



THE MESO-LEVEL INTERPLAY OF CLIMATE AND DISASTER RISK MANAGEMENT IN VIỆT NAM



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ABSTRACT

Goals for climate change adaptation and disaster risk management are widely recognised as overlapping, but little is known about the dynamics of this interplay in the perspectives and practices of local authorities. An important aspect of this is how provincial, district and municipal level institutions comprehend and operationalise climate change adaptation frameworks against the backdrop of their past experience of responding to disasters. This is in turn related to how they provide services to risk prone populations. This research report describes how meso-level institutions in Việt Nam mediate between the different intentions and priorities embodied in national climate change and disaster risk management policies, and ongoing efforts of individual households and communities to adapt to environmental change and natural hazards. Research findings suggest that they are doing this in a context wherein past assumptions about the role of the state are being questioned, but where answers remain ambiguous. Findings emphasise the process of 'bricolage' that is underway, wherein different disaster risk and climate goals, rules and structures are combined. Some of these institutional changes involve innovation and others reflect path dependencies anchored in past societal roles.

INTRODUCTION

Recently there have been growing calls for greater attention in research and practice to understanding how climate and development policies come together at the interface between national policies and household/community adaptation. This is increasingly focused on conceptualising, defining and measuring resilience (Schipper and Langston 2015; Christoplos 2014). An important aspect of this is that of understanding the roles of provincial, district and municipal level institutions (Christoplos et al. 2009; Christoplos 2010). This is particularly pertinent where decentralisation is profoundly influencing implementation of climate change adaptation frameworks (Agrawal et al. 2009). As such, the research reflects earlier analyses of the 'nested' nature of institutions in decentralised natural resource management (Bartley et al. 2008).

The research presented in here is intended as a contribution to better understanding the growing and changing roles of these meso-level (primarily district, but also to some extent encompassing provincial and village) institutions in facilitating climate change adaptation and guiding the national and international climate investments that are expected to grow in the coming years. Special attention is paid to the evolution that is underway in the relative roles and responsibilities of environmental and agricultural authorities in both managing disaster risks and addressing the more incremental aspects of climate change. The shifting roles of the public and private sectors are also considered.

The objectives of the research have been to analyse the changing role of local authorities in providing an enabling environment for climate change adaptation. An underlying assumption of the research was that meso-level institutions mediate

between the different intentions and priorities embodied in national policies and ongoing efforts of individual households and communities to adapt to environmental change and natural hazards. The research explored the nature and extent of the engagements of meso-level authorities in climate change adaptation, as well as the factors and processes that stimulate, constrain or block their efforts to find innovative approaches to shaping climate change adaptation efforts to reflect local realities. A central objective of the research was to find an alternative entry point for understanding how international and national policies for formal, planned adaptation actually reach rural communities. Particular attention was given to the process of 'bricolage' (Cleaver 2012) that is underway, wherein different development, disaster risk reduction and climate goals, rules and structures are combined at meso-level. Some of these institutional changes display characteristics that can be described as innovation, while others reflect responses that are locked into path dependencies related to pre-existing roles of different agencies. These path dependencies are in turn anchored in the factors and relations that underpin state legitimacy.

This research was undertaken in central Việt Nam, which is particularly prone to storms and floods. In this area frequent typhoons wreak considerable havoc due to heavy rains and winds that have destroyed coastal and near-coastal homes, farms and infrastructure, as well as resulting in considerable loss of life and agricultural production.

Methods

This research is based on policy review and approximately forty meetings and semi-structured interviews with agriculture and environmental authorities at provincial, district and commune levels during the period 2012–2015, as well as a limited number of interviews with private sector actors and farmers. This was complemented by an extensive review of government policies and directives from both national and provincial levels. The document review included analyses of provincial climate change action plans to understand the gaps between plans and implementation, with specific attention to the role of local authorities in the planning process. The research was primarily focused on two provinces in central Việt Nam, Thừa Thiên Huế and Quảng Bình.

This research was conducted as part of a larger research programme on Climate Change and Rural Institutions with case studies in Zambia, Nepal and Uganda (see Christoplos et al. 2016) funded by the Danish Ministry of Foreign Affairs.

