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Governance challenges for disaster risk reduction and climate change adaptation convergence in agriculture

Guidance for analysis

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This paper was developed at the initiative of Klaus Urban, Senior Institutions Specialist, Investment Centre Division. Klaus spent more than 30 years working on governance and political economy issues and kept his enthusiasm for analysis and field work until he suddenly passed away. Co-authors wish to dedicate this paper to his memory.

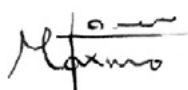
Foreword

The adoption in 2015 of three landmark international frameworks, the Sendai Framework for Disaster Risk Reduction (SFDRR), the Paris Agreement on Climate Change (PA), and the overarching 2030 Agenda for Sustainable Development (SDGs) created new momentum and guidance towards achieving more sustainable, resilient and inclusive development. All three frameworks highlight the nexus between poverty eradication, disaster risk reduction (DRR), climate change adaptation (CCA) and sustainable development and identify agriculture and food security as a key sector, or cross cutting theme, for the achievement of their respective goals. This revised overarching development agenda provides a unique opportunity to enhance integrated actions, including stronger coherence and consistency between DRR and CCA planning and implementation. It creates potential for accelerating improvements of people's agricultural livelihoods, increasing equity, and promoting economic and social growth that respects both people and the planet while responding to the new challenges caused by climate change and increasing threats from disaster and crises.

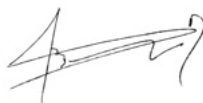
The goals of FAO are to eliminate hunger, food insecurity and malnutrition, reduce rural poverty, and make the agricultural sectors more productive, sustainable and resilient. FAO recognizes that these goals cannot be fulfilled without decisive action on disaster risk management and climate change for the agriculture sectors and in food systems as addressed by the FAO Strategy on Climate Change (FAO, 2017) and FAO's Strategic Programme on Resilience (FAO, 2019). Both underline that the complex interlinked issues of DRR and CCA seem well suited to a more integrated approach. FAO prioritizes actions for disaster risk reduction as an entry point to CCA in areas under frequent threat of climate-related emergencies (FAO, 2011), and supports countries to prevent and reduce climate hazard impacts on farmers, forest users, and fishers, and thus help communities build resilience to confront climate change threats and impacts (FAO, 2014). Enhanced networking, collaboration, and coordination in the two areas of work can deliver a range of benefits related to building inter-agency trust, improved information exchange, convergent decision making, risk sharing, and pooling limited resources to achieve common goals.

There still remains much to understand about why and how convergent action on DRR and CCA can emerge and how it can be sustained. DRR and CCA concepts and terminology evolved through different institutional workstreams in both international and national frameworks. This makes implementation of integrated action on DRR and CCA technically complex and politically challenging, both at international and national levels. Barriers encountered often relate to governance and political economy drivers, such as institutional parallelism, competing interests, power dynamics, and differing incentives. Policy makers must respond to the demands generated by the political and socio-economic environment, which is also the main source of constraints on what can be done in practice.

To date there has been insufficient guidance for enhanced analysis and improved understanding of these governance-related barriers to consider converging actions on DRR and CCA (Forino, von Meding, Brewer, 2016; UNISDR 2009). This discussion paper aims to contribute to this debate from the perspective of the agriculture sectors¹ by providing guidance for an in-depth governance analysis of efforts towards integrated action at the country level. This paper is presented as a living document; it will be enhanced with updates in the future as lessons are learned from the countries and organizations engaging in governance analysis related to DRR and CCA convergence.



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¹ The term ‘agriculture sectors’ used throughout this document refers to crop-based farming systems and livestock systems, including rangelands and pasturelands, forestry, and fisheries. The fisheries sector includes capture fisheries (fish caught from wild stocks in marine, coastal, off-shore and freshwater ecosystems) and aquaculture (the breeding, rearing and harvesting of plants and animals in all types of aquatic environments) (FAO, 2017).

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Finally, we would like to thank Andrea Wöhr for design and layout of the publication.

Acronyms

ARPC	Asian Risk Preparedness Center
CC	Climate Change
CCA	Climate Change Adaptation
COP	Conference of the Parties
CSA	Climate Smart Agriculture
DRR	Disaster Risk Reduction
IPCC	Intergovernmental Panel on Climate Change
GCF	Green Climate Fund
GEF	Global Environment Facility
GFDRR	Global Facility for Disaster Reduction and Recovery
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NDC	Nationally Determined Contribution
PA	Paris Agreement under the United Nations Framework Convention on Climate Change
SDGs	Sustainable Development Goals
SFDRR	Sendai Framework for Disaster Risk Reduction
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations Office for Disaster Risk Reduction



Introduction

Agriculture depends strongly on weather and climate conditions. The impacts of disasters and climate change are diverse and potentially massive for global food security. From the perspective of farmers, pastoralists, as well as for fish and forestry dependent communities, the occurrence of climate and weather induced disasters and climate change go hand in hand. Possible impacts on agriculture include decreased yields, enhanced disease pressure, increased water problems, and soil erosion. The agriculture sectors – including crops, livestock, fisheries and aquaculture, and forestry – absorb approximately 26 percent of the economic impact caused by medium and large-scale climate and weather-induced disasters in developing countries. Together, the impacts of disasters and climate change reduce the capacities of farmers and communities especially in poor developing countries (IPCC, 2014) to cope with risk and maintain their livelihood basis (FAO, 2018). To cope, people often use their savings or increase borrowing to meet basic needs, thus depleting their resource base even further. Over time, levels of indebtedness increase and livelihoods are eroded, which in turn results again in an increased vulnerability to disasters and climate change effects.

The overlaying nature of disaster and climate change impacts on agriculture calls for an integrated approach and working methods that enhance farmers' resilience to shocks and climate change.

Convergence between disaster risk reduction (DRR) and climate change adaptation (CCA) action would bring significant benefits to adaptation, disaster risk reduction and sustainable development (Glantz, 2003; Sperling and Szekely, 2005; O'Brien *et al.*, 2006; Lewis, 2007; Klein, 2015; Forino, von Meding, Brewer, 2016; UNCCS, 2017). These include reduction of climate-related losses through more widespread implementation of DRR measures linked to adaptation; eased burden of programming assistance; minimized duplication of effort and redundancies and thus increased effectiveness, appropriateness and sustainability of both DRR and CCA planning and implementation; improved services; better quality, specificity and timeliness of information; reduced potential for conflicts in policy development and implementation; and improved efficiency of financial, human and natural resources (Sperling and Szekely, 2005; Mitchell, Van Aalst, Villanueva, 2010; Forino, von Meding, Brewer, 2015).

In agriculture the two streams are strongly interrelated and mutually complementary, providing incentives to modify behaviours and practices over the medium to long term (FAO, 2011; FAO, 2013b). This is notably the case in countries where most disasters are climate-related. In such cases, a major shift towards converging actions, including sector specific DRR and CCA technologies and practices, would contribute to more productive and more resilient agriculture, and thus to more resilient livelihoods.

The benefits could also flow into other areas of programming and policy making: working together provides an example of how to collaborate on other cross sector topics. Another common issue addressed in a DRR and CCA convergence process is that of gender equality and women's empowerment. Gender inequality exacerbates vulnerability to disaster and climate risks by affecting the ability of the whole society to cope with risks. Social and cultural barriers combined with limited access to and control over services, education and property rights frequently constrain women from participating in framing priorities and investments in the areas of DRR and CCA. This can lead to mischaracterizations of women's and men's vulnerability, resilience, knowledge and skills relative to reducing disaster and climate risks.

Further, projects and policies that overlook the underlying social stratifiers which shape women's and men's lives risk perpetuating gender inequalities by concentrating power and resources among the actors who traditionally have more say in decision making (ODI, 2016). For these reasons, many international actors advocate mainstreaming gender into adaptation and DRR, including capacity development efforts, monitoring with gender-sensitive indicators, gender-responsive budgeting, and promoting equal access to finance, technology, and information (see for example UN Women, 2017; FAO, 2016).

Recent literature and country experience indicate however, that convergence on DRR and CCA actions remains a challenge (Venton and La Trobe, 2008; Garschagen, Tuan and Vo, 2009; Hasan, Akhter, Ahmed and Kabir, 2013; UNISDR, 2009; UNCCS, 2017). Constraints include lack of coordination, limited (human and financial) resources and lack of knowledge, communication and information between the two fields. Factors behind these constraints relate, in most cases, to governance and political economy dynamics at sub-national, national and international level. Actions to reduce disaster risk and adapt to climate change involve trade-offs with the other objectives of a society, and have to deal with multiple actors with diverging and sometimes contradictory interests.

The value added of a governance analysis

The advantages and disadvantages of integrated action on DRR and CCA and the appropriate pathways to achieve it need to be assessed pragmatically in relation to the specific country and sector context. Policy decisions and actions take place in complex political and social settings in which individuals and groups with unequal power, interests and incentives interact (World Bank, 2017). Implementing convergent action encounters significant governance challenges as it relies on consensus and coordinated action by multiple and diverse stakeholders at different scales and sectors. Furthermore, there is generally less political will or incentive to invest resources to ensure that something does not happen in the future, compared with investing in presently visible and politically popular infrastructure or programmes.

Successful convergence of action on DRR and CCA calls for governance arrangements that allow for shared understanding and synergies among diverse governmental entities and stakeholders at different government levels. This implies not only considerable changes in national and local governance, legislation, policies and financial mechanisms (Trujillo and Baas, 2014), but also a change in thinking about

DRR and CCA interventions, and active engagement of actors whose agendas directly influence individuals' and local communities' vulnerabilities, and those responsible for shaping sub-national, national and international economic development.

The value added of looking at DRR and CCA integration through a governance lens is that it allows for an understanding of whether integration is actually beneficial and necessary in a given country context; and if yes, at what level and in what form? A governance analysis also indicates the key governance bottlenecks that hinder integration, and how important they are – at national and local level; whether realistic opportunities for integration are available within particular configurations of interests, actors and incentives; and whether there are possibilities to form a coalition of actors ready to support a given solution, and accept it as legitimate.

Each country has its own unique set of issues, actors, constraints and opportunities, and will need a tailor-made combination of policies and interventions in order to achieve maximum results. The governance analysis can help to identify the opportunities for the most appropriate form of integrated action at different levels, and the respective stakeholders that need to be engaged.

There are many definitions of the term 'governance' as it has been developed and used in various disciplines across a variety of contexts over the past twenty to thirty years. For the purpose of this paper, governance embraces “the formal and informal rules, organizations, and processes through which public and private actors articulate their interests” frame and prioritize issues; and “make and implement”, monitor and enforce “decisions” (FAO, 2013a).

It is important to underline that looking at the governance issues related to DRR and CCA convergence does not imply using the lens of a future ideal state of governance. It implies analysing *what the reality is* and understanding *why it is so*. This pragmatic approach offers a basis on which to develop a realistic picture of what domestic actors (with support from international actors) can do to enhance the chances for convergence. This means going beyond legal frameworks, formal institutions and processes and trying to understand the political economy underpinning the functioning of DRR and CCA actions in terms of actors, interests, resources and power.

The suggested governance analysis unfolds in an iterative three-step process:

- (I) frame the problem related to DRR and CCA convergence and identify/verify the key governance challenge(s);
- (II) analyse political economy drivers behind these challenges; and
- (III) develop realistic strategies to address identified constraints to convergence or integration, and enable stakeholders to engage, in order to foster change.

In framing the problem related to DRR and CCA convergence, it is important to consider the context, the institutional set up, roles and responsibilities of key actors and the distribution of power internal and external to the government. This implies looking at how structures, institutions, and key actors interact in the deliberation of ideas, interests, values and preferences in relation to DRR and CCA actions. It also implies

looking at how different individuals, groups, organizations and coalitions shape the relevant political arrangements and policies.

