasters or systemic shocks. A risk is covariate in terms of the extent to which it overwhelms societal functions to manage risk. Idiosyncratic risks are those facing a limited group of people or a single household. This distinction is essential for economic analyses of risk exposure and to understand and estimate the vulnerabilities and capacities existing at different levels to manage and cope with a given hazard. It is also a way to better understand the relationship between household vulnerability and wider hazards.

At the same time, this distinction may be problematic in terms of drawing attention to multiple risks where idiosyncratic risk (related to household food security, for example) and covariate risks related to broad climatic factors come together. It may also distract attention from how some people find ways to benefit from risk, e.g., how local adaptive

capacities can consist of leveraging new comparative advantages, when other producers experience stress and when markets otherwise become more lucrative. A crop that (for climatic or other reasons) is too risky to plant for one farmer may be an economic opportunity in another locality. The differentiation between covariate and idiosyncratic risk is a useful tool, but may ultimately explain more about the nature of hazards than about how people deal with their respective vulnerabilities and capacities.

Another aspect of risk that is important to understand is the shifting relationship between large and dramatic hazard events versus small, slow-onset and/or seemingly mundane risks. Media and political attention related to climate change have tended to focus on predictions of increased occurrence of *intensive risk* as manifested in the large sudden-onset disasters that are triggered (in part) by extreme climatic events. This is important, but has tended to overlook *extensive risk*, the many climate-related slow-onset and small recurrent disasters which are expected to have far greater impact on well-being and food security than major, headline-catching events (de la Fuente et al. 2009). Covariate risk may seem to be primarily associated with intensive risk, but the idiosyncratic risks associated with extensive risk are becoming covariate, as societies and governments are becoming battered with more recurrent extreme events. The cumulative effect of what at first might appear to be extensive idiosyncratic risk may become covariate. These extreme events may consist of climatic hazards, market volatility or chronic conflict, or combinations of all three. Humanitarian response to climate-related disasters may provide significant impact where a major disaster mobilises national and local authorities (along with donor interest), but the growing need to address climate-re-

lated extensive risk is unlikely to benefit from such levels of institutional engagement. Management of extensive risk is more dependent upon existing local adaptive capacities.

Climate change has drawn attention to the existence of *tipping points* where gradual changes in the environment, paired with ongoing degradation, chronic conflict and/or repeated extreme climate or market events make past livelihoods, settlement patterns or natural resource management regimes untenable. These tipping points usually come as surprises, since the multiplicity of factors that come together to cause these radical changes are not on the radar screen of researchers and policy makers who are oriented toward following probabilities related to individual indicators and bell curves (see, for example, Taleb 2007).

There has been a growing tendency to describe a range of tipping points as being primarily related to climate change alone. There are reasons to question this. It is tempting to associate cataclysmic events with a single causal factor, but it is likely that these events have multiple causes. For example, many farmers are finding that they are producing 'doomed crops' due to difficulties producing traditional products in a changing and highly variable climate. This may not only be because of changing weather patterns, but also because of resource degradation caused by population pressures, changing consumer preferences, emergence of new retail channels and food safety requirements. Tipping points are happening, but not necessarily due to the simple reasons popularly portrayed.

2.2 A brief typology of rural risk

A basic premise of this paper is that there is a tendency in the discourse on climate-related risk to 'reinvent the wheel', while also ignor-

ing lessons of the past. It is therefore useful in a paper such as this to review what was known about rural risk before climate change entered the equation. The following is an admittedly very broad-brush typology of rural risk factors, presented as a reminder of how risk was (and still is) perceived outside of the climate discourse. This brief summary is not intended as a comprehensive analysis of the myriad of multiplying factors among these different risks, but hopefully provides a rough orientation regarding most of the factors that need to be considered in moving from a double exposure frame of reference to an analysis of multiple exposures.

Climate or weather?

The attention currently being given to climate change has been frequently accompanied by claims about causal attribution of a range of weather phenomena to climate change. It is seemingly self-evident to point out that rural people, especially those dependent on agriculture and livestock husbandry, have always been faced with weather-related risks, and risks related to cyclical climate patterns. For them, there is often little difference between how they manage these 'old' patterns of droughts and floods and how they consider potential response to climate change.

Climate change may primarily become a new and important issue for the rural poor if they perceive that climate change represents a tipping point wherein past coping strategies become futile. They may also find it necessary to change their livelihood and natural resource management strategies in response to increasing frequency of extreme weather events and unpredictability of weather due to climate change.

Attention to 'normal' climate cycles has been overshadowed by the polemic debate between those who support or deny conclu-

sions that human-induced climate change exists. Those who deny the existence of climate change base their claims on analyses that label these phenomena as 'normal' climate cycles. This working paper does not aim to engage with this debate, but it is important to point out that the choice of how rural risk is labelled is related to this heated meta-debate.

Demographic pressures and migration

Although this working paper does not assess the very different issues related to how climate change is impacting on urban risk, it is essential to point out that one of the most popular and effective strategies that rural populations have for reducing their risks is to move to the city. This draws attention to the fact that a significant proportion of what is today referred to as autonomous adaptation to climate change can also be seen to be an extension of long-standing trends related to how population pressures lead to changes in local natural resource management and urban-rural linkages.

When rural populations increase, people often respond to the risks inherent in increasing scarcity of the resources they need for extensive agricultural production and natural resource management systems by adopting intensive resource use regimes that generally make more effective use of land and water resources. Many aspects of these long-standing responses to demographic change are mirrored in new recommendations for climate change adaptation. People are being advised to do what they have always done when faced with increasing pressures on resource use.

In addition to changing natural resource use, people respond to scarcity-related risks by strategies wherein all or part of the family migrate to urban areas, emigrate or take seasonal employment in urban or rural areas,

often in commercial agriculture. Remittances are increasingly recognised as the most important way that the rural poor deal with both extensive and intensive risk (Savage & Harvey 2007). They are also a hidden factor in how risk that would seem to be covariate is actually managed surprisingly effectively with help from relatives outside the disaster zone.

These migration trends have frequently been described as either maladaptation or as evidence of a failure to preserve rural livelihoods, but they nonetheless represent the most common and obviously effective measure by which people manage risk. There are initial signs of a rethink in this regard (Barnett & Webber 2009), but distrust of globalisation, combined with pastoral romanticism, has meant that not enough has been applied from existing knowledge about demographics, migration and risk in discussions of climate risk.

Risks related to resource scarcity and implications for tenure and stewardship

A significant body of research exists on the dichotomy of covariate and idiosyncratic risk in relation to the ability of local customary institutions to respond to hazards (Dercon 2004). Much of this research points to the importance of understanding inequality in access to natural, financial and social capital as the key to understanding if, how and for whom these institutions actually manage risk. Broad and optimistic claims about the role of 'communities' in climate and other risk reduction deserve closer analysis with respect to these findings.

One common conclusion of research into natural resource tenure and stewardship is that formal land tenure may be beneficial in terms of encouraging investment in long-term risk management and in responding to

projections of future (climate) risks. But that is only the case if legal institutions are strong and inclusive, which is rarely the case.

Efforts to intensify, formalise and commodify use of natural resources, often linked to commercialisation/globalisation, may disenfranchise those who have used these resources to manage risk in the past. It is common that women lose control of land and other resources, especially those used for household food security, when these changes occur. This is often cited as an example of how prevailing development paradigms may actually increase risk in general, as women shift from being smallholders to agricultural labourers, sometimes with lower wages than men (Müller & Patel 2004). There is a danger that the formalisation and commodification that accompany payments for environmental services may have similar negative impacts.