The context of climate risk in Việt Nam

The ways that climate change is perceived and addressed in Việt Nam reflect the country's character as a 'developmental state' (Gainsborough 2010), where the state takes a strong role in directing development, particularly in economic spheres. The broader changes in the development agenda described here are mirrored in the changing roles and responsibilities of the Vietnamese state in responding to and managing climate and disaster risk. Even if the central role of the state has never been in question, the nature of that role has been gradually transformed. A complex mix of social contracts for managing multiple risks related to natural hazards, markets and political volatility has both prevailed and changed. The developmental state in Việt Nam was forged in centuries of struggle, both with natural hazards and to maintain national independence in the face of Chinese, French and United States aggression. The Vietnamese state's legitimacy rests on providing political security, food security, ensuring growing livelihood opportunities and providing protection from natural hazards for its citizens. Managing the risks associated with climate change is part of the social contract (Christoplos et al. 2016).

Climate change is widely recognised as a threat that will test the resolve of the state. Việt Nam is already among the countries hardest hit by climate change, mainly through rising sea levels and changes in rainfall and temperatures (Bingxin Y et al. 2010). Storms are one of the main natural hazards. In the period 1954–2006 there were 380 storms and tropical depressions affecting Việt Nam. Storms often lead to tidal surges which, accompanied by long periods of heavy rain, cause flooding.

Việt Nam has a long tradition of constructing sea and river dykes to protect the population and their agricultural land. Due to its location and very long coastline, sea dykes are very important for Việt Nam to protect low-lying paddy areas from storm surges and other forms of flooding. As early as the Ly dynasty (1009–1225) sea dykes were built along the banks of the Red River, Ma River and Lam River in the northern and central regions. Since that time the construction and repair of dykes has been a major priority in disaster risk reduction efforts of the country. Over the centuries, the building of dyke systems has been so fundamental to protecting the population as to become associated with the culture and economy of the nation (Nguyen Nguyen Hoai 2011).

Despite the obvious high levels of climate risk, seasonal floods in the research areas in central Việt Nam are not unusual. Farmers in central Việt Nam are so accustomed to floods that they generally do not perceive production losses due to heavy or unseasonal rains as a 'disaster' per se (Beckman 2006), but rather as part of the constant livelihood risks that they face. However, as will be described below, due to demographic pressures and new economic opportunities the population in the coastal areas of central Việt Nam is growing increasingly reliant on high risk livelihoods such as aquaculture. Furthermore, increasing unpredictability in when the flooding season will begin has led to recurrent crop losses that are leading farmers and meso-level authorities to look for innovative solutions to increasing levels of risk.

Climate change within broader economic development

It would be misleading to look at climate change as a discrete 'sector' in Vietnamese policy formation. Priorities for Vietnamese rural climate change adaptation policies and praxis are intertwined in a comprehensive rethink that has been underway in overall agriculture and rural development policies. Growing concerns about climate change are a component of prevailing national and meso-level government commitments to ensure economic development and food security (Christoplos et al. 2014). In contrast to much of the international discourse on climate change (Inderberg et al. 2014), in Việt Nam these threats are expected to be dealt with as part of (and not in opposition to) the 'business as usual' of development.

Furthermore, climate change priorities also relate to gradual but profound transformations in how the role of the market is perceived to demarcate farmers' (growing) and authorities' (shrinking) room for manoeuvre. A shift has been underway in overall economic development policies since the late 1980s (referred to as *doi moi*). This has led authorities to continue to encourage economic development, while perhaps taking less responsibility for its consequences for increasing the climate risks facing farming households. One aspect of this is efforts to speed the pace of conversion of cropland for industry and residential areas, and consequent detrimental reduction of areas for flood run-off. This is glaringly apparent in the vicinity of the provincial capitals of Hue City and Dong Hoi in our research area. Similarly, in rural districts officials frequently express concerns that newly constructed roads do not always take water flows into account and are therefore causing increased flooding. Upstream forest exploitation, due in part to population pressures and in part to the growth of plantation agriculture, is increasing siltation downstream, which is also increasing flood risks.