Most often, factors underlying identified governance issues will relate to political economy (see Box 1). Political economy analysis focuses on actors, their interests and relationships, asymmetries of power, resources, and information. This includes interest-driven behaviour of stakeholders, historical interests, pressure groups and conflicts, as well as the influence of global processes (Fritz, Kaiser and Levy, 2009; Booth, Harris and Wild, 2016). In other words, the institutional solution for DRR and CCA convergence should be tailored to the political economy of enforcement. If a theoretically good institutional solution cannot be implemented in the context of local and national political economy, it is actually not a good solution.

BOX 1. POLITICAL ECONOMY

Broadly said, political economy is concerned with the interaction of political and economic processes in a society; the distribution of power and wealth between different groups and individuals and the processes that influence these relationships over time. It has been found that technical solutions for a given intervention or reform are not enough; success or failure often depend on designing the right incentives to change the behaviour of the entire spectrum of stakeholders. Important efforts have been made to understand how political processes affect development trajectories and influence policy choices. Political economy analysis looks at how interests, incentives and institutions (formal and informal) shape and explain both how actors behave and the political dynamics and practices that affect efforts towards a given goal. Today, there is a substantial amount of literature on political economy of development. An increasing number of political economy analysis approaches have emerged, most of which are supported by donors and development agencies (e.g. Fritz, Kaiser and Levy, 2009; McLoughlin, 2014).

Objectives

The objective of this paper is to support policy practitioners and planners in examining from a governance perspective the opportunities and constraints for convergence as well as integrated action between DRR and CCA in agriculture. It provides guidance to better understand the context-specific pertinence of convergence, or in some cases, integration of DRR and CCA actions, with an analytical focus at the national and subnational levels.

This paper does not imply that integration of DRR and CCA actions is necessary in each and every case. Convergence or integration of DRR and CCA actions can take many different forms and levels and, in some cases, keeping them separate may be justified.

This paper:

- Gives a brief introduction to the concepts of DRR and CCA, and to the complexity of global governance in the two domains, including its relevance for country-level implementation.
- Illustrates some typical governance and political-economy drivers behind non-convergence at country and sub-national levels.
- Provides practical guidance for undertaking an in-depth governance and political economy analysis at country and sub-national levels, and developing realistic strategies for change.

This paper is addressed to all users who are interested in identifying opportunities and potential synergies between DRR and CCA in agriculture, with the aim of achieving resilience and food security of farmers and their communities.



I Disaster risk reduction and climate change adaption - concepts, differences and linkages

TERMINOLOGY

Hazard is a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.

Annotations: Hazards may be natural, anthropogenic or socio-natural in origin. Natural hazards are predominantly associated with natural processes and phenomena. Anthropogenic hazards, or human-induced hazards, are induced entirely or predominantly by human activities and choices. This term does not include the occurrence or risk of armed conflicts or other situations of social instability or tension which are subject to international humanitarian law and national legislation. Several hazards are socio-natural, in that they are associated with a combination of natural and anthropogenic factors, including environmental degradation and climate change.

Disaster is a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.

Annotations: The effect of a disaster can be immediate and localized, but it is often widespread and could last for a long period of time. The effect may test or exceed the capacity of a community or society to cope using its own resources, and therefore may require assistance from external sources, which could include neighbouring jurisdictions, or those at the national or international levels.

Disaster risk reduction (DRR), as defined by UNISDR (2017a), "is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development. [...] Disaster risk reduction is the policy objective of disaster risk management, and its goals and objectives are defined in disaster risk reduction strategies and plans." That is, disaster risk management can be more appropriately thought of as the implementation of DRR, since it describes the actions that aim to achieve the objective of reducing risk.

Climate change adaptation (CCA) refers to 'adaptation' as defined by the IPCC (2014, p. 118), i.e. "the process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects."

Disaster risk reduction (DRR) and climate change adaptation (CCA) are two ways to reduce risk and adverse impacts of climate disasters, and to increase the resilience of farmers and their communities. As such they are an intrinsic part of broader development processes. In the last two decades, DRR and CCA have evolved rather independently from one another, but both with strong support from the international community.

1. Different origins

Before the 1970s, dealing with disasters focused on emergency responses to cope with the impact of such events. Emergency responses were paired with humanitarian assistance for those most affected. Only since the 1970s, did a progressively wider understanding of why disasters happen – accompanied by more integrated approaches to reduce their impact on society – become prominent (UNISDR, 2004). Eventually, ideas related to disaster reduction (IDNDR, 1994; Jeggle, 2001) and later disaster *risk* reduction emerged (Vermaak and Van Niekerk, 2004; White *et al.*, 2004). There was increasing recognition that the incidence of disasters is a function of hazard occurrence and intensity, as well as peoples' exposure and vulnerability. Furthermore, it was recognized that only by reducing and managing conditions of hazard, exposure and vulnerability can disaster impacts be prevented and reduced. This shift in focus to *risk reduction* was strengthened through a number of international instruments, starting with the 1994 Yokohama Strategy and Plan of Action for a Safer World (Yokohama strategy) and culminating with the Hyogo Framework for Action that focused attention on the wider social, political and economic environments in which a hazard is situated.

In March 2015, the third United Nations World Conference on Disaster Risk Reduction adopted the Sendai Framework for Disaster Risk Reduction (Sendai Framework) 2015-2030, as the successor of the Hyogo Framework, and the major instrument for disaster risk reduction at the international level (UNISDR, 2015). Coordinated by United Nations Office for Disaster Risk Reduction (UNISDR), it guides countries in reducing risk and monitoring progress against seven agreed targets, and is an international non-legally binding treaty.

The same year, in September, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development with 17 Sustainable Development Goals (SDGs) and accompanying targets. Some elements of the Addis Ababa Action Agenda (adopted by the Third International Conference on Financing for Development) were incorporated into the 2030 Agenda.

International climate change negotiations, on the other hand, started within the environmental protection community, and initially focused on the need to address the causes of anthropogenic climate change, i.e. mitigation or reducing greenhouse gas emissions from human activities such as the burning of fossil fuels and land-use change – deforestation, for example.²

The concept of climate change adaptation (adapting to changing conditions) emerged and was anchored in all three Rio Conventions (Convention on Biological Diversity, UN Convention to Combat Desertification, and UN Framework Convention on Climate Change as per 1992). The first conference of the Parties to the United Nations (United Nations Framework Convention on Climate Change, UNFCCC) in 1995 acknowledged climate change adaptation as an important component of any response to climate change. Adaptation is well covered by the Convention text,³ for example in Article 4.9 of the UNFCCC.

² In the UNFCCC context 'mitigation' refers to efforts to reduce emissions of greenhouse gas and enhance sinks; in contrast to the way the term 'mitigation' is used in disaster discourse to refer built the environment, and reduce the impact on and damage to the environment.

³ Joint Liaison Group of the Rio Conventions. Adaptation under the Frameworks of the CBD, the UNCCD and the UNFCCC.

Adaptation reporting began under the UNFCCC as part of the National Communication (NCs) as mandated at COP 2, in Geneva, in 1996. The core elements of NCs include relevant information on national circumstances, Greenhouse Gas (GHG) inventories, a vulnerability and adaptation assessment, mitigation assessment, financial resources and transfer of technology, and education, training and public awareness.⁴

Subsequently in 2001, the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) compiled evidence and argued for urgent action on climate change adaptation. Parties to the UNFCCC, at COP 7, in 2001, in Marrakesh, as a response to the IPCC report, established the Least Developed Country (LDC) Work Programme with the scope of developing national climate change mechanisms and building capacity. The National Adaptation Programme of Action (NAPA) was designed to help LDCs identify and respond to countries' urgent and immediate needs with regard to adaptation to climate change. As a next milestone at COP 13, in 2007, in Bali, the Nairobi work programme (NWP) was established to assist all parties – in particular developing countries, LDCs and Small Island States (SIDS) – to: *“improve their understanding and assessment of impacts, vulnerability and adaptation to climate change; and to make informed decisions on practical adaptation actions and measures to respond to climate change on a sound scientific, technical and socio-economic basis, taking into account current and future climate change and variability.”* Last but not least, at COP 16, in 2010, in Cancun, the National Adaptation Plan (NAP) process was decided by parties under the Cancun Adaptation Framework (CAF), complementing the NAPAs (decided in 2001). NAPs seek to enable countries to formulate and implement national adaptation plans (NAPs) in order to identify medium- and long-term adaptation needs and to develop and implement strategies and programmes to address those needs.

It should be noted that over the years a handful of instruments to address climate change adaptation were created by parties under the UNFCCC; however, the climate financing provided to adaptation did not keep pace.

Therefore, adaptation became the ‘bargaining chip’ and the ‘deal maker’ for the Paris Agreement (PA) that established a global goal on adaptation (Article 7 of the PA) of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change. Parties aspired to ensure an adequate technical and financial adaptation response – for developing, least developed and SIDS countries in particular – while contributing to the sustainable development goals.

Despite the different ways in which DRR and CCA have evolved, both aim to reduce the impact of climate hazards and change by anticipating risks and uncertainties and addressing vulnerabilities. Over the past decade significant attention and effort has been focused on explaining linkages and differences between the two. Converging action on DRR and CCA has been promoted at all levels to maximize opportunities and ensure efficiency and effectiveness of action.

⁴ COP 5 (Bonn, 1999) initiated a process of reviewing the guidelines, with the aim of improving them and established a Consultative Group of Experts on National Communications from non-Annex I.

2. Differences and linkages between disaster risk reduction and climate change adaptation

While their broad objectives are similar, the relationship between disaster risk reduction (DRR) and climate change adaptation (CCA) is not straightforward. Table 1 below gives an overview of the differences and signs of convergence between DRR and CCA in specific aspects.

Differences between DRR and CCA include a difference in focus and scope, as well as in institutional architecture. For example, DRR focuses on reducing disaster risk and impacts through enhancing understanding about and awareness of risks, risk governance, promoting risk prevention measures and vulnerability reduction, as well as emergency preparedness for better and more timely responses. It builds on the need to tackle root causes and fundamental challenges to reduce the possibility of hazards transforming into disasters, and on managing consequences (UNISDR, 2015).

CCA on the other hand is mainly about building the capacity of people, societies and ecosystems to adapt to changing climate conditions – including extreme events and slow onset environmental change.

With regard to international frameworks, the Sendai Framework is the main guiding global instrument for DRR while the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement (PA) guide action on CCA. Looking at convergence between the two fields thus involves considering opportunities for joint action while managing the jurisdictional challenge related to the existence of their separate institutional structures and potential challenges that may derive from specific interests of the two communities and their established legal regimes.

Despite their different constituencies, it is important to note that DRR and CCA are profoundly interlinked and complementary (see Table 1), and clear signs of convergence exist (e.g. Garschagen, Tuan and Vo, 2009; Birkmann *et al.*, 2009; Howes *et al.*, 2012; Klein, 2015; Forino, von Meding, Brewer, 2016; UNCCS, 2017). Both concepts are concerned with reducing vulnerability and raising social capacities to reduce and manage climate risks (Davis and Vulturius, 2014). They also share a common conceptual understanding of the components of risk and the processes of building resilience. Both DRR and CCA actions include vulnerability reduction, strengthening coping capacity and reducing direct exposure through long-term, self-sustaining community based or ecosystem-based measures, as well as more specific measures to help communities to adapt, protect against, and prepare for risks and hazards. Such measures might include crop insurance schemes, research on heat and drought tolerant crop varieties, agricultural diversification, vaccines, upgraded drainage systems, enlarged reservoirs and revised building laws.

Also, implementation of the two domains starts with a similar process through building a common understanding on the risk through comprehensive intra- and cross-sectoral risk analyses and undertaking a structured review of potential strategies and cost-benefit analysis (Kelman, Mercer and Gaillard, 2016). Both use similar tools to monitor, analyse and address adverse consequences, and CCA strategies at the local level are similar to, if not the same as DRR strategies.