So-called 'land-grabbing' has recently attracted attention as a catchword for a variety of practices that involve a transfer of tenure over resources from local people to large entrepreneurs or foreign governments. It has effectively become a symbol for the nexus of climate, globalisation and food security risks. Fears about the effects of climate change are driving wealthy countries to 'grab' tenure rights, and entrepreneurs are speculating that resource scarcity will lead to higher food prices, and with that, higher profits for those who control land.

Market-related risk

Market orientation in rural economies has been blamed for increasing risks due to intensified exploitation of scarce natural resources. It has also been acclaimed as the main factor encouraging growing rural populations to shift from extensive production methods to more 'efficient and sustainable' intensive methods and for providing a wider

range of livelihoods by which risk can be spread. Polemics and finger pointing have tended to overshadow balanced analysis of the market-related trade-offs between the different sets of risks in intensive versus extensive production and between protecting past livelihoods versus creating new ones. In many respects, the double exposure dichotomy is problematic for related reasons. It highlights the risk exposures, but is generally weaker as a basis for understanding the opportunities of people who adopt completely different livelihoods.

There are many examples of how engagement in markets has led to a mix of increased and decreased risks. Intensified horticultural production, for example, has undoubtedly led to movement of people to settle in river valleys with high risk of flooding. At the same time, a proportion of the population has become less reliant on unreliable and risky rainfed upland production and those who have moved to such areas often have greater access to alternative employment in these more densely populated areas when floods destroy their main livelihoods.

This is further complicated by the fact that market-driven intensified natural resource use may marginalise those reliant on seasonal or communal exploitation of resources that in the past were common property. Pastoralists may lose access to off-season grazing on flood plains and forest dwellers may lose access to non-timber forest products. These risks often relate to weak or inequitable local governance structures, which tend to side with those benefiting from intensified resource exploitation due to weak legal capacities to argue for customary tenure rights.

Value chain development is an explicit risk reduction strategy in that it is based on enhancing trust and collaboration within the value chain, reducing uncertainties (often

in connection with guaranteed markets and prices), and finding more effective ways for those who are engaged in getting products to consumers. In effect, it is a way of managing risks related to market uncertainty and volatility, factors that are not new but are expected to intensify due to double exposures. At the same time, the very factors that build trust among those who are included in the value chain are likely to increase risks facing those who are excluded. As mentioned above, gender roles may lead to exclusion from value chains and even the loss of resource tenure as well.

There are potential solutions for many of these aspects of market-related risk. Post-harvest processing and storage, as well as schemes to provide credit and related financial services (warehouse receipts) are examples of forms of intervention that have been used to counterbalance the negative effects of commercialisation on risk. Climate adaptation strategies could be informed by such experiences in light of the links between price volatility and weather volatility related to double exposures and opportunities.

Conflict and state fragility

Over the past decade there have been many calls to find greater common ground between those dealing with risks related to natural hazards and those dealing with conflict (Buchanan-Smith & Christoplos 2004). Management of these two inter-related sets of risks has tended to be addressed separately, even if (humanitarian) response has employed similar mechanisms and organisations. Recognition of the correlation between these forms of risk has been recognised and there has been some suggestion of causal attribution. For example, weak capacity to defend rights to land and other resources has been identified as aggravat-

ing conflicts and disincentives for long-term natural resource management strategies. The interplay of these factors has been cited as contributing to declining legitimacy of government institutions and overall state fragility, though this link has not been sufficiently verified. The complexity of these various factors and prevailing institutional divisions (in governments, aid agencies and academic institutions) has meant that the hypotheses regarding relationships between vulnerability to conflict and vulnerability to other hazards have been largely a matter for speculation rather than rigorous research.

As climate has entered the equation, there has been a plethora of statements and some research into the relationship between climate change and conflict. These statements and findings largely coincide with earlier statements about the links between conflict and other forms of risk, especially those related to drought and natural resource degradation. Without entering into an extensive analysis of this emerging theme within the climate discourse it can be confidently stated that much of the caveats highlighted throughout this paper with regard to simplistic and deterministic causal assumptions would seem to apply.

Seismic risk

Finally, as illustrated by the recent earthquake in Haiti and the South Asian tsunami of 2005, seismic hazards represent the greatest risk for populations in many areas of the world. At first glance it might seem that this is an aspect of risk with relatively few lessons to contribute to understanding climate as a rural risk multiplier. In terms of loss of life and property, seismic risk primarily affects urban areas. While this is largely true, given (a) the changing inter-relationships between urban and rural areas, and (b) the concentration of ru-

ral populations in areas near cities, coasts and markets (some of which are at risk from tsunamis), it would be misleading to disregard seismic risk as being only related to urban, non-climate-related risk.

3. RURAL RISK IN AN ACTOR-ORIENTED PERSPECTIVE

3.1 Institutions and access in risk management

Understanding prevailing institutions before designing new ones

The preceding chapter highlighted how risk is not a new issue in rural development. New climate concerns are, in effect, merging with and influencing pre-existing strategies for managing food security, market and weather-related risks. The ways that people are vulnerable to different combinations of hazards relates to the prevailing institutions that facilitate or hinder people's access to the resources they need to manage their own risk. The common observation that disasters have greatest impact on the poor, directs attention to how a lack of assets increases vulnerability, but it does not explain why. Nor does it explain the ways that some poor people are able to recover more quickly than others from differing forms of risk. It is only by analysing the institutional factors that mediate the access that poor people have to resources that resilience can be understood.

An actor-oriented perspective can provide an entry point for understanding the institutional frameworks that determine levels of risk (i.e., how hazards relate to vulnerability). This is particularly important when trying to understand the interplay between multiple hazards and the complex relationships between poor households and the local

level institutions upon which they rely. This can in turn provide better insights into the merging of pre-existing and new knowledge about how risk manifests itself at household level and within meso-level institutions with responsibilities for various aspects of risk management. Actor orientation is a way of contextualising risk analysis within an understanding of autonomous adaptation and the decision-making processes that frame adaptive capacity.

Locality first

Local perceptions of risk and the norms that are being put forth for national and international frameworks for climate (and other) risk management differ significantly. This is in part because various forms of risk come together at local levels in the actions of a limited group of actors dealing with concrete issues related to livelihoods, investment, etc. A crop failure is likely to be of concern to farmers, the local seed supplier trying to sell wares to farmers that are scrambling to replant, the extension service, the health authorities who have to deal with possible malnutrition, and the mayor. These different individuals may even all meet to discuss what to do. By contrast, at national and global levels different risks are managed by different sets of sectoral actors in a compartmentalised and comparatively abstract manner. For this reason, double exposures are nothing new to the rural poor or local government, but frequently overlooked at other levels amid policies and response procedures that are fragmented by sectoral divisions and administered within 'stove-piped' bureaucratic institutions. People manage their vulnerability by drawing on a range of capacities and resources, but the macro-level policies and institutions that mediate their access to those resources operate within a different logic.

Local government and other local institutions operate in the grey zone that exists between these two realities. They are faced with demands that reflect the multiplicity of risk, but they operate within formal structures that are ill-equipped to respond in a coherent manner. Little is known about how they manage these conflicting pressures and institutional dysfunctions. There is a rapidly growing body of knowledge about how vulnerable people are dealing with climate change as a multiplier of existing risk, but the strategies within local institutions in mediating between micro demands and the segmented macro political and administrative frameworks have received less attention. There is a tendency to blame local government, agricultural extension, farmer organisations or others for failures to live up to the expectations of both their clients and the macro-level policy makers. They are often simply written off as being 'weak' or 'corrupt.' This represents a black box that deserves to be unpacked.