CLIMATE CHANGE SCENARIOS AND CLIMATE CHANGE PLANS AS PERCEIVED BY MESO-LEVEL AUTHORITIES

Despite relatively grand ambitions to address the need for climate change adaptation, our research has found that current national plans and policies are confusing and overwhelming for meso-level authorities. In Việt Nam the bureaucracy is generally responsive to directives from central levels, but less so when those signals are hard to decipher. This is certainly the case with national climate change policies that are seen by meso-level authorities as including far too many unprioritised priorities in relation to their capacities, lacking clear guidelines for the roles of and coordination among different levels and sectors, and (above all) not having an explicit financing plan. Our research has found that meso-level authorities are in many respects incredulous in their response to the stated ambitions of national climate change policies. These policies encompass a broad range of sectors based on over-optimistic expectations about possibilities to coordinate and mobilise highly skilled human resources. National plans and policies are also based on scenarios that are seen as amorphous, and are implicitly predicated on ability to closely coordinate the institutions of the state, private sector and civil society, both horizontally (between national, provincial, district and village/commune activities) and vertically (across different sectors).

To address what is recognised as an overwhelming set of tasks, the provinces have been tasked with developing and implementing Action Plan Frameworks for Adaptation and Mitigation of Climate Change based on the National Strategy on Climate Change (NSCC). However, the parameters for these action plans, the sources of funds and the details of who should implement different aspects remain vague. Within the overall framework of the NSCC, provincial authorities are expected to prioritise and synthesise district (and sometimes commune) level requests, as

well as proposals from sectoral departments and academic institutions, into project proposals that can be integrated into overall provincial development plans. The climate change adaptation efforts described in these plans primarily consist of large infrastructural investments (primarily sea and river dykes, as well as some irrigation and drainage investments). But once these ‘wish lists’ have been compiled, many have been unsure of where they should start to proceed towards implementation.

THUA THIEN HUE ACTION PLAN FRAMEWORK FOR ADAPTATION AND MITIGATION OF CLIMATE CHANGE

The Thua Thien Hue Provincial Action Plan Framework for Adaptation and Mitigation of Climate Change is based on scenarios for future climate change extrapolated from existing trends. Analyses in the plan point out how climate change is a multiplier of other risks largely emanating from demographic shifts. The loss of agricultural land and areas of drainage to industry and urban sprawl is highlighted. Although there is recognition of the potential negative effects of economic development on vulnerability to climate-related hazards, this recognition does not mean that overall development goals and targets for the province are questioned. Economic development clearly has priority over climate change adaptation. Actual investment project priorities can be interpreted as largely representing a focus on ‘climate proofing’ of the existing overall development plan for the province.

Passing mention is made of health, biodiversity and other issues, but these priorities are not mentioned in the list of projects to be implemented, with the possible exception of potential positive externalities related to biodiversity in conjunction with mangrove planting. With respect to the actual projects proposed, over 90% of the funds are to be allocated under the heading “Projects to build, apply and deploy applications of science and technology in order to reduce disaster risk and climate change”. Of these, all but one of the projects are focused on infrastructure. The remaining project is for procurement of equipment for disaster response.

There are a large number of usually very small community-based disaster reduction programmes underway across the country. Some are mentioned in the provincial plans, whereas most appear to be initiated by NGOs and undertaken in parallel. Intentions to scale up these 'pilot' efforts have rarely been carried through and meso-level authorities interviewed have little apparent ownership of these programmes, as exemplified in the very limited attention given to community-based efforts in the provincial climate change action plans.

This illustrates many of the challenges involved in getting meso-level authorities engaged in promoting climate change adaptation on a broader front than just in infrastructural investments. Community-based efforts have been enshrined in law as a government priority, but public funding for these activities has been extremely limited. Provincial and district authorities express recognition that small pilot projects to develop community-based methods, generally led by NGOs and financed with international resources, have potentially valuable lessons for adaptation and disaster risk reduction. But there is also a view that these lessons can very rarely be applied in scaled-up programming due to two obstacles.

First, despite what are, from the perspective of local authorities, 'rumours' of large new climate change financing, there is no obvious, immediately available source of funds from either the state or international institutions to scale these up. Local authorities lack the contacts and understanding of the NGOs regarding potential climate finance and are accustomed to relying on higher-level government authorities to take the lead in accessing most aid funds.

Second, even if financial resources were made available, implementation would require a considerable number of staff with different and greater skills sets than those present within a district-level Department of Agriculture and Rural Development (DARD) or Department of Natural Resources and Environment (DONRE). These authorities recognise that there may be a hypothetical possibility of accessing considerably more funds if such projects can be multiplied or scaled up, but they lack faith that this is likely to happen given their limited and often shrinking human resources. Even if climate financing expands in the future, the limited experience and insufficient staff within meso-level bureaucracies who could potentially work at community level are major obstacles to accessing these financial resources. Such programming therefore remains a reserve of NGOs undertaking serial 'pilot projects'.