For both domains, active community involvement is critical for successful implementation. In practice, at the community level, it is very difficult to separate the issues of DRR and CCA due to the fact that local communities do not experience the impact of natural hazards/disasters and climate change in isolation.⁵ Efforts to converge DRR and CCA should involve communities, scientists, practitioners and policy makers all of whom will often have distinct and different cultures and draw on different types of information, knowledge and experience – all of which are necessary for successful action.

The two fields also share another common feature – they are not “sectors” in and of themselves (UNISDR, 2004). In most countries, environmental authorities are responsible for CCA, whereas ministries of Interior, Social Welfare or Home Affairs with operational capacities located in national disaster management agencies typically have responsibility for DRR. This makes their convergence or integration more complex since they must be implemented through the policies of other ministries, in particular Agriculture, Environment, Land and Water, and Finance.

These strong linkages and complementarities offer opportunities to build on each other, share experiences and fill in information and knowledge gaps that exist when DRR and CCA actions are conducted in parallel. DRR’s extensive history and knowledge of how to deal with a variety of hazards can help guide CCA towards a better understanding of current impacts and future changes in climatic conditions and climatic variability.

As Sperling and Szekely (2005) have suggested, in order to alleviate poverty and achieve sustainable development (including through integration of DRR and CCA actions), efforts to respond to the exceptional challenges posed by a changing climate must build on and expand the existing capacity of DRR, and should not be undertaken in isolation from this wider agenda.

Table 1. Differences and signs of convergence between DRR and CCA

Aspect	Differences		Signs of convergence
	DRR	CCA	
Hazard	Relevant to all hazard types geological, hydro-meteorological, climatic, biological, as well as technological / industrial hazards.	Addresses climate related hazards, but also looks at additional gradual effects of climate change (e.g. sea level rise, air temperature increase, snowmelt, biodiversity loss).	Both focus on increased climate-related hazards, and climate extremes (e.g. floods, storms, landslides, droughts), although DRR also increasingly addresses gradual climate change impacts (e.g. sea level rise).
Time frame	Immediate to medium-term. Most concerned with the present (e.g. existing risks).	Medium to long-term. Most concerned with the future (e.g. addressing uncertainty / new risks).	DRR is increasingly forward-looking. Existing climate variability is an entry point for CCA.
Origin and actors	Traditionally come from humanitarian sectors and civil protection.	Traditionally come from the scientific and environmental community, but now include all sectors.	Both DRR and CCA are increasingly multi-disciplinary and reliant on multiple stakeholders across sectors (e.g. engineering, water, agriculture, health, environment, transport, etc.).

⁵ Confirmed by local stakeholders in many FAO field projects.

Aspect	Differences		Signs of convergence
	DRR	CCA	
Activities	Generally more wide-ranging, from prevention, disaster preparedness (early warning, contingency planning, etc.) to resilience building, building back better after response and in reconstruction.	Activities generally more focused on prevention, climate risk reduction, preparedness and building adaptive-capacities and reducing vulnerabilities.	DRR and CCA typically overlap in the area of disaster preparedness and prevention/risk reduction, although there is a growing attention to mainstreaming climate change considerations in post-disaster recovery and reconstruction.
Tools	Full range of established and developed tools.	A wide range of adaptation tools are available.	Increasing recognition that more adaptation tools are needed and must learn from DRR.
Political interest	Often low to moderate political interest.	The Paris Agreement (2015) set the global adaptation goal in Article 7.	Climate-related disaster events are now more likely to be analysed and debated with reference to climate change.
Knowledge	Traditional and local knowledge is the basis for community-based DRR and resilience building.	Recognizes but at the same time questions, on a case by case basis, the sustainability of indigenous and local knowledge in the context of new risks created by climate change.	Both increasingly recognize the importance of local and indigenous knowledge and practices.
Historical focus	Traditional focus on vulnerability reduction.	Focus on promoting adaptive capacities.	
Application at local level	Existing local level conditions are the entry point for DRR action.	CCA entry point for local action starts with the downscaling of climate data to the national and local level.	Climate change adaptation gains experience through practical local application.
Funding	Funding streams ad hoc and not increasing; new opportunities through GCF.	Funding streams sizeable and increasing through GEF, GCF, bilateral funding.	DRR community engaging in CCA funding mechanisms.
Gender	In the Sendai Framework, "women's leadership is included as are gender sensitive policies and a reference to sexual and reproductive health care services" (WEDO, 2014).	The UNFCCC Gender Action Plan (2017) seeks to advance women's full, equal and meaningful participation and promote gender-responsive climate policy and the mainstreaming of a gender perspective (UNFCCC, 2017).	More extensive commitments on gender equality in CCA community could inform gender mainstreaming in DRR community.

Source: Swiss NGO DDR Platform. 2017. Adapted from Venton and La Trobe, 2008.

Greater integration between the two work streams at the local, national and international level has the potential to increase their effectiveness, efficiency and sustainability, thus leading to improved resilience of local communities to climate hazards and fewer climate and weather-related losses in the agriculture sectors (FAO, 2012). Discussion about integrating the two concepts has been steadily growing, and the subject is now a common feature of several global and regional instruments, conferences and meetings.

3. Most recent calls for integration

The international community has progressively acknowledged the notion of DRR and CCA convergence. The integration of DRR into CCA and development policies was already a key discussion point at the 2009 Global Platform for Disaster Risk Reduction meeting (IISD, 2009). Similarly, as a result of the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties 13th meeting in

2007, DRR strategies were included in the Bali Action Plan, which sets out future climate change negotiation processes (UNDP, 2008). A 2009 Policy Forum supported by the Global Facility for Disaster Reduction and Recovery (GFDRR) focused on Climate Smart Disaster Risk Management (GFDRR, 2009b).

The year 2015 saw renewed attention to the topic, and its relevance for achieving the SDGs, including food security and sustainable agriculture.

The three global frameworks, Sendai Framework, Paris Agreement (PA) and SDGs, recognized the importance of coherence among poverty eradication, DRR, CCA and sustainable agriculture. Agenda 2030 promotes lateral, integrative and holistic thinking in the way it defines problems to be solved and risks to be addressed. Goals and targets spill over sectors, disciplines and problem-areas. Agriculture emerges as central, not only to the achievement of SDG 2 on eliminating hunger, improving food security and nutrition, and sustainable agriculture, but also in several other goals (e.g. SDGs 8, 12, 13, 14), including those related to climate change. There are 25 targets related to DRR in 10 of the 17 SDGs, as well as the SDG goal on climate change (SDG 13).

Article 7.1 of the PA (UNFCCC, 2015) provides an opportunity for integrating DRR and CCA action when it calls for enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change. It calls for countries to update their DRR strategies by 2020. Nationally Determined Contributions (NDCs), which are climate action plans developed by countries, overwhelmingly put agriculture at the top of the list for climate action; over 60 percent of submitted NDCs included mitigation in agriculture. Among those countries that included adaptation, over 90 percent mentioned adaptation in agriculture (CGIAR, 2016).

The Sendai Framework specifies addressing climate change as one of the drivers of disaster risk, representing an opportunity to reduce disaster risk in a meaningful and coherent manner throughout interrelated intergovernmental processes (paragraph 13, Preamble; UNISDR, 2015). More recently, during the 46th session of the Subsidiary Body for Implementation, the Subsidiary Body for Scientific and Technological Advice to the UNFCCC, the first session of the Ad Hoc Working Group on the Paris Agreement (Bonn, May 2017), the 2017 Global Platform for Disaster Risk Reduction (Cancun, May 2017), and the UNISDR meeting on DRR and CCA integration (Bonn, November 2017), it was underlined that action that addresses the interlinked challenges of disaster risk, sustainable development and climate change is a core priority (UNFCCC, 2017a).

Despite continued discussion on the topic, progress on integrated action on DRR and CCA has been relatively slow due mainly to challenges related to adapting the existing institutional architecture and embedded policy making processes at both international and national levels. Key challenges appear to be related to governance and political economy that shape behaviour of actors in economic, social and political life.



II Typical governance challenges related to disaster risk reduction and climate change adaptation convergence

1. Global governance architecture

Global governance for disaster risk reduction (DRR) and climate change adaptation (CCA) is complex, with separate organizations and platforms leading the two respective fields, different political constituencies and, often, with different structures for accountability. Thus, converging action is more difficult as diverse constituencies bring differing expectations of and pressures on each international/United Nations agency. A subtle competition among international agencies is taking place in which concepts and ideas are used as instruments to gain resources and support (Peters, Langston, Tanner and Bahadur, 2016). This variety of forces can, and often does, lead agencies in different directions.

Furthermore, within major international organizations and platforms, DRR and CCA are commonly handled by separate units, communicating and working with different counterparts at the country level. Lack of commitment and support from the highest level discourages those units in charge to seriously invest in convergences, even when there is a case for moving towards it. Key donor governments and international agencies are struggling to ensure communication and collaboration between their own DRR and CCA units, affecting their ability to influence processes in the international arena. Several authors argue that bringing DRR and CCA into the same organizational home at the international level would send a clear message to other bilateral and civil society organizations as well as national governments to do the same (Mitchell, van Aalst and Villanueva, 2010).

The relative political weight of an international framework vis-à-vis DRR and CCA might directly affect efforts toward convergence at country level. The Sendai Framework and SDGs are voluntary instruments. The Paris Agreement (PA) is a partially legally binding international treaty: countries are required to report regularly on their greenhouse gas emissions, adaptation action, and planning including via their NAPs under the United Nations Framework Convention on Climate Change (UNFCCC) and on NDCs under the PA. It provides for a global stock take every five years to assess collective progress towards achieving the purpose of the agreement, and to inform further individual actions by parties. However, the mechanisms to tracking adaptation action and to report them is still to be improved and finally decided by countries. The

Sendai Framework and SDGs (Peters, Langston, Tanner and Bahadur, 2016) entail very detailed indicators already to report against.⁶

The Sendai Framework is generally viewed as a guidance for implementing the higher-level objectives related to disaster risks in the SDGs.

The SDGs and the PA however are regarded as major influencers of global and national politics, which can affect decision making on planning and financing at the country level.

The above said has an important impact on how these instruments are translated and implemented at the national and local levels, where different targets and requirements under a number of international instruments should be linked and reported in a consistent way. One opportunity would be to use the process of formulating and implementing NDCs and NAPs as a framework for practical integration of the two fields across various sectors and levels of governance at the country level (UNFCCC, 2017a).

Another governance challenge for convergence at the global level is the architecture and operation of funding channels for DRR and CCA – a challenge which reflects some of the deeper conceptual differences between the two fields. Existing funding schemes are structured according to the objectives of the issuing institution, and therefore do not facilitate convergence of measures that may be seen as inconsistent with respective areas of responsibility. For example, the strong international momentum for climate change has resulted in a significant increase in financial mechanisms for adaptation (Forino, Fuyicura and Kawanishi, 2011), while growth in development assistance for DRR has been moderate (Kellett, Caravani and Pichon, 2014).

On the one hand, an important barrier preventing the use of adaptation funding for DRR action is the need to demonstrate ‘additionality’, that is, to address the changes in climate rather than just the level of loss and damage or of the increased variability and extremes in the current climate (Mitchell, van Aalst and Villanueva, 2010). On the other hand, many DRR programmes are expected to be funded by humanitarian budgets and coordinated by humanitarian aid departments, which traditionally focus on response rather than prevention, which is making it more difficult to achieve convergence with both CCA and with the broader development agenda. Having said that, international adaptation finance increasingly invests in DRR activities (Kellett and Caravani, 2013). The funding itself thus seems to be available from climate dedicated funds, particularly for early warning systems and institutional strengthening. However, funds are managed and delivered within ‘adaptation’ specific institutions, and not those involved with DRR, which leaves the DRR component as climate related, isolated from the DRR systems (Kellett, Caravani and Pichon, 2014).