There is a considerable body of research and practical experience with attempts at local public administration reform that could increase understanding of how greater responsibilities for addressing climate risk might (and might not) become part of local responsibilities. Experience with introducing disaster risk reduction methods for local government and watershed planning, for example, has shown that this can be managed within projects, but that sustainability without significant and sustained support from higher levels has proven elusive (Christoplos et al. 2010). Some efforts to 'fix' local institutions often even misjudge which institutions to focus on, as recommendations to assign new climate responsibilities to governmental extension agencies tend to ignore the lessons that have been learnt in recent decades about the greater effectiveness of more pluralistic approaches working with

a range of public, private and civil society actors (Christoplos 2010).

This illustrates the tendency to narrowly support or blame local government (or specific government agencies in a given locality) in relation to risk management rather than delving into the range of institutions that constitute local governance. In most countries rural people would recognise that reliance on a single governmental agency for managing multiple risks is foolhardy, but such wisdom is easily ignored in the search for an 'implementing agency' to undertake specific climate adaptation tasks. There is well-justified fear among outside agencies in getting tangled in the web of local institutions, but this is unavoidable if there is to be alignment with local perceptions of risk.

Local governance trumps 'the science'

Another area where actor-oriented research into local institutional processes could provide important insights is to critically reflect on the tendency to look narrowly at scientifically measurable climate patterns, market trends or demographic changes to the extent that the question of how people are responding to a myriad of signals regarding risk is ignored. In order to understand how people are responding to complex sets of risks and choosing to apply their adaptive capacities, it is important to consider how climate change adaptation is conceptualised. This means looking beyond what is often referred to as 'the science' (of climate change) wherein risks are calculated, and states are then expected to implement appropriate policies. There is a need to complement 'the science' with an understanding of the complex institutional and governance factors that will determine what is appropriate and what is likely to be implemented (Adger et al. 2009). Realism has been lacking in assumptions regarding the under-

lying prospects for mobilising institutions to respond to climate change and what might trigger widespread and sustainable changes in risk management amid prevailing governance structures (Moser 2009). Greater empirical evidence is needed about how a range of actors engaged in local governance respond to signals about risk so as to inform efforts to align aid and national responses with existing local institutional strategies, particularly those of organisations that touch directly on the lives of the poor (Agrawal & Perrin 2009).

An actor-oriented approach to analysing how local institutions mediate access to resources for managing multiple risk must be cognisant of the paradigms and metaphors that guide policies and bureaucratic practice. The following sub-chapters describe some of the paradigms and metaphors that currently influence how different sets of actors deal with climate as a risk multiplier.

3.2 The rural poor as risk managers within the pro-poor growth paradigm

Building on the poverty alleviation agenda

The ways that climate risk will ultimately be addressed, will primarily be nestled within pre-existing and ongoing efforts to alleviate poverty through promoting local economic growth (with the possible exception of specific hotspots, where climate investments are likely to dominate). The policy norm among most governments and aid agencies regarding how to alleviate rural poverty is commonly labelled ‘pro-poor growth.’ This approach to development is being intensely promoted within modalities that are labelled ‘pro-poor aid-for-trade’ based on assumptions that synergies between economic growth and poverty alleviation are best achieved by enabling the poor to take advantage of the op-

portunities provided through globalisation (Christoplos 2009). This set of policy and programme norms claims that rural poverty can be best alleviated through agricultural commercialisation and promotion of diversified livelihoods. This includes a gradual reduction of reliance on subsistence farming and a growing reliance on non-farm employment and jobs working for larger farms. Some governments and aid agencies expect and encourage a relatively sweeping process by which most smallholders will leave their farms for other livelihoods. Others see smallholder farming as remaining viable, but only through a shift toward commercialisation and with that the departure of a significant proportion of the chronically poor from own-account farming, since they are unlikely to be able to compete in markets. The pro-poor growth paradigm is often justified by empirical evidence that many of the rural poor, particularly the chronically poor, have already left their farms. The deagrarianisation of rural areas, particularly in many African countries, where the majority of the rural population (and the great majority of the poorest of the poor) no longer own farms (Bryceson 2009) is seen as evidence that development efforts need to reflect new realities where the rural poor cannot automatically be assumed to be farmers.

Until recently, pro-poor growth policies and programming paid very little attention to risk. The Poverty Reduction Strategy Papers (PRSPs), which were the basic texts outlining how national governments and the international community would promote pro-poor growth, were largely blind to factors related to risk, and institutions such as the International Strategy for Disaster Reduction focused heavily on finding ways to insert brief references to risk in PRSPs (Venton & La Trobe 2007) as this was seen as the most effective way to

‘mainstream’ risk in development planning. This was (and still is) justified. Risk does need to be mainstreamed. Climate change adaptation efforts entered the development arena with similar assumptions about the need for mainstreaming. Adaptation was at first largely equated with retrofitting the pro-poor growth paradigm by ‘climate-proofing’ existing policies. This was criticised by those who pointed out that the risks to development from climate change were so profound as to suggest the need for rethinking growth (including, of course, pro-poor growth) and globalisation as a basis for development and poverty alleviation. The double exposure discourse has been partially inspired by the observation that people will not be able to adapt to climate change if they are unsuccessfully grappling with the failures of prevailing paradigms related to pro-poor growth. The financial crisis and the food price crisis of 2008 have fuelled these concerns further. The pro-poor growth paradigm has been strongly criticised in climate circles as a source of risk, rather than something that can be retrofitted into a strategy to manage risk.

Risk as a gap in pro-poor growth

From a local actor-oriented perspective this critique may appear correct as a partial description of the predicament of the rural poor. But it is not necessarily very useful as a guide for action. Some of the rural poor are likely to benefit from pro-poor growth and use new livelihood opportunities to spread their risks, whereas others may become further marginalised. Market-related livelihoods are risky, but they are nonetheless likely to be seen by many local actors as at least a partial point of departure, rather than an obstacle, to better manage risk. Persons who are landless may wish they had a farm, but might be more interested in finding a job or

moving to the city as a way of dealing with risk. The prevalence of the pro-poor growth paradigm thus suggests that much about how local actors manage multiple risks can be learnt from how risk reduction fits into efforts to attract investment, jobs and access to markets.

This may seem obvious when, for example, looking at the ways that these difficult choices manifest themselves in how the local farmer organisation, local government and entrepreneurs make decisions in a small rural municipality. Naturally they are trying to find some coherent way forward in relating to both the opportunities of pro-poor growth and the glaringly obvious risks in getting the crop to town when rivers or local markets are flooded. But at more macro levels the silos that separate climate change efforts from rural development have meant that there are surprisingly few analyses of how such small groups of actors are managing climate risk at the same time as they pursue local economic development. In order to understand how farmer organisations, entrepreneurs and local politicians may respond and relate to climate risk, it is essential to start by analysing what they are talking about already, and that is usually the opportunities and risks associated with pro-poor growth.