Climate change action plans have yet to have a discernable impact on district and commune level planning and programming as they have received little funding and as the funding that has flowed is usually directed towards infrastructure projects managed by provincial authorities. However, this does not mean that district authorities are not involved in other measures to deal with climate hazards. There are a range of small initiatives to introduce more appropriate crop varieties, production methods, etc., but such efforts are perceived as part of the ordinary responsibilities of agricultural and flood and storm control authorities. They are not seen to be directly related to climate change policies.

One of the main questions regarding how to move towards 'action' in the provincial climate change action plans regards their financing. The potential for having these plans financed is unclear to meso-level authorities, and it is assumed that they will be largely dependent on international support being negotiated by central government. This has led to a 'wait and see' attitude among many local officials. Their commitment to implementing climate action plans may currently be waning as they have been waiting for a few years already. The 'shelf life' of these plans is likely to be limited given the dynamic nature of overall economic development in Việt Nam and the likelihood that they may be superseded by other agendas (or simply forgotten) if implementation does not start soon. Presumably due to this 'wait and see' attitude towards the uncertainties of international climate finance mechanisms, the provincial action plans have not been anchored in either the understanding of the implications of moving towards implementation or their budgetary commitments. Authorities interviewed state that they are not tracking these plans and are unsure of what elements from the original sets of projects are being implemented or how much funding has been received or disbursed. Respondents assumed that central government would eventually mobilise needed resources, although it was unclear how many activities would be supported.

This lack of understanding about how to initiate implementation is related to uncertainty about how to integrate the abstract aims of climate change adaptation within the broader array of economic development policies, some of which may actually contradict the risk reduction intentions of climate change adaptation. A recent study of these plans concluded that: "...the first round of provincial Climate Action Plans in Việt Nam are consistently weak in relationship to implementing

recommendations. ...The CAP [climate action plan] is not an objective in itself; it is merely a tool to support the local government to implement economic and social development effectively in the face of climate uncertainty. But it is apparent from our comparative study that there is currently no significant connection between the CAP and local government development planning." (Nam et al. 2014: 37)

DISASTER AND CLIMATE CHANGE IN MESO-LEVEL AGENDAS

There are clear contrasts between the ways in which climate change policies and procedures are being designed and how (climate-related) disaster risk is being managed. The former are characterised by uncertainties regarding priorities, procedures and resources. The latter, by comparison, is far more concrete and meso-level authorities recognise disaster risk management to be part of their core responsibilities. As such, the two agendas exemplify the ways that these authorities see their differing accountabilities for responding to climate change. The following example of the chain of responsibilities and institutional structures for disaster management illustrates the clarity with which these responsibilities are perceived, in comparison with the ambiguities of the efforts around climate change action plans. This is of particular importance at district and commune levels, where the intelligibility of 'marching orders' is decisive for stimulating action.

Nationally and locally, disaster preparedness and rapid, effective response to disasters are clearly perceived as a public good and therefore a responsibility of the state. The prominence accorded to disaster preparedness and response is evident in the institutional commitments at the national level as well as their integration into the activities of all national ministries. The dominant ministry in preparedness and response has for many years been the Ministry of Agriculture and Rural Development (MARD). At provincial and district levels, DARD leads efforts, in many respects as part of their role in leading the Committees for Flood and Storm Control (CFSCs). However, due to the provincial and district DONRES' work with climate change scenarios, their role appears to be increasing. The divisions of

responsibilities described below are outlined in a Law on Flood and Storm Control and Rescue No 33/2013/QH13, approved on 19 June 2013 (Ministry of Justice 2013), but in practice at meso-level there are always grey areas in the division of responsibilities between DARD and DONRE.

