

Assessing Progress on Integrating Disaster Risk Reduction and Climate Change Adaptation in Development Processes

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Strengthening Climate Resilience Discussion Paper 2

Strengthening Climate Resilience (SCR) – through Climate Smart Disaster Risk Management’ is a UK Department for International Development funded programme that aims to enhance the ability of developing country governments and civil society organisations to build the resilience of communities to disasters and climate change. It is co-ordinated by the Institute of Development Studies (UK), Plan International and Christian Aid, who are working with a variety of organisations across ten countries (Kenya, Tanzania and Sudan in East Africa; Nepal, India, Bangladesh and Sri Lanka in South Asia and Philippines, Indonesia and Cambodia in South East Asia). SCR has developed the Climate Smart Disaster Risk Management Approach (see Climate Smart Disaster Risk Management). If you would like to be involved in SCR meetings or work with the programme to trial the Climate Smart Disaster Risk Management Approach with your organisation, please either visit the SCR website: www.csdrm.org or send an e-mail to info@csdrm.org

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Assessing progress on integrating disaster risk reduction and climate change adaptation in development processes

Abstract

Climate change threatens development and the progress needed to achieve the Millennium Development Goals. With shifting seasons, increasing water scarcity, and potentially more frequent and intense extreme events (IPCC 2007), climate change is bringing a series of disaster and livelihood impacts to the poorest and most vulnerable countries and communities, and is placing development assistance at risk.

In managing such risks to development, there is a significant overlap of concepts and shared goals between disaster risk reduction (DRR) and climate change adaptation (CCA). In Mitchell and Van Aalst (2008), we reviewed the extent of convergence between the two at a number of scales, finding limited integration and both approaches struggling to be mainstreamed into regular development programming. We suggested that continued separation risked policy incoherence and ineffective use of resources, due to administrative inefficiencies, duplication of efforts and damaging competition between different inter-sectoral coordinating mechanisms.

Since 2008, the momentum toward convergence has continued to grow and analysis in this 2010 assessment indicates pockets and trajectories of integration that promise improved development outcomes. However, it also demonstrates continued separation of DRR, CCA and development in some geographic areas and significant structural barriers to convergence in critical institutions at different scales.

Abbreviations

AFB	Adaptation Fund Board
AWG-LCA	Ad hoc Working Group on Long-term Collaborative Action
CCA	Climate change adaptation
CIF	Climate Investment Funds
CSDRM	Climate-Smart Disaster Risk Management
DFID	Department for International Development
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EC	European Commission
EIA	Environment Impact Assessments
ERL	emergency recovery loans
GAR	Global Assessment Report
GEF	Global Environmental Fund
GFDRR	World Bank's Global Facility for Disaster Reduction and Recovery
GIS	Geographic Information System
GoB	Government of Bangladesh
GTZ	German Technical Cooperation Agency (Gesellschaft für Technische Zusammenarbeit)
HFA	Hyogo Framework for Action
IASC	Inter-agency Steering Committee
IDS	Institute of Development Studies
IFRC	International Federation of Red Cross and Red Crescent Societies
IISD	International Institute for Sustainable Development
IPCC	Inter-governmental Panel on Climate Change
LDCF	The Least Developed Countries Fund
MCII	Munich Climate Insurance Initiative
MDG	Millennium Development Goals
NAPA	National Adaptation Programmes of Action
NGO	Non-Governmental Organisation
OCHA	Office for the Coordination of Humanitarian Affairs
OECD DAC	Organisation for Economic Cooperation and Development, Development Assistance Committee
PPCR	Pilot Programme for Climate Resilience
SAARC	South Asian Association for Regional Cooperation
SBSTA	Subsidiary Body for Science and Technological Advice
SCCF	Special Climate Change Fund
SCR	Strengthening Climate Resilience
Sida	Swedish International Development Cooperation Agency
SRES	Special Report on Emission Scenarios
UCLG	United Cities Local Governments
UNFCCC	United Framework Convention on Climate Change
UN-ISDR	United Nations International Strategy for Disaster Reduction