Governance efforts that may increase risk

Despite calls for more attention to be paid to risk, many key rural stakeholders are not explicitly or implicitly accountable for risk being reduced or managed due to the nature of national-level policies, aid-related incentives and the organisational culture of the institutions in which they work. Agricultural development bureaucracies have traditionally been tasked with encouraging, and in some cases even forcing, supposedly risk-

averse farmers to take bigger risks through specialisation and abandonment of agrobiodiversity in favour of high-yielding varieties. Their role and even the self-image of the people employed in these bureaucracies have been interconnected with efforts to bring order and structure to the ‘messy’ farming systems of the rural poor. The ways that climate change mechanisms are impacting (or failing to impact) on this organisational culture present an important area for research into the meaning of local adaptive capacity.

It is important to highlight that although prevailing organisational cultures can be a ‘problem,’ there may be a wealth of tacit knowledge within these organisations. They are involved directly in high-risk approaches to rural development and poverty alleviation. Many local actors therefore have considerable knowledge and a nuanced perspective on the relevance of different high- and low-risk strategies for different sectors of the population. For example, agricultural extension agents tasked with promoting high-yielding seed varieties may know a lot about whether or not the poor can manage the risks inherent in taking advantage of pro-poor growth, since they are engaged in negotiating with farmers about these choices as part of their daily work. They are a source of tacit knowledge about climate adaptation that is seldom recognised.

An actor-oriented perspective on rural risk is therefore not only of interest in terms of redesigning and ‘climate proofing’ policies for pro-poor growth. It can also provide an entry point for understanding how the accountabilities, attitudes and priorities of local stakeholders have been moulded by their organisational cultures and past policies and experience in balancing priorities related to growth and poverty alleviation.

3.3 ‘Communities’ as risk managers

Aligning the community-based agendas

Alternatives to pro-poor growth are being encouraged under the vague labels of ‘community-based adaptation’ and ‘community-based (disaster) risk reduction’. Common elements in these community-based approaches are a focus on social learning and group approaches, underpinned by definitions of development that are significantly broader than the economic bias of pro-poor growth. These concepts, and the policies and programmes that derive from them, rest on assumptions that ‘communities’ – rather than individuals, households, government agencies and businesses – are (or at least should be) the main drivers of local development and are the institutions that are best equipped to ensure sustainable natural resource management. These concepts reflect similar conceptual and policy frameworks that are emerging for dealing with resilience more generally, including post-conflict recovery and peace building.

There are some conceptual grey areas in community-based efforts that make it difficult to understand the interplay between these efforts and trajectories in economic development. Most notably, it is rare that the concept of ‘community’ is critically analysed within an understanding of the different actors, interests and power relations at local level. Adaptation of broader policies and concrete programming to community-based approaches has been difficult for the related reason that the inter-relationships and intermingling between the ‘the community’ and the specific sets of stakeholders (and their specific interests, resources and capacities) within these communities are usually left undefined.

Is it about communities or projects?

The parameters of this alternative paradigm are also difficult to pinpoint as it is being promoted through a myriad of small projects with a variety of conceptual frameworks. There are challenges in learning from the many examples that exist of these small, community-based projects. The research community has analysed these small projects in order to find evidence that there are alternatives to the much-criticised pro-poor growth paradigm. The research that has been done looking at these projects has frequently missed the forest for the trees in terms of critically reflecting on what an assortment of 'good projects' says about how local actors use these projects within their strategies to manage multiple risks. Most analyses of such projects are weak with regard to placing the 'solutions' presented within an understanding of the motivations, incentives, constraints and attitudes of the different actors that constitute these 'communities.' Analyses of how community-based adaptation is being combined with pro-poor growth could provide a more empirically grounded perspective on the role of 'communities' as risk managers, as it would inevitably involve disaggregating the roles of households, businesses and farmer organisations.

There are many examples of ostensibly successful small risk reduction projects that have remained reliant on outside support and have not found sufficient sustainable support and ownership from local actors (Christoplos et al. 2010). Realistic exit strategies for withdrawal of outside support are rare. Research is not needed to prove that these problems exist (though perhaps more ex post evaluations would be useful). By looking into the interplay between community-based and pro-poor growth modalities and how this shapes the motivations of different members of the

community, it may be possible to understand why this approach, which has been driven by the search for 'sustainability,' has proven so unsustainable.

The main Achilles Heel of community-based adaptation and risk reduction with regard to sustainability and national/local ownership is the tendency to take projects for granted and to portray actors as mere 'implementers.' Within the new development aid architecture, and as part of decentralisation efforts, projects are disappearing fast, with efforts increasingly channelled through ongoing programmes and local institutional structures. This would seem to favour community-based risk reduction efforts, but thus far it has not due to this 'projectitis.' It is therefore important to critically reflect on what can and cannot be learnt from the interfaces between the 'communities' that these projects assemble and the different spheres of interest and influence that exist at local levels.

There is some recognition that community-based efforts must start to transcend project modalities if they are to be taken seriously. Some small projects have shown that groups of local stakeholders are effective in managing multiple risk and that this management can be strengthened through investments in developing the capacities of these actors. However, the continued dominance of the pro-poor growth paradigm suggests that the implications of these findings for broader policies and programmes are not clear. Advocates of increased investment in community-based climate adaptation have often pinned their hopes that National Adaptation Programmes of Action (NAPAs) will provide the primary vehicle to both scale-up community-based efforts and place them on a wider footing. This has not happened thus far. Very few NAPAs have led

to significant levels of activity and the large majority of these programmes remain collections of sectoral projects designed with little input from ‘communities’ (Agrawal & Perrin 2009; COWI & IIED 2009).

3.4 Risk, local government and rural services

Decentralisation as a blind spot in policies for risk management

Projects are clearly an inappropriate point of departure for research into the role of communities as risk managers and the inclusiveness of pro-poor growth in a risk-aware perspective. A more concrete entry point may be to look at how trends in decentralisation and changing governance are impacting on the relations between local governments and their constituencies, and between local rural service providers and their clients. It is within these sets of relationships that project packages are unpacked and where vague calls for pro-poor growth result in inclusive or exclusive community development processes. It is at this level that the successes and failures of managing multiple risks are most apparent.

As mentioned above, organisational mandates and capacities are treated as a black box in many risk management plans. Climate policies and programming focused on environmental management often miss the mark already from the start by making plans for agencies without operational capacity to significantly impact on risk management. Environmental authorities are not likely to be leading on-the-ground climate adaptation and risk reduction efforts due to their relatively limited field-level operational capacities and weak integration into local environmental governance. It is therefore essential to explore how the local public, private and

civil society actors that are primarily associated with natural resource management, agriculture and local economic development are themselves responding to signs of changing risk and new information flows within their pre-existing perspectives, tasks, priorities and concerns. In order to understand how risk is managed, it is essential to take into account the capacities and motivations within local organisations to undertake different courses of action, including how they choose to use their limited resources when confronted by a myriad of short- and long-term challenges and high levels of uncertainty.

Putting local governance structures in the driver’s seat

Some rural service providers, such as agricultural extension, have already been drawn into efforts to address climate and food security risk through, for example, seed provision in agricultural rehabilitation and emergency food security programmes. Despite the fact that extension is usually treated as a mere ‘implementing partner’ in such efforts, it has a long-term relationship with farmers that includes a dialogue about whether those new seeds will reduce exposure to climate, market and other risks. Analysis of how a seed distribution is received and how it impacts on relations between ‘implementing agencies’ and their clients/beneficiaries (and indeed whether they are treated as ‘clients’ or as ‘beneficiaries’) can reveal much about multiple risks, including, for example, how farmers are combining changing technologies with efforts to maintain agro-biodiversity within their farming systems (Longley et al. 2007).