The Central Committee for Flood and Storm Control (CCFSC) is the national standing agency for disaster risk management. It is composed of representatives from relevant ministries: MARD, Ministry of Natural Resources and the Environment (MONRE), Ministry of Planning and Investment, Ministry of Finance, Ministry of Education and Training, Ministry of Information and Communications, as well as the Việt Nam Red Cross, mass media and some technical agencies (Global Physics Institute, the Hydrometeorological Services). It meets once a year to review the disaster risk management issues of the past year and to plan for the coming year. While CCFSC is located in MARD and is chaired by the Minister of MARD, the Deputy Prime Minister is the overall national leader for disaster risk management, with responsibilities including approving legal documents, initiating response, calling for support and mobilising other institutions with responsibilities for response, such as the military and police. In addition, the Deputy Prime Minister is also chair of the National Rescue Committee, which plays a significant role in disaster response. Furthermore, each national ministry has its own committee responsible for monitoring the implementation of flood and storm activity plans within their own organisations and areas of responsibility.

In 2002 the National Assembly established MONRE. Particularly at local level, MARD/DARD has had far stronger operational capacities than MONRE/DONRE, reflecting the greater relative priority given to agricultural and food security services in comparison with environmental concerns. Also, agricultural authorities have had responsibilities for providing services to farmers, whereas environmental authorities have tended to focus more on regulation. Since the creation of MONRE a series of decrees have sought to define its functions, responsibilities and organisational structure. Of particular importance has been that defining the new ministry's responsibilities vis-à-vis MARD. Since its creation, there has been unclear differentiation of responsibilities between MARD and MONRE on a national level. The relative roles of the two ministries are now being adjusted to reflect changes expected when and if investments in climate change adaptation materialise and therefore place MONRE in a stronger role than in the past.

At provincial and district levels, flood and storm control and rescue responsibilities are combined in the CFSCs and housed in the provincial and district DARDs. At the commune level, which does not have the same departmental divisions, the CFSC is integrated into the main administration. NGOs and some private firms, the mass media, telecommunications and the Việt Nam Red Cross are also active in response and work closely with CFSC at all levels.

In rural districts DARD has a much stronger operational presence overall than DONRE, which gives it a greater role, as most of the decisions and actions that are required to address climate change adaptation are related to agriculture. However, DONRE's role varies in different locations. In one of the districts analysed (Phu Vang, in Thua Thien Hue Province), for example, DONRE was largely involved with land registration and some pollution control. Officials there appeared happy to encourage the more dynamic DARD to take the lead on disaster risk management and even climate change initiatives. By contrast, in Quang Trach District (Quang Binh province) DONRE was very proactive in climate change planning and they were very aware of the implications of this for disaster risk management and the need to engage very directly in these issues. Findings are inconclusive, but it appears that this division of responsibilities is strongly influenced by the individuals in the given district departments.

At commune level efforts also vary. In some communes there are considerable efforts underway related to mangrove planting. In most, the priorities are more focused on disaster preparedness. Interviews in some communes revealed that they equate their role in climate change and disaster risk management as mainly that of pre-positioning relief supplies and planning flood evacuation routes. In general, comments from officials suggest that all communes in disaster-prone areas take their responsibilities for disaster preparedness very seriously. The extent to which they are engaged in activities to address climate change in a broader sense and are working to reduce disaster risk are largely related to whether they have access to externally funded projects and initiatives.

EXAMPLE OF COMMUNE LEVEL ROLES

In Ham Ninh Commune (Quang Binh Province) local authorities describe their responsibilities for climate change adaptation and disaster risk reduction in relation to central government regulations and directives. However, they also acknowledge that in practice they need to merge and redistribute responsibilities to reflect their available capacities. Their responsibilities primarily include flood and storm control, disaster preparedness and the mitigation of agriculture production risks.

Ham Ninh Commune has a CFSC consisting of 21 members, led by the chairman of Commune People's Committee. At hamlet level there are sub-committees for flood and storm control. When floods and storms occur, these committees are in charge of evacuation and rescue, reinforcing houses as well as protecting homes. Disaster preparedness is the responsibility of the commune Red Cross and involves disseminating knowledge and early warning. Moreover, the Red Cross urges the local people to reinforce their houses, prepare stockpiles in case of floods and storms (water, food, clothes and other necessities) and protect their livestock.

Agriculture climate change responsibilities in the commune emphasise supporting local people in reducing production risk. As part of this, commune authorities propose seasonal crop production calendars. Commune authorities also suggest suitable varieties and new cultivation methods to adapt to changing climate conditions. Commune authorities promote annual seasonal production calendars for aquaculture as well. When aquatic epidemics occur, commune authorities notify district and province authorities and support local people to manage these outbreaks, including responding to requests for subsidies to recover from major losses.