1. Introduction

Over the past decade, progressively more attention has been given to converging DRR and CCA agendas conceptually and in practice at sub-national, national and international levels. This has paralleled the emergence of 'adaptation' as a critical component of the global response to climate change and the institutionalisation of DRR signalled by the agreement of the 2005 Hyogo Framework for Action (HFA). Despite a considerable body of work, both academic and policy-focused (Sperling and Szekely 2005, the 2006 special edition of *Disasters*, Few et al 2006, Yamin et al 2005, for example), the 2009 UNISDR Global Assessment Report on Disaster Risk Reduction (GAR/DRR) suggested that the majority of national processes for tackling DRR and CCA exist in parallel and have separate policy and institutional frameworks¹. As the focus of the GAR/DRR was on poverty and extensive risk rather than on the interface with climate change, there was little empirical analysis of how DRR and CCA are actually being linked (or not) in practice through legislation, institutions, policy and budgetary processes at the national scale. This 2010 review provides a snapshot of current levels of convergence of DRR and CCA at multiple scales and in doing so, conducts some of the analysis absent from the GAR/DRR.

The review, aimed primarily at a policy audience and focusing on international and national scales, begins by assessing the similarities and differences between DRR and CCA, before examining what is at stake if the two agendas do not converge. It then presents updated evidence of where DRR and CCA are already converging, followed by a section re-evaluating obstacles to further convergence. The material presented in this review is drawn from analysis of the 2009 country reports covering progress toward implementing the HFA, National Action Plans for Climate Change and National Adaptation Programmes of Action (NAPAs) across several countries (see Annex 1), consultation with a series of key actors from bilateral, multilateral organisations and non-government organisations (NGOs) working in this area and from the authors' own experiences of working in these fields.

¹This view is also supported by Few et al (2006) and Mitchell and Van Aalst (2008).

2. Comparing disaster risk management and climate change adaptation

CCA and DRR have much in common. Both aim to reduce the impacts of shocks by anticipating risks and uncertainties and addressing vulnerabilities. Indeed, a significant portion of climate change impacts will materialise through exacerbating climate variability (for example an especially wet rainy season) and extreme weather events (such as heavy rainfall events).

Definitions

Climate change adaptation: 'An adjustment in natural or human systems in response to actual or expected climate stimuli or their effects, which moderates harm or exploits benefit opportunities.'²

Disaster risk reduction: 'The broad development and application of policies, strategies and practices to minimise vulnerabilities and disaster risks throughout society, through prevention, mitigation and preparedness.'³

Climate change is shifting the frequency and intensity of hazards, such as heat extremes, heavy rainfall, droughts, high sea levels, and possibly cyclones, with direct implications for disaster risk (see Table 1).⁴

²IPCC (2007) Climate Change 2007, IPCC Fourth Assessment Report, Geneva, Switzerland <http://www.ipcc.ch>

³Twigg, J. (2004) Disaster Risk Reduction, Mitigation and Preparedness in Development and Emergency Programming, HPN Good Practice Review 9, ODI, London, UK

⁴IPCC (2007) Climate Change 2007, IPCC Fourth Assessment Report, Geneva, Switzerland <http://www.ipcc.ch>

Table 1 Examples of possible impacts of climate change due to changes in extreme weather and climate events, based on projections to the mid- to late 21st Century.