It has been proposed that more social learning among local organisations dealing with climate change adaptation is needed (Ziervogel et al. 2008; Agrawal et al. 2008), particularly when tipping points demand ability to ‘think

the unthinkable' and deal with comparatively chaotic frames of reference (Pelling & High 2005). The appalling response to Hurricane Katrina has been attributed to "an inability to develop a shared understanding of roles, responsibilities, capacities, and the dire circumstances that citizens were encountering" (Wachtendorf & Kendra 2006). The normative aims of multi-stakeholder social learning are intriguing, and there is some experience with pilot efforts at developing methodologies for this, but little empirical research has been undertaken into the potential for widespread adoption of social learning modalities within real local governance, given the prevailing political economies of local institutional change. Research can help to transcend stylised assumptions about the social learning processes within projects to look directly at how local government and local service providers are integrating new investments in risk reduction with their pre-existing agendas for dealing with risk.

3.5 Statist distortions

Risk management in the private sector

There is a significant statist bias in the discourse on risk and climate change, with a strong focus on checklists of things that governments must do to respond to climate change, to prepare for disasters, to ensure that markets work for the poor, etc. With regard to climate adaptation in particular, the statist bias manifests itself in directive statements about how states should spend the funds that are expected to be allocated for climate adaptation. The focus on how to channel public expenditure draws attention away from how non-state actors are investing non-public funds in private risk reduction strategies. When these investments are made, they

are treated with suspicion. The climate discourse frequently portrays globalisation and the market (and with it the private sector) as 'the problem' and state-led programming and projects are portrayed as the 'solution.'

There are some claims that the private sector is not much involved in climate change adaptation (Agrawal et al. 2008), but this perhaps reflects a narrow analytical framework on the multiplicity of risk. This statist bias belies the fact that most of the tasks and investments being made in rural risk management are emanating from the private sector – for better or for worse. Some of these investments, including insurance, storage and diversification, are pro-poor. Many are not. But they are all part of how risk is managed. If a company decides to relocate or an insurance company decides to withdraw insurance cover for a given area in order to escape what they perceive as a tipping point, this will increase the risks facing the population living there, but may reduce risks in the area where the business is being relocated. When new information is made available about climate risks, entrepreneurs must choose between investments in managing these risks through, for example, protecting buildings, or deciding to move the business elsewhere. The perceptions and priorities of the private sector are therefore central to understanding how climate risk is being integrated with other risk management efforts.

This points to the fact that the generation of more climate risk resilient livelihoods is primarily a matter of how businesses respond to risk. It is their investments that will determine whether or not there are jobs available in a given area and whether the poor who are faced with climate related crop losses and displacement are able to find alternative employment. The scale and nature of private sector development will also determine

whether or not wages can keep pace with rising food prices. Social funds, employment generation schemes and other related public interventions sometimes contribute to filling livelihood gaps when a drought or flood interrupts business investment, but even after major disasters the private sector generally provides far more new livelihoods than relief and early recovery efforts (Clay & Benson 2005; Christoplos 2006).

State fragility and climate-induced rural risk

Another aspect of how the statist bias in the risk reduction discourse can lead to distorted assumptions and priorities is in relation to understanding (and accepting) the limits to state capacities to govern. Capacity limitations are part of the landscape of links and gaps between management of climate change and other risks in fragile states, weak states and countries undergoing difficult transitions amid or after conflicts and disasters triggered by natural phenomena. There are significant correlations between climate-related risk and state fragility, as can be seen by the insecurity in many arid and semi-arid countries and in countries facing agro-ecological and demographic tipping points. Indeed, there is a growing policy and research literature on climate change as a threat to political security (Halle 2009). A weakness in this discussion has been the primary focus on causal attribution from climate risk to insecurity. The reverse, i.e., the ways that state fragility impacts on capacities to manage risk, have received less attention, as has the interplay between weak capacity to respond to risk and a weakened social contract between states and citizens, leading to deteriorating state legitimacy and capacity (discussed further in section 5.1. below). It is generally the vicious cycle of ineffective response to natural hazards, decreasing legitimacy (due in large part to failures to ensure

food security), increasing conflict and declining capacities that lie behind weak governance. Simplistic, one-way causal assumptions about climate change leading to conflict can be made more nuanced by empirical analyses highlighting risk multiplicity.

It can be stated with confidence that much of the new climate change adaptation architecture is likely to be dysfunctional in states with weak institutional structures. The statist bias in most climate change mitigation and adaptation plans has led to the generation of very ambitious checklists of things that government *must do*. These lists bear little resemblance to current understanding of what local government in weak and fragile states *can do*. Particularly in fragile states, it has been suggested that the good governance agenda may need to be modified to focus on “good enough governance” (Grindle 2005), but this concept has yet to significantly influence policies and programming related to climate risk. Even relatively strong states have not been able to muster the human resources for planning climate change adaptation and mitigation due to the complexity and novelty of the issues involved (COWI & IIED 2009). The MRV demands of REDD+, which may in the future encompass agriculture, are onerous. Countries in most need of climate adaptation investments are those that are least likely to be able to access and effectively utilise these funds. The gap between what can be done in weak states and declarations about what must be done to address climate risk is growing, which can have serious implications for understanding the prospects for strengthened risk management.

Finally, when the capacities of authorities at local level are extremely limited, environmental issues are rarely a priority for either these authorities themselves or for donors investing in post-conflict and post-disaster

programmes. Both governments and donors lean toward views that livelihoods and food security come first, the environment later.

4. FOOD SECURITY AND CLIMATE RISK

4.1 New food security-climate policies and old institutional realities

Food security and alignment between the pro-poor growth and community-based agendas

It is starting to be recognised that it will be important to “extend resilience theory to better accommodate human agency” (O’Brien et al. 2009), but it is less clear whether normative theories about resilience can genuinely make room for the human agency of those who are more concerned about eating tomorrow, selling their crops or accumulating wealth than they are about managing climate risk in the long term. When assessing the potential for more climate-aware food security efforts and more food security-aware climate adaptation efforts, a useful starting point is to look critically about where these ostensibly new perspectives suggest the need for new concepts and courses of action at local levels. There is widespread agreement that the two aims should merge, but little consensus on how this is best pursued in the perspective of local institutional realities. This chapter reviews food security as a strategically important example of how climate multiplies other risk factors from an institutional and actor-oriented perspective.

There is significant scepticism within ministries of agriculture and international agencies responsible for food security about whether new perspectives and modalities are needed to address climate risk, or if it is just another fad requiring insertion of new catchwords to

meet funding windows. Many feel that they have long been working to address issues such as climate variability and uncertainty, and that therefore information about how these risks are intensifying implies nothing more than a call to ‘work harder.’ Indeed, many community-based climate adaptation projects draw heavily on the community-based natural resource management (Ensor & Berger 2009) and the disaster risk reduction toolboxes (ISDR 2008) of recent decades. Those working with community-based approaches have found significant wind in their sails in calls to focus on food security within communities. Those promoting food security through pro-poor growth have been somewhat slower to jump on the climate bandwagon. On both sides of the fence there are common views that expanded interest in food security and climate change may result in expanded funding and (perhaps) ownership, but not necessarily much of a change in modalities.

So what’s new?

While undoubtedly true to a significant extent, this is just part of what climate change means for addressing food security risk. Protecting and promoting food security in light of climate risks will create demands on institutions involved in agriculture, disaster risk reduction and environmental governance to both do much more of what they have done before and also do things differently (Christoplos et al. 2009). The food price crisis of 2008 resulted from a convergence of non-climate risks related to speculation, demographic changes, pressures on limited natural resources, etc., together with increasing occurrence of extreme climate events and (perhaps) the arrival of tipping points in some agricultural systems. It was a reminder that the current and future landscapes of risk suggest the need for conceptual and operational frameworks that

are informed by the past, but which also include new perspectives.