Every year, the district flood and storm control committee organises a training course on disaster risk reduction for representatives of the commune CFSC. The district CFSC inspects how communes prepare for disasters and also distributes boats, life jackets and electric generators to communes before the start of the flood and storm season. DARD organises training courses on plant protection for people in the commune and gives recommendations on seasonal calendars, appropriate breeds and varieties to the commune agriculture authorities. DARD and its Plant Protection Station and Veterinary Station carry out activities related to managing disease outbreaks together with commune staff. DONRE's role is primarily in land use planning to address environmental problems in the commune. One informant reports "Both DARD and DONRE have supported the commune in climate change adaptation and disaster risk reduction but it seems DARD has more and more frequent support than DONRE. It is maybe due to DARD's function that connects closely to production activities".

CLIMATE CHANGE ADAPTATION AS AN INTEGRAL PART OF DISASTER RISK MANAGEMENT

At provincial, district and commune levels in central Việt Nam the highest perceived priority in climate change adaptation is disaster risk reduction. This stems from the experience of destruction and loss of life caused by typhoons, storms and floods. Great progress has been made over the past decade in terms of clarifying and strengthening disaster response structures. Authorities are justifiably proud of their work in this regard.

As described above, the provincial climate change action plans include measures that also contribute to disaster risk reduction through intended investments in dykes and other infrastructure that are expected to protect the population from extreme weather events. The priorities in these plans clearly reflect how the main risks of climate change are perceived of as being related to disasters, rather than the incremental affects of climate change.

Both disaster preparedness and infrastructural aspects of disaster risk reduction are important for responding to climate change, but there are also other areas that have thus far been neglected. Most notably, disaster risks associated with extreme climate events are likely to grow in severity due to economic development trends that do not take into consideration the implications for potential increased flooding and other risks. Such trends include urbanisation and conversion of farmland to housing and industry. Some meso-level authorities acknowledge awareness of these factors but, as described above, this does not lead to an embrace of responsibilities for disaster risk reduction that impinge on the promotion of economic development.

Our research has found that the experience of floods, perhaps combined with a growing awareness of the risks associated with climate change, contributes to significant institutional change, albeit not in all of the areas that might be expected. The changes described by meso-level authorities can be seen as falling into the following categories (based on Christoplos et al. 2016):

- Meso-level authorities with formal responsibilities for disaster preparedness and response are increasing their capacities to understand and respond to disasters through training and dialogue within the disaster response chain.
- Disaster management policies and responsibilities are strictly adhered to. Examples of this include procedures for rescue, evacuation and pre-positioning of relief supplies before the flooding season. New policies for community-based disaster risk reduction are recognised, but by comparison have rarely been applied without external engagement. Training and provision of guidelines have been greatly expanded to ensure that government staff are aware of their duties.
- Perhaps the activity most often stressed by interviewees in local level institutions is the multi-stakeholder planning that is undertaken before the flooding season to assess and apply lessons from the previous year. These planning processes are an important part of keeping the CFSCs at commune, district and province levels active and ready to respond.
- In addition to reporting on the impacts of disasters, the media has improved their provision of weather forecasts and analyses of disaster events. Media organisations are influencing the agenda and spurring social media-led response. This not only includes the supply of information, but is also an element in holding meso-level authorities accountable for performance after disasters and also in raising awareness of how weak governance (e.g., reporting on how local authorities have allowed uncontrolled removal of river sand, which leads to erosion and increased flooding) can increase disaster risks.
- There has been a partial but notable shift away from seeing climate and disaster risk as solely a responsibility of the state. Despite enhanced rigour in governmental response, mobilisation of public response (e.g., through social media) and corporate social responsibility initiatives have created an ambiguous situation for local authorities. There is, however, increasing openness to and involvement of the private sector, mass organisations and NGOs in disaster preparedness and community-based disaster management.

- Climate change adaptation funding is starting to be invested in disaster risk reduction-related infrastructure. The allure of potential future funding flows, despite creeping doubts about whether they will materialise, is a factor in keeping climate change on the local agenda.
- District and commune level officials interviewed proudly explain how, over the past decade, they have been increasingly empowered to make their own decisions and find their own interpretation of national directives.