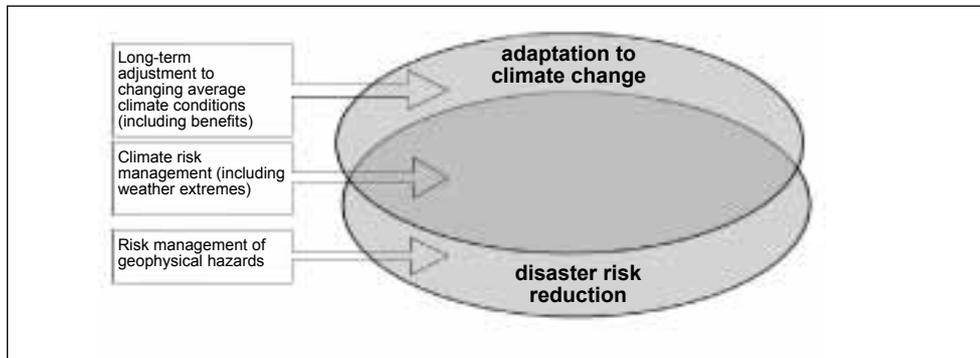
Phenomenon and direction of trend		Examples of major projected impacts by sector			
		Agriculture, forestry and ecosystems	Water resources	Human health	Industry, settlement and society
Over most land areas, warmer and fewer cold days and nights; warmer and more frequent hot days and nights	Virtually certain	Increased yields in colder environments; decreased yields in warmer environments; increase insect outbreaks	Effects on water resources relying on snow melt; effects on some water supplies	Reduced human mortality from decreased cold exposure	Reduced energy demand for heating; increased demand for cooling; declining air quality in cities; reduced disruption to transport due to snow, ice; effects on winter tourism
Warm spells/heat waves; frequency increases over most land areas	Very likely	Reduced yields in warmer regions due to heat stress; increased danger of wildfire	Increased water demand; water quality problems. e.g., algal blooms	Increased risk of heat-related mortality, especially for the elderly, chronically sick, very young and socially-isolated	Reduction in quality of life for people in warm areas without appropriate housing; impacts on the elderly, very young and poor
Heavy precipitation events; frequency increases over most areas	Very likely	Damage to crops; soil erosion, inability to cultivate land due to water logging of soils	Adverse effects on quality of surface and groundwater; contamination of water supply; water scarcity may be relieved	Increased risk of deaths, injuries and infectious, respiratory and skin diseases	Disruption of settlements, commerce, transport and societies due to flooding; pressures on urban and rural infrastructures; loss of property
Areas affected by drought increases	Likely	Land degradation; lower yields/crop damage and failure; increased livestock deaths; increased risk of wildfire	More widespread water stress	Increased risk of food and water shortage; increased risk of malnutrition; increased risk of water- and food-borne diseases	Water shortages for settlements, industry and societies; reduced hydropower generation potentials; potential for population migration
Intense tropical cyclone activity increases	Likely	Damage to crops; wind throw (uprooting) of trees; damage to coral reefs	Power outages causing disruption of public water supply	Increased risk of deaths, injuries, water- and food-borne diseases; post traumatic stress disorders	Disruption by flood and high winds; withdrawal of risk coverage in vulnerable areas by private insurers, potential for population migrations, loss of property
Increased incidence of extreme high sea level (excludes tsunamis)	Likely	Salinisation of irrigation water, estuaries and freshwater systems	Decreased freshwater availability due to saltwater intrusion	Increased risk of deaths and injuries by drowning in floods; migration-related health	Cost of coastal protection versus costs of land-use relocation; potential for movement of populations and infrastructure; also see tropical cyclones-above

Source: IPCC (2007) Climate Change 2007, Synthesis Report, IPCC Fourth Assessment Report

However, while reducing the risk of weather extremes is a substantial component of managing climate risk and of the overlap between DRR and CCA (see Figure 1), DRR does not equal CCA, and effective disaster risk management in a changing climate is more than business as usual.

Figure 1: Overlap between DRR and climate change adaptation

Source: Mitchell and Van Aalst 2008



As illustrated in Figure 1, the main overlap between the two is the management of hydro-meteorological hazards, where DRR needs to take account of changes in these hazards, and CCA aims to reduce their impacts. Two key distinctions are that:

- DRR addresses the risks of geophysical hazards (such as volcanoes and earthquakes), whereas CCA does not.
- CCA also considers the long-term adjustment to changes in mean climatic conditions, including the opportunities that this can provide, and how people and organisations can develop the capacities to stimulate and respond to longer-term change processes. This has not been a traditional focus of practical applications of DRR.

Table 2, an updated version of Tearfund (2008), examines further the differences between DRR and CCA and considers whether there are signs of convergence between practices driven mainly from a CCA or DRR perspective.