A major difference in the 'new' conceptualisation of food security risk is that the topic appears to be taken more seriously. Governments are scared, and this is leading to more than just additional money. Even though it is too soon to confirm, there are some signs in the aftermath of the 2008 food price spike and COP15 of a move toward greater policy and programme coherence at international level related to (a) smoothing food consumption and production flows, (b) managing uncertainty through greater access to information, (c) expanding livelihood options, (d) improving food storage and handling capacities, and (e) providing more advice regarding choice of crop varieties and farming methods. These are all examples of what are increasingly referred to as 'no regrets' opportunities to reduce the impact of the variability and uncertainty that characterise climate-related food security risk. The term 'no regrets' is generally used to refer to interventions that address non-climate development needs at the same time as supporting climate adaptation, i.e., they address multiple risk.

It is important to ask why such interventions are only now being considered if their benefits are so obvious. It is here that the new approaches being promoted at international levels run into 'old' realities at local levels. 'No regrets' investments (sometimes also referred to as win-win, or even win-win-win strategies) are usually characterised as 'low-hanging fruit,' i.e., activities that can be quickly expanded when new climate adaptation funds are made available using on-the-shelf technologies. Attention to local institutional realities suggests that this is rather optimistic (Frühling & Warfvinge 2008). Sustainable risk management is not a quick-impact project and, despite claims about their obvi-

ous benefits, investments in national climate change adaptation efforts in least-developed countries have been painfully slow in getting started (COWI & IIED 2009).

This relates to capacities, which are in turn related to pre-existing priorities and mandates. The reason that these fruits are apparently not as low-hanging as they seemed at first is that the harvesters are busy elsewhere. New policies may be introduced, but they are largely overlaid on pre-existing institutional realities. Scaling-up food security efforts and adapting them to new emerging climate hazards will only happen if they can be related to the organisational priorities and capacities of the local and national agencies that are expected to play a role in implementing these tasks. There has been a lack of analysis concerning what these priorities and capacities consist of. For example, much advice from the climate change community related to food security culminates in calls for more agricultural extension and more climate information (Ensor & Berger 2009), but there has been very little analysis thus far of how agricultural extension institutions (where they still exist) respond to information related to climatic variability and uncertainty, when their modus operandi has usually been promoting standard production packages.

Disasters and food security

With respect to disaster-related food security risks, there are particular institutional dynamics and divisions that need to be considered. Here again, what is 'new' is that there is a realisation that the old divisions between different actors are no longer appropriate (in this case between development and humanitarian agencies and governmental departments). Disaster trends are ever more intertwined with chronic decline in food security due to reduced precipitation, glacial

melt and heat stress on crops and livestock, all of which generate both extensive and intensive forms of risk. All of these food security risks are being addressed by both humanitarian and development actors, albeit through different modalities. The divide between acute humanitarian needs and the factors that generate chronic poverty and food insecurity are becoming blurred. There are some who therefore suggest that a merging of response mechanisms is needed as well. The view that simple structures should exist whereby some agencies provide relief in 'disasters' and that social safety nets will respond to address chronic food insecurity as part of 'development', is seen as being out of touch with climate-related food security risk. In this new landscape of risk related to chronic decline, it is in many respects pointless to try to differentiate between acute and chronic food security. This has major implications for rethinking institutional mandates and operational structures (Parry et al. 2009).

Related to this, the appearance of tipping points, where gradual decline turns into collapse of livelihoods and agro-ecosystems, has not been on the radar screen of most governments or much of the aid community. It should be, as the collapse of livelihoods and consequent chronic food security emergencies in fragile states as diverse as Somalia, Haiti and North Korea are clear examples of tipping points (albeit not all related to climate change). These examples illustrate the difficulties of understanding how to approach the management of risk when a tipping point is reached and risk is no longer manageable. The difficulties of identifying humanitarian exit strategies in countries such as these are indicative of the problems that exist in determining responses to emerging forms of food insecurity.

THE MESSAGE AT COPI5 – NO AGRICULTURE, NO DEAL – BUT AGRICULTURE FOR WHAT?

The uneasy relationship between climate change and food security was an undercurrent in discussions at COP15. The slogan at the COP15 Agriculture and Rural Development Day was 'no agriculture, no deal', but in many respects the tone of this seemingly strident message was similar to that of other sectors looking for a piece of the post-Copenhagen pie. Discussions emphasised calls to bring agriculture into the mitigation architecture through a REDD+ mechanism that would include ecosystem services related to agriculture as a complement to forestry (Joint Statement 2009). Adaptation was mentioned, along with food security, but surprisingly little reference was made to what this might have to do with a social contract to prevent famine or reduce household food security risk, much less addressing the 'trust deficit' that plagued the conference. Potential synergies between mitigation and adaptation were duly mentioned, but there was no sign of a clear agenda regarding what those synergies might consist of, which aspects of adaptation were going to be given priority, and ultimately whose food security would be ensured through such synergies.

It may be true that without agriculture there will be no deal on climate change, but the deal with agriculture will probably need to be anchored in genuine commitments to addressing multiple risks to food security and livelihoods. This would require thinking beyond adding

plus signs on the back of REDD agreements. It would require finding ways to foster ownership among actors in agriculture that are currently out of the loop in the climate discourse and who are unlikely to be tempted to get into the loop if discussions remain focused on carbon emissions and forestry.

4.2 Food security risk, agro-biodiversity and natural resource governance

Global production and local livelihoods

Projections about probable declines in global and national production levels per capita, which in some regions and countries are expected to be severe due to climate change, are driving much of the current interest in food security. The 2008 global food price crisis was (rightly or wrongly) commonly attributed to these production trends. It was popularly portrayed as a forewarning of the risks that will accompany future climate change. This narrative assumes that food security is about covariate risk related to aggregate global food supplies, related primarily to food production and productivity. This is in contrast to the narrative on food security in the pro-poor growth paradigm whereby, for households and individuals, food security relates to their access to entitlements to food, and that this is mostly related to idiosyncratic factors in a given household's livelihoods.

The dichotomy between these two narratives has major implications for policy response. The food-production-focused discourse tends to emphasise the need for higher-risk strategies based on specialisation

and greater adoption of input-intensive high-yielding crop varieties (in order to increase aggregate national and global food supplies). The latter may instead suggest the need to reinforce the ways that people have traditionally managed risk through planting a range of crops and investing in longer-term natural resource management efforts to preserve the productive capacity of their farms, such as the moisture retention of their soils. Furthermore, an entitlement focus may also involve greater reliance on off-farm employment, since with commercialisation there may be increased investment in specialised agriculture and processing.

At local level, these contrasting strategies and concepts come together, and are often pursued simultaneously, but not necessarily as part of a coordinated or coherent strategy. Policies and practice today tend towards a messy mix of promotion of three approaches: (a) production (for national and international goals), (b) diversification for risk spreading (to build on more traditional household food security strategies) and (c) diversification into off-farm employment, often on larger commercial farms (which may be seen as a way of achieving both goals). The trade-offs in combining these disparate and sometimes contradictory goals are rarely confronted in policy declarations, but are inevitably part of how food security and climate risks come together at local levels.