Also related to global governance of DRR, and of CCA in particular – and against the backdrop of the adoption of SDGs, the Sendai Framework and the PA – is the variety and diversity of actors including non-governmental actors, the private sector, and international legal and ethical experts. Their action and involvement strongly influences how convergence of DRR and CCA action within and across sectors is approached, what

⁶ On the other hand, a significant percentage of NDCs prioritize adaptation and resilience, placing an emphasis, for example, on investments in the development of early warning systems. This is a clear indication that countries recognize that climate change significantly exacerbates disaster risk. In the agricultural sectors, for instance, 93 percent of developing countries highlighted adaptation needs and goals.

resources are allocated, and which kind of programmes are designed to address them. It is thus important to understand who the global governance actors are, who the influential decision makers are, how their expected outcomes and goals converge or diverge, how they interact, and how all of these elements affect convergence.

Despite these challenges, global governance for DRR and CCA provides a unique opportunity to encourage increased political commitment and economic investment in convergence at country level. A central motif of the three international frameworks is their recognition of development as an inherently complex process, possible only when public and private actors recognize the necessity of considering mutual dependencies, constraints and trade-offs of action across sectors. The cross-fertilization among stakeholders working in DRR, CCA and sustainable development change can help achieve resilience and improve food security. Another commonality between the global governance for DRR and CCA concerns the issue of gender equality with increased efforts to establish gender-related commitments in relevant global policy mechanisms.

2. Country level architecture

The notion that convergence between DRR and CCA can be beneficial for resilience has gradually filtered from the international arena to national governments' discourse and policies, with several countries having initiated action towards greater convergence of DRR and CCA in policy and institutional terms (Gero, Meheux and Dominey-Howes, 2011; Howes *et al.*, 2012; Hasan, Akhter, Ahmed and Kabir, 2013; Forino, von Meding and Brewer, 2016). However, the pursuit of convergence is not without its challenges (Mitchell, van Aalst and Villanueva, 2010; Gero, Meheux and Dominey-Howes, 2011; Forino, von Meding and Brewer, 2015).

While convergence can, and often is, promoted at the policy level, the implementation of relevant DRR and CCA policies and programmes is often motivated by a variety of forces, including influence from international actors and agendas. This is also the case in the agricultural sector. In many countries, parallel structures for DRR and for CCA continue to operate. Most often Ministries of Environment handle CCA while Ministries of the Interior or Social Affairs are responsible for DRR, each with their own inter-sectoral coordination arrangements, their own channels of funding, and their own separate entry points for different international agreements (UNFCCC and Sendai Framework respectively). Even when the two work streams are present within the same sector and Ministry (e.g. the Ministry of Agriculture in Viet Nam), the two units in charge often operate in a separate and parallel manner, linking and coordinating their work with the agencies that lead DRR management or climate change (CC) (see Box 2). This institutional parallelism leads to inefficiencies and may become fertile ground for conflict over resources. In some cases, it is the key obstacle to growing convergence between the two fields.

Country experience indicates that institutional parallelism and lack of progress in convergence of DRR and CCA action often, but not always, reflect political dynamics at the national and local levels, and are influenced by the relationships between different actors, power and information asymmetries, conflicting interests and characteristics of a given society. Examples of possible governance and political economy challenges behind institutional parallelism and slow progress on convergent action of DRR and CCA include the following:

First, in many countries there is a historical legacy and strong response-oriented (rather than prevention-oriented) attitude towards disasters within government. These strongly influence the way the issue of convergence between risk reduction and adaptation is perceived and shaped at both national and local levels. Disasters continue to be generally perceived as a product of hazards rather than a function of both human and natural systems' vulnerability and climate change. Risk reduction, adaptation and resilience appear to be distant and vague objectives when placed next to a crowded agenda of demands placed on local governments, like for example, in the Philippines (See Box 2). The benefits of 'soft' risk reduction and adaptation measures (awareness raising and education, capacity development etc.), and of investing in prevention and resilience building for (uncertain) future events through a wide-range of system-specific measures, are not sufficiently known. As a result, increased emphasis on DRR and CCA might seem unnecessary from the perspective of government officials based in sectoral agencies, where DRR and CCA were traditionally not key priorities. The challenge, especially for local officials, is to recognize the complementarities between DRR and CCA and their cross-sectoral nature, which would necessitate integration into the relevant local and regional sectoral plans, as well as into development, investment and land-planning.

This 'response-oriented' attitude contributes to the continued strong focus on the construction and maintenance of mostly structural protection measures, and the provision of short-term responses rather than longer term strategies to prevent and reduce future losses and facilitate adaptation to climate change for increased resilience.

Second, there are insufficient efforts to build a common understanding, indicators and information systems, and a common knowledge management system by both DRR and CCA communities. Sharing and debating the evidence base can give individuals and organizations dealing with DRR and CCA specific knowledge to help them better understand the linkages and complementarities of the two domains in agriculture, e.g. how DRR and CCA affect the productivity of crops, the timing of the cropping seasons, the prevalence and spread of pests and diseases, losses of crops etc. Yet in many countries, in addition to fragmentation of information and knowledge management, differences in methodology and tools persist, including those for assessing vulnerability and resilience.

In addition, indicators for adaptation are lacking compared to indicators for monitoring and evaluation of DRR strategies. There is also a certain resistance to share and disseminate information among the concerned agencies and with other stakeholders. Furthermore, finding the right way to convey information about risks associated with climate change to farmers and local communities remains a challenge. The uncertainty regarding possible future impacts presents a unique difficulty in making climate change relevant to people's daily lives and livelihood activities, in particular in the poorest rural communities. Tapping into existing DRR efforts for climate variability and extreme events could be a good entry point for building understanding and adaptive capacity.

A third challenge relates to the ownership of and use of information about disasters and climate change, and on the vulnerability of people and areas at risk of being impacted by climate change and disasters. Precise risk information is the basis for effectively mainstreaming disaster and climate change risk into development planning and implementation processes. The key issue, however, is the availability of information as well as the relevance and usability of the risk information available, which must be compatible with a given national development and governance system.

Many countries have carried out multi-hazard risk assessments with support from development partners but the development planning agencies at national, sub-national and sectoral levels find it challenging to process, package and use such information in a way that allows for greater integration of risk in development policies and plans. In addition, risk information often lacks sex-age-disability-disaggregated data and other demographic and social criteria which would be conducive to a more inclusive and informed development. Lessons from various countries in Asia suggest that governments need to: a) develop context-specific risk assessment methodologies to be used by line ministries and sectors without seeking much external assistance; b) go beyond uploading the risk information on a DRR portal by developing a system that has solid linkages with development planning instruments (templates, forms, manuals, etc.); and c) build capacity of development planning officials on processing and utilizing the available risk information while conceiving, planning, designing, and implementing development programmes and plans at various levels.⁷

Fourth, the absence of clear leadership, and incentives for convergence, and power dynamics between and within government bodies in charge of the two domains seem to contribute to the slowing down of progress towards converging action (Gero, Méheu and Dominey-Howes, 2011; Garschagen, Tuan and Vo, 2009; Howes *et al.*, 2012). Governments have traditionally divided their responsibilities for implementation of specific work areas, such as emergency services, the environment, health, infrastructure, agriculture etc. This fragmentation has often led to a 'silo' mentality within organizations that encourages a narrow view of issues within one's respective purview and tends to overlook the broader, or cross-agency, implications. This applies to a large extent to DRR and CCA, which, as mentioned above, are under the umbrella of different government agencies or different units within one agency.

Therefore, cross-sectoral coordination is not a natural result of regular bureaucratic activity, but in practice heavily depends on *political* support. It is a rarity that government ministries provide incentives for individual officials to collaborate with officials from other sectors. Collaboration can be difficult even within the same agency (for example in Viet Nam – see Box 2). Collaboration and converging action of two domains implies the existence of partners who are interested in collaboration because of the potential benefit. It is thus particularly sensitive to changes in the political environment. Organizations in charge of DRR and CCA respectively (and the individuals inside them) should have reasons and incentives to work together, and there should be mechanisms that facilitate organizations' sharing of information about problems, solutions, and strategies.

Several countries have established national cross-sectoral coordination commissions or committees at the highest level aimed at facilitating integrated planning and implementation (see Box 2). But catalysing such bodies in practice is challenging: there are often operational challenges, differing expectations about desirable outcomes, financing and capacity issues. Often missing are strong political and social champions to support the formulation and implementation of effective solutions to issues with complex multi-sectoral effects. Because operational or institutional benefits may be unclear, individuals and institutions tend to have little motivation to vigorously pursue cross-sectoral efforts in practice.

⁷ Information provided by the Asian Disaster Preparedness Center.

Fifth, the relationship between state and sub-national governments and the context in which local governance systems (both formal and informal) function is an important governance issue. This is particularly the case when the responsibility for DRR and CCA is in the hands of local government departments, who often lack sufficient knowledge, capacity and resources to properly accommodate them. Local authorities often prioritize and invest in immediately visible and politically more popular infrastructure or programmes, rather than in collaboration efforts to prevent future, uncertain risks. Depending on the political system and type of local governance, the most appropriate way to deal with this issue will vary.

BOX 2. CASE STUDIES: PHILIPPINES AND VIET NAM

This box is based on a literature review provided in the bibliography for the Philippines and Viet Nam, and on interviews with a number of resource persons from FAO.

Governance issues in efforts towards integration in the Philippines and Viet Nam

Both Viet Nam and the Philippines are particularly prone to climate-related hazards like floods, droughts, heat waves and storms, which are expected to become more frequent and/or possibly more intense. Climate hazards strongly affect the agriculture sector, a sector that plays an important role in the development of the two countries and employs a significant portion of the labour force. Considering the geographical and weather conditions in both countries, the ability to reduce natural disasters has been critical for their economic development. To this end, several laws, strategies and policies relating to disasters have been developed since the early 1940s and today strong established structures and capacities for DRR management implementation are functional in both countries. Climate change entered the policy agenda much later. Today, both countries are part of the three key global frameworks (Sendai, SDGs and the PA), and are engaged in the process of integrating DRR and CCA action for enhanced resilience to disasters and climate change.

The Philippines

Integration between DRR and CCA features high on The Philippines' policy agenda: The country's 2009 Climate Change Act and the 2011 National DRR and Management Plan both highlight the importance of integrating DRR and CCA action, and are themselves interlinked.

In practice however, the responsibility for DRR and CCA rests with actors affiliated with different agencies, supported by their associated international agreements and bodies. The Department of Environment and Natural Resources (also dealing with UNFCCC and the PA) plays a leading role in the field of climate change, while the lead institution in the DRR field is the Office of Civil Defense (dealing with the Sendai Framework). In the agriculture sector, the Department of Agriculture (DA) hosts the country's Disaster Risk Reduction and Management Operations Center for agriculture as a platform for decision makers and experts to enhance national preparedness and to coordinate response activities in the sector. A special Office for Climate Change has also been established within the DA. Two cross-sectoral mechanisms are mandated to monitor and coordinate efforts related to DRR and CCA: the National Disaster Risk Reduction and Management Council (the Council), translated at the sub-national level into the regional, provincial, municipal and Barangay Disaster Coordinating Councils, and the National Climate Change Commission, attached to the Office of the President. As the frontline of basic services to the communities, the local government units serve as the platform of convergence to operationalize and implement location-specific integrated DRR and CCA measures. Following the decentralization process, national government ministries have reduced technical capacities within provinces or municipalities where the local chief executive (e.g. mayor or governor) has the main decision making authority.

Despite the policy commitment to integration, the competent bodies at all levels tend to continue running their own initiatives separately. The interaction and relationships between the concerned authorities remain limited, and the implementation of the integrated action for DRR and CCA lags behind, both in terms of capacities, funding, and in the consistency in approach throughout various levels of government. Each agency seems driven by different policy processes with different stakeholder groups supporting differing policy agendas: no national policy has yet created the operational mechanism needed to promote DRR and CCA integration; neither in general nor by sector. Particularly in agriculture, there is a gap in which risk prevention and preparedness measures often have an adaptation or even a mitigation co-benefit, which can be critically important to farmers and their communities.