Table 2: Conceptual and practical differences between DRR and CCA

Differences		Signs of convergence
DRR	CAA	
Relevant to all hazard types	Relevant to climate and weather-related hazards	DRR programmes have always considered weather-related hazards but there are indications that some are now taking into account the impact of climate change on hazard frequency and magnitude and on vulnerability and planning interventions accordingly
Practice of DRR strongly influenced by post-disaster humanitarian assistance	Origin and culture of CCA derived from scientific theory and international climate change policy processes	Common ground being found in joint mainstreaming into development sectors – so specialists on both adaptation and DRR working in infrastructure, water/sanitation, agriculture and health for example.
Most concerned with the present and near future: addressing existing risks based on assessment of local experience and historical record, for example	Most concerned with the short, medium and long-term future – addressing uncertainty and new risks derived from the impacts of climate change	DRR increasingly forward-looking and CCA increasing using and existing climate variability as the entry point for activating adaptation processes. The idea of ‘no regrets’ options is a key area of convergence.
Traditional and local knowledge is the basis for community-based DRR and resilience building	Widely held view that traditional and local knowledge at community level may be insufficient as impacts of climate change introduces new risks and changes to the frequency and magnitude of existing hazards. However, increasingly recognised that local knowledge also includes people’s ingenuity in facing risks.	Growing number of examples where local knowledge and meteorological/climatological knowledge being considered side-by-side to inform DRR interventions
Traditionally has considered risk a function of hazard, vulnerability, exposure and capacity	Traditionally has treated vulnerability interchangeably with physical exposure	IPCC special report on ‘managing the risks of extreme events and disasters for advancing adaptation (due in 2011), promises convergence in this area
Full range of established and developing tools	Range of tools under development	Significant progress made in integrating learning from DRR into adaptation tool development
Incremental development, moderate political interest	New, emerging agenda, high political interest	Disasters more often seen as linked to climate change, and governments recognising the need to consider both simultaneously
Funding streams often ad hoc, unpredictable and insufficient	Funding streams increasing and promise to be considerable, though problems of delivery and implementation widespread	DRR community demonstrating signs of being increasingly savvy in engaging in climate change adaptation funding mechanisms

Source: Modified from Tearfund (2008), Linking Climate Change Adaptation and Disaster Risk

3. What is at stake if disaster risk reduction and climate change adaptation do not converge?

For both CCA and DRR, key shared objectives include protecting development gains and effective planning and programming: managing risks and uncertainties for all shocks and stresses is simply good business, particularly in the face of mounting evidence that disasters are hampering development and poverty alleviation (UN-ISDR 2009a). On the other hand, as experience has shown, neither government-led CCA nor DRR will happen automatically (Mitchell and Van Aalst 2008). There is often little political will or financial incentive to invest resources to ensure that something does not happen, compared with investing in visible and popular infrastructure or social programs. The incentives are even more skewed given that the donor community provides generous humanitarian assistance after a disaster but largely fails to provide similar support for reducing disaster risks. Attention to incentives, institutions and instruments to promote good risk-aware development is urgently needed.

Both the DRR and the CCA agenda have suffered from a lack of political influence and human capacity to raise the profile of risk management in mainstream development planning and practice. Nevertheless, the higher international political and public profile of CCA may generate additional momentum for innovation in international frameworks and institutional structures for DRR, which may potentially bring DRR and CCA closer together (Yamin et al 2005; Schipper 2009; Mercer 2010).

In most countries, CCA and DRR typically have separate institutional 'homes', often Ministries of Environment for CCA and Ministries of the interior or similar agencies for DRR, each with their own inter-sectoral coordination groups, each with their own channels of funding, and each with separate entry points in different international agreements (UNFCCC and HFA respectively). While sharing very similar objectives, and similar challenges in raising the profile of their agendas, they typically fail to coordinate among themselves. Such duplication of efforts, administrative inefficiencies, and even competition among various groups not only hampers DRR and CCA efforts, but compromises the overall effective use of resources. Hence, opportunities for joint work towards the common objective of reducing risk to development must be seized wherever feasible.

At a more technical level, the rapid expansion of climate change-related efforts may waste time and risk reinventing older approaches if they neglect learning from experiences, methods and tools developed for DRR. On the other hand, efforts on DRR that do not take account of the impacts of climate change on the frequency and magnitude of hazards, exposure and vulnerability may not only fail to achieve their objectives, but even increase vulnerability, for instance when flood defences provide a false sense of security, but will fail to provide lasting protection against rising flood risk.

4. Where are disaster risk reduction and climate change adaptation already converging?

4.1 Convergence in international agreements

The overlapping objectives of CCA and DRR are increasingly reflected in international agreements, government statements and policies, as well as in joint activities.