Local risk is different

The return of narratives of production and productivity has been beneficial in ensuring that the broader and possibly catastrophic long-term impacts of climate change on the global agrifood system are in the spotlight. A danger exists that the response to global and national food security concerns may ignore or undermine the risk reduction strategies

of the poor. The return of attention to food production and productivity is in many ways a prime example of the difficulties of retaining awareness of the diffuse local drivers of multiple risk reduction when political and scientific attention are focused on the factors framing global climate risks. Coherence, and even synergy, would seem to be a matter of finding greater conceptual and practical alignment between perspectives on agriculture and natural resource management.

Community-based adaptation and risk reduction are commonly seen as being virtually synonymous with locally-led natural resource management. But in order to understand how food security and natural resource management come together, it is essential to recognise how vulnerable populations themselves are trying to balance long-term natural resource management with struggles to have enough to eat in the short term. Assessments of the outcomes of climate adaptation and risk reduction projects stress that ownership is dependent on (a) ensuring that these projects address the immediate and not just the long-term risks that they face, i.e., food security and disaster resilience must come first, and (b) anchoring such efforts in the work of local institutions, particularly local government and agricultural extension, since they must find ways to manage this mix of policies (Ensor & Berger 2009).

Much of the food security efforts that aim to combine pro-poor growth and community-based approaches look to traditional varieties, 'slow food,' non-timber forest products and other strategies based on better exploitation of biodiversity – agro-biodiversity in particular – as a 'win-win' method. These types of projects have attracted significant interest from the research community, but the nature of self-contained projects using 'implementing partners' has been an obsta-

cle to understanding the local institutional dynamics of these efforts. It is important to analyse how these kinds of initiatives are perceived by these erstwhile 'implementing partners.' Maintenance of agro-biodiversity may be part of how farmers manage multiple climate and market risks through natural resource management, but such strategies have generally been frowned upon in agriculture bureaucracies oriented towards pro-poor agricultural growth. Agro-biodiversity is difficult to combine with the efforts to promote bulk, uniformity and timeliness of production that dominate value chain development and pro-poor growth more generally. There is no simple solution to how to combine these approaches to more sustainable natural resource management with market development. Some strategies to manage risk may be combined with market-oriented production, but others not (Christoplos 2009).

These trade-offs between preservation of biodiversity to reduce risk and engagement in markets to access opportunities for new livelihoods are rarely considered in a balanced or transparent manner within discussions of climate change adaptation. A division exists between the nature conservation aims of a large proportion of climate change efforts and the focus of most ministries of agriculture on market innovation as a driving force in rural development. Claims are made from both sides regarding the supposed benefits of their respective paradigms for livelihoods and food security. This polarisation may draw attention away from how the rural poor themselves combine subsistence production and pursuing livelihoods through the market economy as part of how they manage natural resources and make use of their knowledge and resources related to biodiversity.

4.3 Food security risk in relation to livelihoods and subsistence agriculture

Gaps in the new food security agenda – lessons from the old

Given expected volatility related to climate change, demographics and markets, the food production challenge is in many respects the tip of the iceberg in relation to the underlying risks to the livelihoods that will provide food security entitlements. Despite this seemingly self-evident statement, the tendency to categorise climate change as an ‘environmental issue’, to be dealt with by ministries of the environment or meteorological authorities, has meant that the implications of climate-related food production policies for livelihoods have not become a significant aspect of the climate policies of most developing countries. These factors are not ignored by the food insecure themselves as they look for work. It is also apparent to local governments that are trying to attract private and public investments. At local levels, fears about jobs and crop failures are more concrete and immediate compared to the relatively abstract projections regarding climate change. This is important to stress, as it is within this interaction between private sector actors considering investments, local governments trying to attract them and the strategies of the food insecure in search of livelihoods that the most important decisions related to the food security-climate nexus are likely to be made. This suggests that livelihood-related support to managing climate risk should reflect what has been learnt in other livelihood support efforts, particularly with respect to how sustainability and targeting are reliant on an understanding of resource scarcity, prevailing markets and the role of local public and private institutions in underpinning the livelihoods of the rural poor.

BEYOND ROMANTICISM?

The ‘yeoman farmer fallacy’, wherein subsistence and semi-subsistence agriculture was expected to be a basis for rural poverty alleviation, has been largely debunked. Pro-poor agricultural growth policies and programming are increasingly focused on value chain development and in addressing the challenges in ensuring that the poor are able to benefit from these chains. Some observers feel that even these policies are still grossly over-optimistic. The assumptions that even commercial smallholders could or should be effectively supported to retain benefits from the new landscape of agribusiness are being criticised as being ‘romantic’ (Collier 2009). In this discourse, the entry barriers and risks of market agriculture are portrayed as being too great for smallholders, who are instead expected to be better off pursuing pro-poor growth related livelihoods elsewhere. Climate risk is seen to provide additional evidence that smallholder agriculture has no future, since only well-off farming enterprises are likely to have the resources to reinvest and rebound after extreme climate events.

Some ministries of agriculture, long eager to promote ‘modern’ industrial agriculture, have taken on this narrative, effectively declaring the livelihoods of the most vulnerable rural poor to be unviable, and therefore unworthy of further support. In these policy frameworks, the large numbers of smallholders is not a development priority but rather an indicator of under-development. Some donors have implicitly endorsed this view,

perhaps due to the lower transaction costs and greater and more measurable (national food security) outcomes that can be achieved with better-off farmers. The tendencies of donors to give priority to agricultural programmes that ‘pick winners’ after disasters and conflicts are indicative of this trend (Christoplos et al. 2010; Christoplos 2007). The implication of this call for abandoning ‘romanticism’ has been a growing gulf between household food security policies, on the one hand, and those focused on agribusiness and trade on the other.

Food security trade-offs in market-driven development

Market integration is indeed not a guarantee for the livelihoods needed to improve food security. It is part of the institutional environment that generates markets for both products and labour, whereby the rural poor may find ways to spread their risks. But it is not a panacea. Experience with market-oriented agriculture has shown that strengthened market chains will primarily benefit those households with sufficient assets to take advantage of new market opportunities, unless explicit attention is paid to working with frontline institutions, such as agricultural extension, to address the risks that poor farmers and entrepreneurs face (Christoplos 2008). Weather-indexed insurance, warehouse receipt systems and other interventions that increase access to storage and credit, together with relevant market and climate information, can perhaps help the rural poor to manage these combined market-climate-livelihood risks. Insurance initiatives have received particular attention in recent years, but as yet these types of

interventions have rarely been sustainably institutionalised and scaled-up within national and local structures (Warner et al. 2009).

It is important to consider food security through the lens of livelihoods, but at the same time recognise that much of the food-insecure rural population still relies on subsistence agriculture for a significant proportion of their livelihoods. Long-term trends suggest that subsistence agriculture is declining in importance and that even those households that are still partially subsistence-oriented are trying to improve their livelihoods through diversification (World Bank 2007). But in a context of high risk due to financial and food price crises, there is a growing acknowledgement that subsistence retains an important role, as at least a buffer in dealing with variability and uncertainty (Trivelli et al. 2009). This is not new. The collapse of the Marxist economies of Eastern Europe (Christoplos 2007) and the combined impacts of financial crises and HIV/AIDS in countries such as Zambia (World Bank 2007) have generated some measure of retreat to subsistence. It is unclear whether climate change and food price volatility are significantly changing these trends or if the overall trajectories of agricultural development will remain intact.