Despite existing cross-sectoral coordination mechanisms, the system of separate ministerial implementation responsibilities often complicates the harmonization of plans and actions at the local level. Rather than providing a common vision and guidance for integrated action, various national agencies bring individual demands to the local level, often creating confusion or even competition over priority entry points for action at the local level. In addition, as decentralization does not foresee any direct reporting line within sectoral agencies from regional to local level, municipal officials may set priorities which are not necessarily in line with regional priorities. Agricultural extension officers may receive requests from the regional level of government, but are due to report to the mayor; further complicating the harmonization of plans and practices. The exchange of knowledge on disaster risk and climate change at the local level, and the horizontal interaction between local communities, still seems relatively limited. When it does occur, it is more often than not initiated by research communities/ academia or external projects, with little or inconsistent leadership and coordination roles handed over to local government units (LGU).

Moreover, local governments remain financially dependent on the central government: funding is based on the amount of revenue an LGU generates. The higher the revenue of an LGU, the higher its allocation from the Government. While these funding mechanisms take account of DRR and risk exposure, final resource allocations at the local level often result in poor resource allocation for agriculture and risk reduction. In some cases, this dependence combined with lack of knowledge and capacities related to DRR and CCA has resulted in separate, overlapping local level planning processes.

Viet Nam

Viet Nam's DRR management system remained for a long time focused on structural measures such as dams and dykes, as well as emergency response to disasters. Predominance of infrastructural solutions persists also today, as infrastructure appears as a clear and visible response embedded in a long tradition that brings together state legitimacy with hydraulic management and capacity to respond to disasters. The 2013 Law on Natural Disaster Prevention and Control introduced provisions on long-term prevention and risk management, and references climate change as "an area of interest to disaster risk."

Simultaneously, the 2011 National Strategy on Climate Change mentions the necessity to proactively cope with natural disasters and monitor climate, but has no specific reference to disaster risk reduction (or management). The agenda primarily concerns research, planning, communication, and inter-institutional and inter-sectoral coordination efforts. In terms of organizational mandates and responsibilities, the leading role of the Ministry of Agriculture and Rural Development (MARD) on DRR is a result of the history of the double role of the hydrological infrastructure for both irrigation and for water-related hazards protection. The MARD is also the standing body of the Central Steering Committee for Natural Disaster Prevention and Control (Committee), and the focal point for the Sendai Framework. Climate change is led by the Ministry of Natural Resources and the Environment (MONRE), which is a standing body of the National Steering Committee on Climate Change (NSCCC) that also deals with the UNFCCC and the PA. However, the responsibility for the development and implementation of the 2008 National Target programme to Respond to Climate Change is shared among all state ministries.

Given the MARD's responsibility for DRR, the regulatory framework for climate change offers an opportunity for integrated action on DRR and CCA in the agriculture sector. In 2008, MARD adopted the Action Plan Framework for Adaptation to Climate Change in the Agriculture and Rural Development Sector Period 2008-2020, and established the Standing Office on Climate Change (SOCC) to take the lead on activities related to climate change in the sector. In practice, however, the SOCC seems to be more connected to MONRE and NSCCC than to MARD.⁸ This institutional set-up at the national level, including the coordinating bodies for DRR and CCA, is mirrored at the provincial and district levels, and to a certain extent at the commune level.

Although placed within the same Ministry, the two departments of MARD keep separate budgets and mandates at the expense of integrated action. Moreover, both departments risk reduction and adaptation dimensions are said to be often underestimated and under resourced even within their own domains (MARD and MONRE). Furthermore, the government has set up a General Department on DRR under the MARD. This situation risks giving even greater prominence to the DRR aspect and exacerbating the separation with the CCA Office that will remain a small group under the Department of Science, Technology and Natural Resources within the Ministry.

⁸ Based on interviewee information.

This institutional separation is mirrored at the local level. While the decentralization process places greater responsibility for implementing and integrating DRR and CCA with local level government, national level decision makers retain significant influence. This has been largely attributed to the country's political culture, in which decisions are made centrally, with civil servants generally perceiving each issue to fall under the responsibility of a specific ministry, including disasters, risk prevention and climate change. One example of concrete consequences of this approach is local officials' preference for potentially profitable but high-risk economic development models promoted by national-level decision-makers such as plantation rubber production schemes in coastal areas. These tend to pose higher livelihood risks than those associated with smallholder production. Thus, when the Typhoon Wutip hit the Quang Binh province in September 2013, the greatest damage in the agriculture sector was to the rapidly expanding rubber sector (Christoplos, Ngoan, Sen *et al.*, 2017).

Another challenge resulting from the institutional separation mentioned is the difficulty in developing solid quality criteria for integrative development of adaptation and DRR strategies and plans at all levels. The current prevailing practice remains parallel, and separate reports and plans at the provincial level are only exchanged among relevant authorities after their adoption (Garschagen, Tuan and Vo, 2009). This often leads to the inefficient use of scarce resources, inadequate or disconnected services and lack of information for the communities and farmers involved, thus reducing the success potential for both adaptation and risk reduction at the local level, leaving people and assets more vulnerable and less resilient to hazards and climate change.

Sixth, there is often a lack of participation and influence of local stakeholders and the concerned communities, at various levels of governance, in identifying priority problems, providing information on conditions and potential solutions based on community knowledge and experience, and in planning and implementing processes (Bollettino, Dy Alcayna and Vinck, 2016). Social capital and networks, community bonds and organizing structures play a strong role in the social distribution of vulnerability and adaptation capacity. Meaningful participation of men, women and communities, with their knowledge about events such as floods or droughts, would be particularly useful in working on ecosystem-based adaptation and risk reduction strategies, as well as in monitoring changes in climate, flood regimes, and vulnerabilities. In many countries, local communities possess knowledge of traditional ways of understanding and interpreting local weather signs, based on men's and women's understanding of their environments. These might include traditional housing structures and building methods, food preservation, rotation of planting sites and crop diversity, response to weather and hazard elements, such as wind, salt, inundation and droughts, all of which contribute to their food and livelihood security. This traditional knowledge has helped communities prepare for disasters, and could help them adapt to climate change. Grounding convergent DRR and CCA policies at the community level should thus be fully owned by local populations and civil society. This includes the most vulnerable groups whose lives and livelihoods will be directly affected by certain adaptation and risk reduction options. For example, vulnerable groups should be involved in exploring alternative response options to relocation (Lebel, Lebel and Daniel, 2010; Nguyen and Shaw, 2010).

Recognizing and addressing community-based issues can also empower people to better identify their risks and needs, to formulate and implement sustainable responses, reduce disaster risk and adapt to climate change, as well as to demand more accountable governance (Australian Himalayan Foundation, 2016). At the community level, traditional knowledge systems are often fundamental for determining social, political and cultural processes for decision making that guide convergent risk

reduction and adaptation efforts (Anderson, 2012). Supporting the local community's involvement is thus crucial for implementing convergent strategies that will lead to a culture of risk prevention and adaptation. In addition, acknowledging how social and cultural norms reinforce power dynamics and frequently concentrate decision making authority and control in the hands of men is the first step in designing approaches that can increase the resilience of all groups within a community and improve gender equality (ODI, 2016).

Finally, another governance issue relates to the influence of external actors on convergence between DRR and CCA (see Box 3). In practice, in many countries, efforts towards convergence and shifting attention on resilience are strongly influenced by the international frameworks, and supported by donors and international agencies present at the country level. At the same time, the relevant international actors acting under the key international frameworks (SDGs, Sendai and Paris) continue using different terms, different approaches, and different strategies and funding sources, and cooperating with different country authorities. Competition at the national level is amplified at the global level when different ministries tend to gravitate separately toward different international forums. This competition plays a significant role in influencing the agenda for sectoral actors working on DRR or CCA at country level. It frames concepts and discourses, making the acceptance of converging approaches to DRR and CCA at the country level even more challenging.

BOX 3. INFLUENCE FROM EXTERNAL ACTORS

Often countries' externally driven projects (and related agendas) are implemented independently, producing DRR and CCA overarching planning documents which often exist in parallel to the sectoral development plans. In this way, externally driven projects may create commitments for national sectoral agencies, NGOs, or private sector actors to address the DRR and or CCA agenda as a separate, additional work stream. Sometimes these plans are drafted by outside experts, without sufficient involvement and ownership of relevant national and/or sectoral key stakeholders.

With external funding and support for risk reduction and adaptation being managed by different agencies and departments, it is often observed that those in charge are not interested in renouncing their portion of funds, or sharing with other entities. This situation will likely cement the division of CCA and DRR management rather than promote integrated action on the ground.

An in-depth governance analysis, addressed from an agriculture sector perspective, will confirm (or deny) the relevance/spill over of these generic, typical governance and political economy challenges or point to other, more country and sector-specific issues.



III Governance analysis of disaster risk reduction and climate change adaption action – the agriculture perspective

As mentioned earlier, the process of disaster risk reduction (DRR) and climate change adaptation (CCA) convergence depends on consensus and coordinated actions by multiple and diverse stakeholders at different levels and sectors. It requires a “whole of society” approach that necessarily relies on a willingness to work across agency boundaries, and with communities and businesses at the national and local levels.

This paper suggests that institutional parallelism and the lack of progress in DRR and CCA integration observed in several countries often – although not always – reflect the obstacles that exist within the specific governance processes and arrangements and political dynamics at national and local levels. These include influence from government, power relationships between different stakeholders, and historical, economic, social and political features of a given society. Global governance and fragmentation of international community also play a role.

In this sense, the convergence of DRR and CCA cannot be addressed without engaging in more fundamental governance and political economy challenges affecting national and local planning and implementation processes related to risk reduction and adaptation in agriculture.

An in-depth analysis can help to assess and clarify the context of DRR and CCA convergence and identify constraints and opportunities for a better integration of the two. The following section aims to serve as a practical guide for undertaking an in-depth governance and political economy analysis at the country and sub-national levels and offers possible entry-points to promote convergence and address related issues.

Suggested governance analysis unfolds in a three-step process (see Figure 1): (i) frame the problem related to DRR and CCA integrated action and identify key governance challenge(s) at local and national levels; (ii) analyse political economy drivers behind these challenge(s); and (iii) develop realistic strategies to address identified constraints, and to enable stakeholders to engage in order to foster change.

The purpose of such an analysis is to:

- i) Verify whether the uptake of DRR and CCA agendas and the integration of DRR and CCA actions were actually beneficial and necessary (economically, socially and environmentally) in a given country and its sector specific contexts; and identify what the key governance challenge for convergence is;
- ii) Analyse political economy bottlenecks that hinder convergence of agendas and the integration of actions, and assess how important and strong they are;
- iii) Develop, based on the findings of analysis, the most appropriate and realistic strategies for action.

Figure 1: Three phases of governance and political economy analysis for DRR and CCA action



The three levels of analytical work are strongly interlinked and will be shaped by specific country contexts, actors and processes. The guidance provided should be read and used flexibly and adapted according to specific country contexts and national priorities (e.g. depth and scope of analysis, decentralized locations, prioritization of issues). The questions suggested are indicative only.

BOX 4. REMAIN FLEXIBLE AND ADAPT TO SPECIFIC COUNTRY CONTEXT!

The understanding of governance issues related to local and national level DRR and CCA planning and implementation processes will come through exploring, probing and listening to key stakeholders, rather than through directive questioning. It is critical to regularly exchange with main actors and stakeholders as this exchange may provide valuable insights and suggestions as well as concrete contributions to final recommendations.