INCREMENTAL CLIMATE CHANGE AND PLURALISTIC AGRICULTURAL DEVELOPMENT

Much climate change advice includes recommendations that rural authorities should take on new and expanded responsibilities. Ambitious calls for profound transformations to transcend 'business as usual' are a common feature of current international climate change advice (see for example, Inderberg et al. 2014). Agricultural extension in particular is expected to take on a more proactive role in engaging with the rural population to understand how incremental climate change is affecting their livelihoods and to jointly explore and identify new solutions to these emerging challenges. There is less clarity in these recommendations about how these actors are going to achieve these goals, or even why they might be motivated to do so given other competing priorities related to market-driven economic development (see Christoplos 2012).

Việt Nam exemplifies the need to look more critically at climate change adaptation paradigms that are predicated on expanded local responsibilities such as 'more extension'. There are signs of a mounting trend among meso-level agricultural authorities in Việt Nam to reflect over and ultimately choose more limited (rather than expanded) realms of intervention. This is due to four sets of factors:

- Meso-level agricultural authorities are being instructed to scale back their activities to create space for pluralistic agricultural development as the dynamic private sector and even some civil society actors are exerting growing influence on how farmers make livelihood and production decisions.

- The power of these authorities to influence farmer production decisions is decreasing as farmers and other market actors are no longer obligated to follow directives and advice in many aspects of production.
- Staffing levels are dwindling as provincial and district budgetary priorities reflect a recognition that the role of the state in agriculture is shrinking.
- Many new hi-tech innovations in agriculture require highly specialised and advanced skills and knowledge which are tied to a given technological package. The more generalist skills of public sector extension staff are unlikely to be appropriate for supporting farmers with these new technologies.

These factors circumscribe the space available for the grand transformations that are assumed (in the global climate discourse) to be required for effective climate change adaptation. Agricultural authorities may be struggling to improve their work, but are generally not capable of scaling up their engagement to support farmers to respond to growing risk. Their organisations are facing a combination of disinvestment in much-needed bureaucracies, paired with rapidly increasing and diverse private investments. The potential of the private sector to contribute to climate change adaptation relates to how these actors perceive market, production and climate risks. Public investments in climate change adaptation are rarely integrated into these private sector decisions.

Despite these trends, local authorities in Việt Nam are finding some ways to support farmers to manage climate risks. Their efforts are circumscribed and modest. The roles of public sector agricultural authorities in technological change have, particularly since the emergence of agricultural extension systems in the early 1990s, been linked to the provision of small subsidies to encourage the adoption of 'models' of new production methods. Despite significant results from these approaches in the past, in many sub-sectors of the rural economy these subsidies and models are now miniscule in comparison to the massive levels of private sector investment.

AQUACULTURE AND THE LIMITS TO PUBLIC SECTOR ADAPTIVE CAPACITIES

The changing role of public agricultural authorities in managing incremental climate risk can be exemplified by their types and levels of engagement in aquaculture. On a broad level, maintaining the integrity of coastal ecosystems is a public good that can conflict with the expansion of aquaculture. The destruction of mangroves in coastal areas has long been noted as a factor in maladaptation, as mangroves protect sea dykes and biodiversity. These concerns are well known in Việt Nam and meso-level authorities are involved in some projects to replant mangroves, but in central Việt Nam the agricultural officials interviewed acknowledge that these projects are small and fragmented.

By comparison, huge investments are being made in new hi-tech and capital-intensive aquaculture methods. Agricultural authorities interviewed acknowledge that they have very little capacity to provide relevant advice to farmers or otherwise influence these trends. Furthermore, particularly in aquaculture, food safety certification requirements for exports are the main incentive for environmental control. The large multinational enterprises that can obtain such certification are clearly in the lead in these efforts, as local authorities have little technical or operational capacities to assist smallholders to meet new standards.

The example of the increasingly hi-tech aquaculture industry illustrates how, where rapid and dynamic market-driven processes are underway, local authorities have little choice but to step back. These findings suggest the need for a rethink of the climate change adaptation advice that calls for 'more extension' without recognising how pluralistic extension systems are changing the playing field (Christoplos 2012). The global discourse on how to promote climate change adaptation remains heavily statist (Christoplos et al. 2014) and fails to factor in issues such as shrinking ability to cover recurrent costs within local government, and private investment trends. The assumed role of agricultural authorities as ostensible 'implementing partners' for climate change plans fails to take into account their actual limited role in managing and influencing change.