Any retreat to subsistence goes against the projections and policies of most ministries of agriculture, which have gradually shifted policies away from household food self-sufficiency and toward market orientation (see, for example, Swanson 2009). The guiding assumption in this pro-poor growth narrative has been that subsistence farming for food security is a maladaptive practice of ‘risk averse peasants’ who would find great livelihood and food security if they were to concentrate on commercial farming or other livelihoods. Awareness of the implications of climate change and the impacts of the food

crisis has begun to lead to some recognition of the importance of at least a partial subsistence buffer for those who cannot deal with market risks.

5. MULTIPLE EXPOSURES AND MESSAGES IN THE MULTIFARIOUS LANDSCAPE OF RISK

5.1 From (disaster) risk reduction to a reassessment of the social contract

Building back better?

Disasters are often portrayed as a sentinel indicator of the convergence of multiple risks. As such, increasing disaster risks could and should draw attention to how a range of risk factors come together in a very concrete manner. It may become apparent if and how risk multiplicities are understood and responded to by looking at decisions about priorities for disaster risk reduction and what ‘building back better’ after a disaster or a crisis means in terms of addressing future risks. The call to ‘build back better’ (which became a catchword in the responses to the South Asian tsunami and the Haitian earthquake) highlights the fundamental choices about what kind of society should be rebuilt, as it begs the question ‘what is better?’

This is not to assume that risk is necessarily at the top of the agenda when responding to disasters. Grand proclamations about disasters constituting a clarion call to do something profoundly different are made after most major disasters (see e.g., Christoplos et al. 2010), but these claims are rarely heeded and have in some ways distracted attention from the need to understand the implications of global and local climatic hazards and socio-economic trends for how local actors attempt to overcome their vulnerabilities. It is

easy to agree that we need a ‘transformation,’ but harder to agree on the direction of that transformation.

From relief to risk reduction

Discussions of the implications of ‘building back better’ are often framed as a choice between prevention of disasters (through risk reduction) and response. This dichotomy is frequently described in an either-or framework through claims that, due to the spiralling effects of climate change, demographic pressures, non-inclusive markets and resource scarcity, risk reduction must be the focus instead of (rather than in addition to) humanitarian response. Relief is increasingly portrayed as a dependency-creating and wasteful relic of the old aid architecture, which must be replaced by a convergence between risk reduction and climate change adaptation investments.

Decisions to put the uncertainties of longer-term reduction of relatively ambiguous climate risks before the immediate humanitarian imperative of addressing hunger and famine, may carry with it a new form of triage in terms of targeting risk reduction towards those whose risks can be most easily reduced (often those with the resources to possibly produce more food) rather than addressing the consequences of risks for the most vulnerable (e.g., the landless). Sweeping rhetorical claims tend to overshadow this triage. It is likely that frontline actors dealing with food security may have a very different perspective on ethical trade-offs, particularly on how to manage the balance between relief and risk reduction modalities.

Crisis and the social contract

Management of disaster risk is part of the social contract between states and citizens (Pelling & Dill 2009), and much can be learnt

from political responses to crisis. The failures of the state to live up to minimal responsibilities after Hurricane Katrina have been described as a breakdown in the social contract (Ignatieff 2005) and anger at the initial denial of state responsibilities in Nicaragua after Hurricane Mitch by the then-president Arnoldo Aleman were seen in a similar light (Christoplos et al. 2010). The 2008 food price crisis led to the fall of at least one government (Madagascar) as well as riots and social unrest in a number of countries. These examples highlight the perceived responsibilities of the state to respond to acute human suffering as part of how they respond to projected risks.

Particularly in fragile states, the entitlement to household food security is a central pillar in the social contract between states and citizens for managing risk. The state is legitimate in the eyes of those who have enough to eat. If the comparatively abstract risks of climate change are to be better related to food security, it would seem that this alignment of different aspects of risk reduction would need to be cognisant of the nature of this social contract (which is likely to differ from country to country and under different political regimes).

At the same time, the social contract of the state to protect private property and ensure economic growth has been portrayed as a pillar in the institutions that exclude the most food insecure and lock development efforts into unsustainable trajectories through 'business as usual' development models (O'Brien et al. 2009). People demand what they have come to expect from the state, and that would appear to be related to expectations related to these traditional responsibilities, rather than new and vague tasks related to climate change.

This suggests that it is important to gain a deeper perspective on the nature of the in-

terplay among these different aspects of the social contract between states and citizens, including how different (and perhaps conflicting) responsibilities are reflected within local and national institutional processes of building such legitimacy. Social contracts do not necessarily reflect 'sustainability' from an environmental perspective, but they may be at the core of sustainability in terms of addressing the institutional landscape of risk.

5.2 Re-connecting the dots

The detachment of the new discourse on climate risk from the old discourse(s) on risk more generally has fragmented approaches that must be brought together. This paper has hopefully provided some guidance in how to start reconnecting these dots, and also some pointers as to where there are knowledge gaps that must be filled if we are to better understand what is new and what is old when climate change multiplies risk.

The example of food security explored here, illustrates how the metaphor of double and multiple exposure has descriptive value in drawing attention to the need to better connect various forms of risk. In order to align research into these connections with the perceptions of those people who are simultaneously managing various risks and development models requires a wider palette of analytical tools and a somewhat different point of departure. The non-linear, temporally and spatially variable, inequitable and dynamic nature of climate change means that learning about how people layer their responses to different forms of climatic and non-climatic risk will inevitably be dialectical (Christoplos et al. 2009). Research needs to delve into that dialectical process as part of the process of reflecting on how it could and should influence policy.

Research has an important role in increasing understanding of (a) the multiplicity of risks faced by rural people as they pursue and protect their livelihoods, and (b) how they perceive and weigh the choices, obstacles and opportunities that they face. This involves a realisation that climate-aware development is not just a matter of ‘mainstreaming’ risk reduction measures into development so much as it is a matter of better understanding how, for many actors, management of multiple risks is at the core of their own development strategies. Research into the multiplicity of risk can break down stylised and misleading assumptions about ‘climate proofing’ by acknowledging that there are other factors that influence how people pursue development and confront climate change. Such research could provide an important counterbalance to the drive in the climate change discourse to design and transfer normative societal models at the expense of respect for the ways that the rural poor are already dealing with risk. It can also provide a more informed perspective on what parts of the new climate agenda are likely to be ‘implemented’ at local level, given prevailing, pre-existing and emerging concerns about other risks. Finally, it is a way of unpacking the equally normative discourse on globalisation, by starting with an awareness of the approaches of the different groups of the rural poor who are struggling to deal with changing, and often disturbing, demands and opportunities.

In addition to levels and sectors, there will be a need to connect the dots within the climate agenda itself. In light of the likely strong focus on REDD+ in rural climate change investments in the coming years, it will be important to explore how the new forestry-related investments will impact on rural risk, notably food security. It is perhaps too early to speculate on the outcomes of these invest-

ments, but it appears that food and livelihood security are likely to be treated as ‘positive externalities’ in mitigation efforts, with the notable exception of areas where stricter environmental protection efforts reduce risks related to natural hazards. Synergies are clearly possible between mitigation and many aspects of the development agenda, but there has been insufficient specific attention paid to synergies with risk management in particular.

This working paper suggests that the basis for a more empirically-grounded perspective on climate risk should start with greater application of what is already known about rural risk and deeper appreciation for what needs to be known about those who are managing these risks. There is no need to reinvent the wheel. The starting point should be critical reassessment of what is already known about risk from more of an actor-oriented perspective.

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