1. Organizing for analysis

Governance analysis is an iterative process, combining activities ranging from desk reviews of existing literature and data, to undertaking surveys, collection and analysis of primary data, to discussions of findings with concerned, selected stakeholders and actors. The division into three steps is a convenient way of structuring the exposition of the process, but it does not correspond precisely to the reality of the analysis undertaken in practice, and some repetition is inevitable.

The timeframe will depend on the scale of the analysis (one or few municipalities or regions, or national level), the political environment, and other characteristics of the country. Ideally, in addition to collecting data at the national level, two to three different municipalities/regions should be selected for a detailed analysis and qualitative-based fieldwork.

The governance analysis may come as a part of context analysis undertaken by a development agency within a framework of a concrete policy support intervention related to DRR and CCA at country level. It can be undertaken by i) independent experts and local research institutes or ii) development actors supporting governments in designing and implementing DRR and CCA activities.

The preparatory step for any analysis involves a preliminary conversation with concerned national/local level actors and possible partners about DRR and CCA in general and the convergence or integration of DRR and CCA actions in particular, but also about possible unsaid issues that need to be addressed. This conversation will help to assess the perceived need and readiness for potential change, and the overall priority given to any convergence process/effort.

A qualified assessment team has to be established which brings together subject matter expertise as well as sound local knowledge. It is suggested to conduct an in-depth training on the analysis methodology to allow team members to familiarize themselves with all aspects of the governance assessment. The training should facilitate a buy-in, active participation, and acceptance and ownership of findings and recommendations.

For the field-based data collection and analysis, a cascading method is particularly useful, whereby the analysis is informed by collecting information starting from the national level (from all relevant actors, including international partners), to the regional, district and municipal levels. A range of qualitative and participatory data collecting tools will be useful for conducting the data collection and analysis. They include survey questionnaire, key informant interviews and focus group discussions.

Different analytical tools that development practitioners are familiar with – e.g. stakeholder analysis, stakeholders' rights, responsibilities, returns and relationships (4Rs framework), situation analysis, institutional analysis, risk assessments, political, economic and social context analysis, power analysis – can support the analysis.

The analysis should be forward looking; its findings will help design the most realistic strategies for addressing identified constraints and pursuing integrated action on DRR and CCA in a given country.

2. Problem statement and identifying key governance challenges for disaster risk reduction and climate change adaptation convergence in the agricultural sector

The first step in the analysis is to understand the state of the art around the implementation and possible convergence of both agendas, or of specific disaster risk reduction (DRR) and climate change adaptation (CCA) actions within the agriculture sector. This will allow the team to identify and frame the main problem, and identify key governance challenges that influence the convergent implementation of DRR and CCA agendas in a country.

The deconstruction and understanding of a problem is essential. A lack of convergence and institutional parallelism in DRR and CCA in a given country may not be a problem *in itself*; it becomes a problem only if it causes ineffectiveness and inefficiency, and negatively affects the efforts of farmers and communities to reduce risk and vulnerability to disasters and climate change, and to build a more resilient and food secure community and society. The 5-Whys technique is one possible useful tool for problem analysis (see Box 5).

BOX 5. 5-WHYS TECHNIQUE

The 5-Whys analysis serves to identify and better understand the root causes of a recurrent problem. Often, issues that are categorized as technical problems turn out to be human and process problems. This technique helps deconstruct the problem and identify its key causes and components. The technique asks to identify the initial problem and then answer why it is a problem five times. This helps stakeholders go beyond the initial issues or those that are immediately visible, to work out what is actually causing the problem and where the most effective entry points for its resolution may be. At the end, the root cause of the initial problem can turn out to be something very different from initial expectations and most often linked to the human or process dynamics factor.

Sources: Kanbanize (2019).

The analysis will look at the political system in a country (federal, centralized, decentralized state) and its socio-economic, legal and sectoral context to understand the institutional set up, decision making processes, the actors in charge of DRR and CCA actions, and possible existing coordination mechanisms. Institutions include formal (e.g. laws, legislation, electoral systems) and informal rules (ways of working, social norms and cultural practices that include social hierarchies and forms of rent-seeking) that influence the incentives, interests, and positions of the key actors and their behaviour.

Convergence could, for instance, be promoted through relevant policy or legal instruments at the national and sub-national levels, but with key institutions operating in a separate and parallel manner in practice, resulting in overlaps and inefficiencies. The analysis should deconstruct the main problem(s) and challenges deriving from possible parallel action on DRR and CCA in agricultural sector.

Special attention should be focused on the *local level*. This is where DRR planning and implementation, and increasingly CCA, are happening and where key problems stemming from the lack of convergence are likely to be most felt in practice. This local-level emphasis reflects the fact that the impact of disasters and climate change are experienced locally, and therefore, geographic variability in impacts emphasizes the need for “place-based” approaches. Also, in most countries, including the Philippines and Viet Nam, local governments represent core institutional units that are recognized as the responsible and legitimate entities for planning and implementing local action including for DRR and CCA (Measham, Preston, Smith, Brooke, Gorrdard, Withycombe and Morrison, 2011).

At the same time, it is also at the local level where integrated DRR and CCA actions can be most often observed in practice since communities themselves, rarely, if at all, differentiate between DRR and CCA. Rather, they see risks to their livelihoods and the environment upon which they depend in an integrated way. Because of their direct exposure to natural hazards and related risks, and limited (human and financial) resources and capacities, the same community authorities often engage in both DRR and CCA planning and implementation in agriculture. However, in some cases, this responsibility has been viewed by local governments as another instance where a responsibility has devolved to the local areas in the absence of sufficient guidance and resources (Howes *et al.*, 2012).

The analysis should continue, looking at the critical point where the responsibilities and action in the two fields may start to separate, and identify the main characteristics and consequences of the diverging agendas at that level. An examination of the situation might involve asking:

- What were the most important national experiences that led the country to its current situation related to DRR and CCA?
- Are policies at local, territorial, national, regional and global levels sufficiently aligned and supportive – if not, where are inconsistencies and potential conflicts?
- At which institutional level is there a separation between the planning and action in two fields in the agricultural sector? Is that mirrored across the agriculture sector?
- Are there duplications and inefficiencies, or possible conflicts over resources to implement similar if not the same activities by the agencies in charge of DRR and CCA respectively? And if so, what are they (duplication in planning with loss of energy and resources; lack of or contradictory information, etc.) and what is their impact on peoples’ resilience to climate-related hazards and their food security?
- What are key possible governance bottlenecks for convergence in agricultural agencies? What blocks collaboration/integrated action?

It will also be important to look at and understand the situation at different levels as well as the linkages and guidance/instructions applied throughout different levels of government about how to handle DRR and CCA planning and implementation. In some cases, there might be top down instructions. The latter may facilitate or constrain regional or local authorities in engaging with the broader governance network to establish institutional arrangements for integrated DRR and CCA planning and implementation.

This first step will help to identify the main institutional and process dynamics, and indicate key governance challenge(s) that may hinder coordination and convergent action. Possible causes and drivers behind them will be analysed in Step 2.

It should be noted that there may be cases where the analysis can reveal that for certain aspects integration, and not even convergence, is necessary. Even if separate planning streams exist, the respective DRR and CCA activities in agriculture can be implemented in a coherent manner at the local level. In such cases, the analysis could stop at this point.

3. Analyzing political economy issues behind key governance challenges

Once the main problem(s) deriving from the lack of convergent action on risk reduction and adaptation has been understood and key governance challenges identified – it will be necessary to dig deeper into these issues to the level of political economy drivers behind them: (i) structures; ii) stakeholders, their interests and power relations; and iii) the processes through which decisions are made and enforced (see Figure 1 *supra*). This will help to explain drivers of possible institutional parallelism, better understand how important these drivers are, and how they can be addressed.

This analytical step could be initiated at the institutional level in which trade-offs due to parallelism have been reported under Step 1. The analysis should involve a combination of stakeholder, power and political economy analyses.

The focus on actors and stakeholders is central. Brainstorming about the various actors involved will provide a starting point but the list will need to be reduced to those actors that really matter. In order to make this selection process it is important to assess the interests, power, incentives and motivations of *key* actors engaged in planning and design of DRR and CCA interventions. It will be useful to identify the individuals and organizations that have an interest in solving the problem of institutional parallelism, and who among these may influence decisions and outcomes related to it. Stakeholders include both individuals and organizations, but also specific groups (such as mid-level officials of a Ministry, or a local agency or farmers' associations) as well as external donors, regional and international organizations and foreign investors, who influence local and national economic development.

It is important to distinguish who the critical players are without whom convergence or integration is not possible, and the other players who are important but not decisive for converging action. It may be a collective body (Ministry or municipality, or other) presented by a single individual (minister, mayor) or there may be greater complexity within (e.g. a diverse group of municipal council members). It is also crucial to identify and understand opponents to a convergence agenda. Who are they and what are their motivations? Finally, it is important to identify actors who may often be left out, but who have critical knowledge to contribute or social networks that can be built upon for convergence.

The detailed mapping and assessment of key stakeholders and their interests is thus a crucial step in the analysis, which should focus on:

- Roles and responsibilities as defined by the formal institutions or structures and if relevant, by traditional norms: Who are the decision makers on relevant topics within the key agencies?
- What do these actors *really* do in their daily work/practice? Can they focus on what their assigned responsibilities are? Are there possibly other/additional agendas

and objectives they also have to follow? In case there are signs of divergence, what are their actual priorities, motivations and interests to fulfil their responsibilities? And/or what are their other objectives that they define for themselves, which could possibly be independent of their formal obligations (e.g. a mayor may be directly accountable to his or her party leaders, rather than to the population/community)?

- Technical capacities and competency profiles of the key units/actors in charge of DRR and CCA issues: Are they familiar with DRR and CCA topics and technically capable of making decisions about DRR and CCA convergence on the basis of their own knowledge? Do they rely on third party know-how to inform their decision making?
- Communication and communication channels: what are the established paths of formal communication flow? Are they convergent or separate for DRR and CCA? Are they efficient? Are there other informal paths of communication flow which trigger action and follow up?
- Effectiveness of collaboration arrangements and partnerships in practice: collaboration has more chances to succeed when (i) there are fewer actors engaged; and (ii) they share converging interests along a given dimension (agricultural outcomes); or (iii) when there are strong and viable institutional arrangements for enforcing collaboration. Is such an enabling environment in place? Are there champions who actively promote collaboration within or across units and agencies? These factors have to be understood and the readiness and interest for collaboration has to be confirmed even in cases in which specific coordination mechanisms for DRR and CCA are already established (e.g. a national commission or committee) at the national or sub-national level, since it does not automatically follow that collaboration will be effective.
- Process and power dynamics: Linked to the profile of responsibilities and tasks, the analysis could discuss possible categorizations of actors such as “winners” and “losers,” or “reform champions,” “undecided,” and “opponents” to trigger discussions on power dynamics and trends. Such analysis however needs to be done with a topical focus, great care, and consciousness of the fact that positions can shift, and that stakeholders often have interests that cut across several sectors or issue areas.

BOX 6. POTENTIAL DRIVERS AND OBSTACLES TO A CONVERGENCE AGENDA

The perceived costs and benefits of convergence and/or integration of action as perceived by key actors and decision makers are among the primary factors that will influence decisions to engage in a convergence or consolidation process. In many instances, the changes needed to initiate or implement further convergence of action will not necessarily mean cuts in funding or resources, but rather reallocating them and adjusting their use to make them more efficient and more effective, leading to multiple benefits on the ground. In most cases enhanced coherence and consolidation of actions may actually increase available resources by reducing duplication of structures/functions (and staff time allocations), which focus on delivering similar or even the same concrete services to the local level. On the other hand, convergence may influence or shift power dynamics, reallocate responsibility of key actors as well as control over resources, all of which could create barriers to readiness for change.