4.1.1 DRR in the UN Framework Convention on Climate Change

The United Framework Convention on Climate Change (UNFCCC) itself mentions the need for special attention for developing countries prone to natural disasters (Article 4.8d), but has no references to the concept of hazard or disaster risk. Critically, climate change, as framed by the UNFCCC, has tended to concentrate on long-term climatic changes rather than extremes and shocks associated with current climate variability. This has made it politically challenging to integrate substantial text on tying CCA to DRR in the UNFCCC, as DRR is perceived as only being concerned with current climate variability rather than more gradual long-term changes. In recent years however, the attention for climate risk management has grown substantially as governments recognise the importance of linking CCA and DRR and as more disasters associated with hydro-meteorological hazards have occurred. This is reflected in implementation mechanisms, such as the funds discussed below and in the Nairobi Work Programme⁵, an international framework that aims to improve countries' understanding of climate change impacts and vulnerability and to increase their ability to make informed decision on how to adapt successfully.

DRR featured prominently in the 2007 Bali Plan of Action, which highlights DRR as a critical tool for CCA, opening up a range of possibilities for integration of CCA in DRR strategies. This document is a crucial landmark for the 'convergence agenda', recognising the need for enhanced action on adaptation, including: '... disaster reduction strategies and means to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change'⁶ (UNFCCC 2008:2).

More recently, the Subsidiary Body for Science and Technological Advice (SBSTA) of the UNFCCC, in preparation for the 14th Conference of the Parties (in Poznan, 2008) produced a series of background papers on issues at the interface of DRR and CCA⁷. These papers informed a session of the UNFCCC Ad-hoc Working Group on Long-term Collaborative Action (AWG-LCA), the main forum for discussions on the post-2012 agreement. The session on risk management and risk reduction strategies, including risk sharing and transfer mechanisms (UNFCCC 2008) focused on the value of DRR and the HFA in supporting CCA in a post-2012 agreement and parties formally recognised the need for a 'common framework' between DRR and adaptation⁸. While the 'disasters community' was present in Copenhagen for the 15th Conference of the Parties, and issues such as climate-related disaster insurance were discussed as an integral part of a potential post-2012 agreement, the relatively brief Copenhagen Accord – the non-binding outcome agreed between a small group of countries – does not mention the words 'disaster' or 'risk'.

4.1.2 Climate change in the Hyogo Framework for Action

Albeit on a considerably smaller scale than negotiations under the UNFCCC, the HFA provides an international framework for action on DRR. It is signed by 168 countries, is endorsed by the UN General Assembly, and is supported by the UN International Strategy for Disaster Reduction (UN-ISDR) Secretariat. Contrary to the UNFCCC, the HFA does not contain an inherent financial mechanism and is not legally binding. The HFA explicitly integrates the need to anticipate changing risks due to global climate change (even though at the time of the negotiations on the HFA, which took place before the IPCC Fourth Assessment Report came out, certain states objected to using strong language on climate change) The HFA also specifically states that regional and international organisations and other actors commit to promoting⁹:

... the integration of risk reduction associated with existing climate variability and future climate change into strategies for the reduction of disaster risk and adaptation to climate change, which would include the clear identification of climate-related disaster risks, the

⁵The Nairobi work programme is a five year programme (2005-2010) that aims to help countries improve their understanding of climate change impacts and vulnerability and to increase their ability to make informed decisions on how to adapt successfully. It is an international framework implemented by Parties, intergovernmental and non-governmental organisations, the private sector, communities and other stakeholders.

⁶UNFCCC (2008) Report of the Conference of the Parties on its Thirteenth Session, Part Two: Action Taken by the Conference of the Parties at its Thirteenth Session, Bali Action Plan, Bali: Indonesia see: http://unfccc.int/meetings/cop_13/items/4049.php

⁷In particular, the technical paper 'Integrating Practices, Tools And Systems For Climate Risk Assessment And Management And Strategies For Disaster Risk Reduction Into National Policies And Programmes' aimed to take stock of current knowledge on this topic to assist parties to the UNFCCC and consider the role of DRR in a post-2012 climate change agreement.

⁸See http://unfccc.int/meetings/cop_14/items/4481.php

⁹UNISDR (2005) Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters, Kobe: Japan, see: www.unisdr.org/eng/hfa/docs/Hyogo-framework-for-action-english.pdf

design of specific risk reduction measures and an improved and routine use of climate risk information by planners, engineers and other decision-makers (UN-ISDR 2005:11).