CONCLUSIONS

These research findings emphasise the importance of recognising the existing resources, capacities and motivations of meso-level authorities, with particular attention to the relationships they have with their constituents. The bricolage underway in their response to disasters and the advice they are giving to farmers to adapt their production systems to climate change are what define their responsibilities to those affected by climate change. The legitimacy of the state is to a significant extent dependent on if and how meso-level authorities find ways to adapt policies and develop practices that allow them to do their jobs in a more climate-aware manner within (a) their human and financial resources, (b) their changing relationships with the private sector, and (c) their mandated responsibilities for disaster preparedness and response. This suggests that in order to move towards approaches to climate change adaptation that reflect meso-level realities, it will be important to move from past emphasis on the enormous lists of 'what needs to be done' to confront climate change, to instead better support a search for ways to foster meso-level consensus on what can actually be accomplished. This latter question can only be answered within a recognition of the formal and informal norms, incentives and relations that define the motivations and room for manoeuvre of meso-level authorities.

From the perspective of meso-level authorities in Việt Nam it needs to be recognised that climate change adaptation is largely nested in historic, disaster-related norms; and disaster-related institutional norms are nested in economic development as the primary current focus of Việt Nam as a developmental state. A strong social contract

for disaster response clearly exists in Việt Nam, and this in turn has translated into emphasis on disaster preparedness and an infrastructural bias towards 'climate proofing'. Other aspects of adaptation and risk reduction are not absent from the agenda, but tend to receive less attention for three reasons.

First, the actions that may be needed to reduce disaster risk and to respond to climate vulnerability are part and parcel of the broader range of decisions that meso-level authorities are making on a daily basis in relation to socio-economic development. The broader concerns related to opportunities and risks in the main development agenda take precedence over adaptation to long-range environmental change.

Second, with regard to typhoons and floods, there is a historical path dependency that locks in assumptions that the solution of infrastructure is adequate as the centrepiece of the climate change agenda, even though the factors that generate risk may have significant dimensions that cannot be addressed by infrastructure.

Third, climate risks are amorphous, both in relation to their nature and the responsibilities for their response. Climate policies and intended paths towards implementation are similarly amorphous and are therefore generally given lower priority since there are few discernable 'marching orders'. From the perspective of meso-level authorities it is not self-evident who should respond to the warnings in emerging climate change scenarios and who should pay for such a response. There are indications of a palpable fatigue with directives, pilots and training exhorting meso-level officials to action in relation to the broad landscape of risk, when there are no clear institutional mandates or budget lines to implement these actions.

Neil Adger's (1999) analysis of social vulnerability in coastal Việt Nam was influential in setting the tone for a subsequent global discourse on the declining social contract for addressing disaster and environmental risk. His critique of the impact of market liberalisation and the weakening role and capacity of the state to protect the population from hazards is illustrative of prevailing narratives on how 'development as usual' can lead to maladaptation in Việt Nam and elsewhere. In focusing on roles and relations at meso-level our research has encountered a more complex interplay of factors than that portrayed in the adaptation versus maladaptation discourse.

There is a much stronger (perhaps renewed) focus on saving lives through disaster preparedness, which is certainly appreciated by vulnerable communities and serves to reinforce this 'bottom line' of the social contract. The evidence is more mixed regarding changes in the responsibilities of the state to reduce future climate and disaster risks.

In the longer term the nature of meso-level responses to climate change relates to the shifting nature of public authority. There is evidence of meso-level government officials' efforts to improve their work in disaster response and help farmers with more appropriate technologies, but there are also indications of the evident limits to their engagement in other aspects of climate change adaptation. These divergent tendencies demonstrate their declining influence over market-led and urban/industrial-driven development. In sum, a simple claim that in the face of such changes the state is pulling back does not do justice to the dynamic and complex process wherein state legitimacy is being rethought amid an increasingly pluralistic institutional landscape and where the public and private locations of 'adaptive capacities' are in flux and national policies remain poorly synced with local institutional realities. There are dynamic efforts to adapt policies to these local realities, but this is occurring within the boundaries of the higher level social contract for generating economic development for a growing population with increasing expectations.

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