Performed in a disciplined way, this analysis will illuminate dynamics that may currently hinder convergence, and highlight current perceptions and opinions about incentives or disincentives, constraints and opportunities for DRR and CCA convergence. It will help identify key actors within the agencies in charge of DRR and CCA, as well as other stakeholders that have the interest or the power to influence processes and outcomes. This analysis can also help to identify sources of inertia or reversion to *status quo* after externally funded intervention in favour of an integrated agenda has ended. The analysis will lead to better understanding of what could be rational and realistic opportunities for or against promotion of a convergence agenda, and possible entry points for action.

4. Developing programmatic priorities for action

Governance challenges and political economy drivers behind them identified by the analysis may appear to be delicate to handle (for example, when lack of integrated action is the result of ongoing competition for power and resources or other political pressures). In such cases, when the analysis points to a situation where there are strong conflicts of interests or clear absence of political will for any form of DRR and CCA convergence, the only option may be to no longer invest further energy on promoting the convergence agenda until the political environment changes.

In most cases however, the analysis will provide the basis needed to formulate or adapt possible strategies for change and increase the chances of success. For example, in a given country, there may be some elements or aspects of DRR and CCA that do not need convergence or integration of action and others that do. For those that do, there may exist a multiplicity of possible modalities and levels of conceptual convergence and/or for integrating actions. These include the exchange of information, networking, coordination, collaboration, partnerships, dissemination and access to technologies and related know how, joint planning and programming, integrated provision of services for local action, as well as monitoring of actions. Various options can lead to different outcomes for different stakeholders. Many of these approaches can be used without major expenditures of money or political capital.

While specific strategies for action will differ on a case-by-case basis depending on the results of the analysis, it is possible to list some generic entry points to deal with identified governance and political economy issues, and to promote convergence:

a) Policy and legal framework

The first, fundamental level of action is to establish or strengthen the national DRR and CCA framework as well as the sector specific policies and strategies. In case there is an absence of overarching DRR and/or CCA policy frameworks, building coalitions, facilitating dialogue and advocating for putting in place adequate national and agricultural sector policy frameworks for DRR/ CCA may be an appropriate strategy. Promoting a convergence agenda, as deemed appropriate, may be an integral part of that process. If favourable, policy frameworks for DRR and CCA are already in place, but are not sufficiently supportive of convergence between the two agendas (institutional parallelism), dialogue with high-level decision makers could aim to revise those documents from a unified perspective, and assessing the existing level of willingness among key institutional stakeholders to engage in a reform or integrate thematically similar/identical work areas and actions supported by both agendas.

BOX 7. LEVERAGING SDGS AND THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

The recent adoption of the SDGs and the Agenda 2030 can be used to accelerate the process towards convergent action on DRR and CCA. Both DRR and CCA are critical elements of sustainable development. The 2030 Agenda strongly upholds the necessity to think and work cross-sectorally, in a coherent and integrated manner. Most countries are working towards operationalizing the 2030 Agenda through the selection of national SDG targets reflecting their specific country priorities, including DRR and CCA. The process of operationalizing the 2030 Agenda at country level thus represents an excellent opportunity to generate consensus and stakeholders' support to work towards a common vision for converging action on DRR and CCA in agriculture, and a theory of change for achieving this vision. The fact that countries have committed to update their national DRR strategies by 2020 in line with Sendai Framework for Disaster Risk Reduction (SFDRR) and SDG 13.2 creates an excellent opportunity to proactively take the convergence agenda on board.

b) Planning and programming processes towards local action

In cases where awareness about the DRR and CCA convergence agenda is in place but there is no integrated action yet in sectors like in agriculture, potential paths for engaging may be discussions at the regular annual or biannual sector development planning processes. The convergence agenda and process needs to be coordinated and owned by all relevant agencies and actors at all levels, rather than merely reflect the views of a single department or individual. It needs to span the relevant institutional layers. In case of sectoral up-take it is important that the DRR and CCA agendas ultimately find their way into overarching sectoral development plans. External actors can often add value by assisting through planning process facilitation.

BOX 8. EXAMPLE: RISKS OF PARALLEL PLANNING WORK STREAMS

Often countries face situations where DRR and CCA appear on the agenda of the agricultural sector in the form of externally funded and implemented projects and/or as top-down requirements moving from global to central and decentralized levels. In such cases, the governance analysis will allow for getting a sense of the level of real engagement of agricultural sector's key actors. They may not relate with those projects, particularly when they are coordinated by external project staff, a situation which can result in DRR or CCA projects running as parallel work streams.

On the other hand, key national actors could be involved and consider those externally funded interventions as an experimental learning space for testing new agendas. The latter scenario offers real opportunity for constructive dialogue and building the basis for negotiations on convergence and integration of DRR and CCA actions. In a best-case scenario, national actors may be able to browse value added ideas from those externally-led activities and incorporate selected good practices into their sectoral development plan. In that case, the integration of DRR and CCA action may actually function in form of mainstreaming key aspects of both together into the overarching sectoral development plans.

Facilitating the construction of a joint vision and theory of change helps key stakeholders to start looking beyond their immediate sectoral interests towards broader, common goals such as strengthening farmers' and communities' resilience. A joint vision and theory of change can also help in acknowledging and addressing

possible conflicts of interests and trade-offs between current decisions, short-term and long-term goals linked to diverse values, and priorities for the future.

BOX 9. EXAMPLE: ASIAN RISK PREPAREDNESS CENTER (ARPC) WORK IN NEPAL

Through the Hariyo Ban Programme, the ARPC supported Nepal's efforts to integrate DRR and CCA at district and municipal levels. The concerned stakeholders had difficulties in understanding the differences between DRR and CCA, and were confused about where synergies start and end. The confusion hindered communities focusing on adaptation from embracing DRR, and DRR communities from engaging in climate change policy at all levels. The differences between DRR and CCA approaches have acted as barriers to closer collaboration. Support was provided to a District Disaster Management Committee (DDMC) to develop district-level DRR and CCA related planning documents, and ensure their implementation. The Programme also worked on strengthening capacities of local stakeholders and communities so that they are better prepared to tackle disasters and climate change adaptation impacts in an integrated way. These activities contributed to building the commitment of district and municipality officials to funding integrated DRR and CCA activities. At the same time, DRR and CCA were integrated at community level through the ward citizen forum, and were presented in village or municipal council for endorsement.

Source: Communication from ARPC.

c) Delivering integrated action

Data and information systems (e.g. Early Warning System), satellite/IT based tools, and other communication and knowledge management methodologies and tools, as well as sector specific technology options and interventions open a wide window for integrated action on DRR, CCA and sustainable development (see Box 10).

BOX 10. EXAMPLE: CONVERGENT ACTION THROUGH TECHNOLOGY OPTIONS

Agriculture specific services where duplications/overlays of action between DRR and CCA can frequently be observed include vulnerability, risk and exposure mapping to extreme events or climate change impacts; provision of tailor-made early warning messages for farmers on farming practices, planting times, harvest time/emergency harvests etc.; or related recommendations for DRR good farming practices and CCA/Climate Smart Agriculture (CSA) good farming practices which in many cases point from both angles to the same technologies like conservation agriculture, or crop varieties which show high tolerance to drought, salt intrusion, or flood submerged conditions, as well as water saving technologies, mulching, and soil improvement/management.

Creating information systems that contain both hazard and climate data sets in a combined way promotes convergence. Such information systems could result in a transformational shift from the collection of relevant data towards making the data accessible, understandable and actionable at different time scales by different users at all levels.

At local level, the integration of action can sometimes be achieved relatively simply by modifying existing planning methods and tools to incorporate a wider range of questions and information. This can be particularly useful in adapting standard risk, vulnerability and capacity assessment tools such as seasonal calendars, historical profiles and risk mapping to identify longer-term climate trends and uncertainties.

Providing relevant information, analysis and evidence on economic and social advantages that could be generated through DRR and CCA convergence to all relevant stakeholders may be a helpful entry point for stimulating and facilitating debate on convergence with a view to improve the coordination processes at different governance levels.

BOX 11. EXAMPLE: ASIAN RISK PREPAREDNESS CENTER (ARPC) SUPPORT TO CHAD

In Chad, the ARPC, joined with Caritas Switzerland to support building a seasonal and forecasting early warning system. The focus was put on actively involving concerned communities and strengthening cooperation and trust between different actors in particular, communities and local authorities. Four early warning systems were set up and linked to official structures so that the data collected can trigger the necessary interventions. Systems are now managed locally and give concerned local communities information and power, improving their response to crises and resilience (e.g. use of adapted crops based on drought or flood forecast) and transforming them from beneficiaries to agents of change.

Source: Communication from ARPC.

The governance analysis will on the one hand uncover factors that potentially hamper integration of actions. On the other hand, it will produce insights and information that will allow the promotion of (further) integrated action with the objective of enhancing efficiency and effectiveness of interventions and services provided at the local level. Such information can relate, for example, to cost-benefit analysis for running separate information management systems; to cost and staff time savings within the sectoral agencies; or to cost and benefits of externally funded projects; to the advantages from using the common tools for vulnerability, risk or public expenditure analysis; or to the increase in the relative proportion of services and support that would reach farmers and other local actors in the long run if DRR and CCA actions were better integrated.

d) Coordination and monitoring

Leadership and trust are critical ingredients for convergence to succeed, particularly in initiating a process and sustaining it over time. Change processes are shaped both by the action of individual champions (as well as resisters) and their interactions with organizations, institutional structures and systems (IPCC, 2012). Most advances in cross-sectoral coordination are made because of the insight and energy of a facilitative leader, champion or convening entity able to motivate diverse actors, assist in negotiation among them, and maintain the vision and bigger picture alive.

Establishment of appropriate accountability mechanisms that help clarify responsibilities of public and private sector stakeholders in reducing existing (disaster/climatic) risks and preventing the emergence/creation of new ones is another opportunity for integration (CADRI, 2017).

Concluding remarks

An integrated approach to disaster risk reduction (DRR) and climate change adaptation (CCA) at the local, national and international level is currently discussed as a suitable way ahead for increasing effectiveness, efficiency and sustainability of stand alone DRR and/or CCA strategies and respective plans and activities. This could eventually lead to improved resilience of local communities to climate hazards and fewer climate and weather-related losses in the agriculture sectors. However, progress on scaling up and implementation has been slow. A review of the available literature and experiences from countries indicate that institutional parallelism on DRR and CCA persists, and that governments tend to still focus more on piecemeal technical solutions, rather than addressing the key governance challenges that are required for an effective coordination and convergent action.

While the operationalization of the Sendai Framework, the 2030 Agenda, and the Paris Agreement is progressing slowly, a new momentum for cross-sectoral action has been created, which offers a unique opportunity to generate consensus and stakeholders' support to work towards convergence and integrated action on DRR and CCA in one of the fields where it could be particularly beneficial: agriculture.

Looking at agriculture as a key sector for DRR and CCA implementation, this paper suggests that the question of convergence of DRR and CCA actions cannot be properly addressed without understanding and dealing with governance and political economy related to national and local DRR and CCA planning and implementation. In other words, the appropriate institutional solution for DRR and CCA convergence should be tailored to the political economy of enforcement. If a theoretically good institutional solution cannot be implemented in the context of local and national political economy, it is actually not a good solution.

An in-depth analysis of the ongoing institutional parallelism between DRR and CCA work streams and its drivers, which are manifested by specific governance processes and arrangements, and political dynamics at national as well as at local level is needed. These include influence from government, power relationships between different stakeholders, and historical, economic, social and political features of a given society. Global governance and fragmentation of the international community also play a role. This paper flags a number of typical issues that can be better understood through the governance analysis and addressed accordingly:

- Historical legacy and strong response-oriented (rather than prevention-oriented) attitude towards disasters within government; incentive system for being pro-active.

- Factors hampering efforts to build a common understanding, indicators and information systems, and a common knowledge management system by both DRR and CCA communities.
- Accessibility ownership and usability of precise risk and vulnerability information which must be compatible with a given national development and governance system.
- The absence of clear leadership, and incentives for convergence, and power dynamics between and within government bodies in charge of the two domains.
- Insufficient clarity on roles and responsibilities between state and sub-national governments and local governance systems (both formal and informal).
- Lack of participation and influence of local stakeholders and the concerned communities in identifying priority problems, providing information on conditions and potential solutions based on community knowledge and experience, and in planning and implementing processes.

Through practical 'how to' advice, this paper aims to contribute to a deeper understanding of governance challenges for DRR and CCA convergence in agriculture. Indicative questions to guide the three steps of governance analysis are provided in the Annex. The questions should be adapted to the specific context, and used during interviews and focus group discussions with stakeholders at the country level. They are intended to facilitate better understanding of governance and political economy issues, but can only be discussed and answered in combination with the necessary technical data and knowledge related to DRR and CCA implementation in the country.

To conclude, this discussion paper, as outlined in the introduction, is an initial effort towards building a more systematic understanding of the topic and possibly, the collection of country case studies on governance of DRR and CCA convergence. Further work and field analyses are needed. It is anticipated that this paper will be complemented and enriched over time as more experience, knowledge and examples are brought to bear to provide further reflection, and guidance for action.



Annex: Guiding questions for governance analysis

The following are indicative questions that can further guide the three steps of analysis. They should be adapted on a case-by-case basis and should not be seen as direct interview questions.

Step 1. Problem statement and identifying key governance challenges

NB: This phase of analysis will look at both national and sub-national levels, understand the specific political organization of the country, and identify the level of governance where the convergence problem is present (it may be at several levels). The set of indicative questions provided below does not need to be answered in great detail at this stage, as the next section of analysis will go deeper into the specific interests, incentives and power of key stakeholders at the level(s) where the lack of converging action is most strongly felt.

The objective of the analysis will be to establish whether lack of converging action on DRR and CCA is actually a problem in a given country, at which level it is present and mostly felt, why it is a problem, and which key governance challenge is related to it.

- What is the current institutional set up related to DRR and CCA in agriculture in a country?
 - Who are the key actors? What are their mandates, roles and responsibilities? (on paper and in reality).
 - How are resources allocated? Is there a mechanism in place for allocating resources to gender-sensitive activities?
 - How are responsibilities distributed between the national and sub-national levels (decentralization)?
 - What are key activities related to agriculture undertaken in DRR and CCA respectively?
 - Are non-governmental actors, including farmers, involved in decision making processes? How?
 - Is there a mechanism for coordination or convergent action of the two fields in agriculture? If yes, provide details, including on its effectiveness and results in practice.
- Are there contradictions or overlap in the respective DRR and CCA activities? Are there duplications? What are they? At what level do they occur (local, regional, national)? Be sure to consider individual-level skills as well as the capacities of organizations to encourage convergence.
- Are there sufficient capacities (knowledge, technical and managerial capacities, experience, and financial resources) at different level(s) (government officials, extension workers, etc.) for increasingly converging DRR and CCA implementation in the agricultural sector?

- How are “resilience,” “risk reduction” and “adaptation” in agriculture understood by different stakeholders, including farmers?
- If there is no convergent action what are the key constraints as seen by the key actors, including farmers? Are they of a governance nature?
- Is the lack of convergent action a problem? Why? (The 5-Whys tool).
- Should the two fields be more convergent in agriculture? If yes, why? What would be the expected benefits (at different levels) of converging action on DRR and CCA in agriculture? If not, why not?
- Would convergence affect certain informal institutions directly or indirectly? How?

If the action on DRR and CCA in agriculture is considered satisfactory, or possible institutional parallelism is not perceived as a problem, the analysis will stop at this level. On the contrary, if the lack of convergent action is seen as a problem, and the reasons are related to a governance challenge (e.g. parallelism with duplications and inefficiencies, power dynamics, pressure interests, information issues) the analysis will move to Step 2.

Step 2. Analysing political economy issues behind key governance challenges

NB: this step in the analysis will focus on the governance issue identified in Step 1. As mentioned in the text, the core of the analysis is on how key actors in a country, with their different interests, incentives, constraints and power, shape the likelihood of successful convergent action on DRR and CCA in agriculture. The objective of the analysis will thus be to identify a) key stakeholders who can influence the process towards convergent action, and how to engage them; and b) what could be the most appropriate and realistic form of convergent action (or 2/3 possible options) within a given country context. Considering that governance issues may differ from country to country, the questions below are of an indicative nature, and need to be further developed and adapted to that specific issue(s).

- Who are the key stakeholders and actors (from the government and outside) related to the identified convergence problem, and a given governance issue?
- What are their respective roles, interests and positions in that regard? What is their actual behaviour?
- Which actors play an informal role in this area? Are key actors left out of the formal process?
- How are farmers and their representatives involved in decision making processes related to DRR and CCA in agriculture? Are female and male farmers represented? What is the access of male and female farmers to information needed for DRR and CCA-related decisions?
- How and in which arenas do key actors communicate and interact? What are the characteristics of those arenas?
- Is there a history of working with others in other sectors and being open to new ideas?
- How do organizational structures, values, culture and experiences influence convergent action in DRR and CCA? Do individual attitudes, behaviours and methods of work encourage collaboration and convergence?

- What are the potential impacts of convergence on other sectors and high priority issues (e.g., sustainability, natural resources management and use, economic development)?
- What would be the strongest benefit of convergence? And possible trade-offs? For whom?
- Who gains from the status quo? Who might lose with a change? What do they stand to lose?
- What factors (including external ones) influence current views and action on convergence by different stakeholders and at different levels?
- For those with the most to gain or to lose from changes towards convergence, what is their capacity and power to influence the process?
- What lesson(s) can be drawn from the history of past efforts to deal with similar questions of cross-sectoral coordination/convergent action – if such experience exists in a country?
- What may be the most appropriate form of convergence (at national and local levels), according to different actors? Why? Benefits? Trade-offs? For whom?

Step 3. Developing programmatic strategies for moving forward

NB: depending on the findings of the analysis in the previous two steps, the questions will need to be further developed and specified.

- How does one overcome the main bottlenecks for convergent action?
- What policy and operational changes may be more beneficial: support to radical reform, or minor changes to the existing institutional set-up (in terms of norms and organizations)?
- What kind of governance mechanism would best support the identified options for convergence in agriculture (coordination/collaboration/merge etc.)?
- If resources are limited, what are the pros and cons of each possible option?
- What is the most feasible and realistic option to enhance coherence in the current governance context in a country? How likely is it that this option could materialize?
- What are possible effects and consequences for different stakeholder?
- How could the most promising option best be designed and implemented (at each level)? What are the risks? How can they be mitigated?
- Who are the key actors to engage (at each level)? How?
- What are key risks and opportunities of engagement? Political sensitivities, risks and opportunities associated with maintaining relationships with traditional partners and forging new relationships?
- Who might be a champion(s) for leading or promoting the reform at the national, local and community levels?
- What actions should be prioritized?



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Glossary

The glossary is compiled based on the one provided by the Intergovernmental Panel on Climate Change (IPCC) (2014).

DISASTER RISK REDUCTION

Disaster risk reduction

Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.

Annotation: Disaster risk reduction is the policy objective of disaster risk management, and its goals and objectives are defined in disaster risk reduction strategies and plans.

Disaster risk reduction strategies and policies

Disaster risk reduction strategies and policies define goals and objectives across different timescales and with concrete targets, indicators and time frames. In line with the Sendai Framework for Disaster Risk Reduction 2015-2030, these should be aimed at preventing the creation of disaster risk, the reduction of existing risk and the strengthening of economic, social, health and environmental resilience. A global, agreed policy of disaster risk reduction is set out in the United Nations endorsed Sendai Framework for Disaster Risk Reduction 2015-2030, adopted in March 2015, whose expected outcome over the next 15 years is: *"The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries."*

DISASTER RISK ASSESSMENT

A qualitative or quantitative approach to determine the nature and extent of disaster risk by analysing potential hazards and evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend.

Annotation: Disaster risk assessments include the identification of hazards; a review of the technical characteristics of hazards such as their location, intensity, frequency and probability; the analysis of exposure and vulnerability, including the physical, social, health, environmental and economic dimensions; and the evaluation of the effectiveness of prevailing and alternative coping capacities with respect to likely risk scenarios.

RESILIENCE

The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.

Adaptation

Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory, autonomous and planned adaptation:

Anticipatory adaptation - Adaptation that takes place before impacts of climate change are observed. Also referred to as proactive adaptation.

Autonomous adaptation – Adaptation that does not constitute a conscious response to climatic stimuli but is triggered by ecological changes in natural systems and by market or welfare changes in human systems. Also referred to as spontaneous adaptation.

Planned adaptation – Adaptation that is the result of a deliberate policy decision, based on an awareness that conditions have changed or are about to change and that action is required to return to, maintain, or achieve a desired state.

Adaptation assessment

The practice of identifying options to adapt to climate change and evaluating them in terms of criteria such as availability, benefits, costs, effectiveness, efficiency and feasibility.

Adaptation benefits

The avoided damage costs or the accrued benefits following the adoption and implementation of adaptation measures.

Adaptation costs

Costs of planning, preparing for, facilitating, and implementing adaptation measures, including transition costs.

Adaptive capacity (in relation to climate change impacts)

The ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.

Adaptation deficit

The gap between the current state of a system and a state that minimizes adverse impacts from existing climate conditions and variability (IPCC, 2019a).

Adaptation limit

The point at which an actor's objectives (or system needs) cannot be secured from intolerable risks through adaptive actions (IPCC, 2019a).

Hard adaptation limit – No adaptive actions are possible to avoid intolerable risks.

Soft adaptation limit – Options are currently not available to avoid intolerable risks through adaptive action.

Adaptive capacity

The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences (IPCC, 2019b).

Adverse side effects

The negative effects that a policy or measure aimed at one objective might have on other objectives, irrespective of the net effect on overall social welfare. Adverse side effects are often subject to uncertainty and depend on local circumstances and implementation practices, among other factors. See also Co-benefits and Risk (IPCC, 2019b).

Risk

The potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values. Risk is often represented as probability or likelihood of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur. In this report, the term risk is often used to refer to the potential, when the outcome is uncertain, for adverse consequences on lives, livelihoods, health, ecosystems and species, economic, social and cultural assets, services (including environmental services) and infrastructure (IPCC, 2019b).

Risk management

The plans, actions or policies to reduce the likelihood and/or consequences of risks or to respond to consequences (IPCC, 2019a).

Resilience

The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation (IPCC, 2019b and CARE, 2019).

THE TOOL

Five e-learning modules about integrating climate change adaptation into Disaster Risk Reduction (DRR) programmes and plans.

Developed by CARE's Strengthening Community-Based Disaster Risk Management in Asia (SCDRM+) Project.

The modules form part of a comprehensive regional learning curriculum for key government, civil society and community representatives from the SCDRM+ project countries.



GOVERNANCE AND POLICY SUPPORT - DISCUSSION PAPER

Governance challenges for disaster risk reduction and climate change adaptation convergence in agriculture

Guidance for analysis

This discussion paper aims to help practitioners work in a more informed and politically sensitive way to integrate actions on disaster risk reduction (DRR) and climate change adaptation (CCA) in agriculture. It illustrates some typical governance and political economy-related barriers that may hamper convergence or integration of DRR and CCA actions. It also provides guidance for in-depth governance analysis, putting the analytical focus at national and subnational levels, while considering the international context as an important factor for convergence.

The FAO Governance and Policy Support Discussion Paper series provides perspectives and concepts on critical governance and policy issues that are relevant to FAO work at country, regional and global levels. Discussion Papers are often based on work in progress and suggestions and ideas are welcome by email: governance-support@fao.org. The series is available at: <http://www.fao.org/policy-support/resources/>

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