In the last two years, UN-ISDR has strongly advocated for the integration of DRR and CCA as a critical component of the HFA's implementation agenda. Integration approaches and collection of national level good practices have been published and widely circulated by UN-ISDR¹⁰ and it has become involved in a range of activities designed to enhance convergence, including a mapping of DRR and CCA policies and frameworks at regional and sub-regional level, to being a key initiator and supporter of the IPCC's special Report, *Managing the Risk of Extreme Events and Disasters for Advancing Adaptation to Climate Change*, due for publication in 2011. However, early indications from the mid-term review of the HFA suggest that UN-ISDR should be doing more to support convergence. Consequently, UN-ISDR launched a series of consultations in 2010 on how climate change adaptation can be better integrated into the HFA.

4.2 Convergence in financial mechanisms

The overlapping objectives of CCA and DRR have been increasingly discussed and reflected in international agreements, government statements and policies, as well as in joint activities. However, relatively limited evidence has been found on how the overlapping objectives and activities are being integrated through financial mechanisms and institutional frameworks.

4.2.1 DRR coverage in climate change mechanisms

The Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF), two financing mechanisms set up under the UNFCCC and managed by the Global Environment Facility (GEF), pay special attention to DRR in their guidance. For example, guidance for the SCCF indicates that it will support 'capacity-building, including institutional capacity, for preventive measures, planning, preparedness and management of disasters relating to climate change, including contingency planning, in particular, for droughts and floods in areas prone to extreme weather events'¹¹.

The Adaptation Fund – the financing mechanism for adaptation under the Kyoto Protocol – has become operational under the guidance of its own Adaptation Fund Board (AFB)¹². The Adaptation Fund does not pay special attention to DRR in its current guidance, but DRR-related components clearly qualify for funding as long as they are also linked to national adaptation priorities as expressed in UNFCCC national communications, NAPAs or other national adaptation planning documents. Several of the preliminary proposals accepted by the AFB so far include DRR components and explicitly mention current and future climate risks. Three out of eight prominently feature DRR-related investments; the others do too, at least in some way. One (Uganda) explicitly refers to the HFA on DRR.

While not formally under the UNFCCC, the Climate Investment Funds (CIFs), were set up by the World Bank to support similar global climate objectives, mainly through country programming supported by the World Bank and the regional development banks. Besides windows focusing primarily on clean development and greenhouse gas mitigation, the CIFs also include the Pilot Program for Climate Resilience (PPCR), which aims to help countries transform to a climate resilient development path, consistent with poverty, risk reduction and sustainable development goals, through national and sectoral planning – possibly including budgetary support. The pilot programmes and projects implemented under the PPCR are built on NAPAs and other relevant country studies and strategies¹³. Several initial components include elements focusing on DRR. For instance, in Zambia PPCR objectives include the development of a National Disaster Management Policy.

Better management of extremes including DRR is also visible in other climate funding mechanisms, such as the Japan-funded United Nations Development Programme (UNDP) Africa Adaptation Fund.

4.2.2 Adaptation in DRR mechanisms

Although funding for DRR is growing, in comparison to CCA, considerably less money is available. Several bilateral donors have specific financing for DRR, although often tied to

¹⁰See www.unisdr.org/eng/risk-reduction/climate-change/docs

¹¹See Climate Adaptation Funds www.climatefundsupdate.org

¹²See www.adaptation-fund.org

¹³See World Bank Climate Investment Funds, see: www.climateinvestmentfund.org

response and early recovery programmes, rather than programmed as part of 'regular' development.

Under the World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR) which supports DRR and risk transfer mechanisms, the funding available under Track-II and the new initiative on South-South capacity building, explicitly includes adaptation to climate change among their objectives. The Country Programmes for Disaster Risk Management and Climate Change Adaptation 2009-2011 seek to increase the impact of their operations by deepening engagement in selected priority countries, which are highly prone to disasters and likely impacts of climate change. Integrated approaches and comprehensive programs for disaster risk management and CCA are being funded for each of the priority (and donor earmarked) countries (GFDRR 2009).

In the context of the GFDRR, a policy forum on Climate-Smart Disaster Risk Reduction was held in Stockholm in October 2009. Organised by the GFDRR, the Swedish International Development Cooperation Agency (Sida) and UN-ISDR the event gathered 100 country representatives, practitioners and experts from the disaster risk management and climate change communities to identify practices and critical actions for implementation of adaptation efforts. The meeting resulted in a joint communiqué on climate smart disaster risk management signed at high level, committing to (i) integrated delivery of support for adaptation and disaster risk reduction, including incorporation of climate risk into relevant operations and sectors; and (ii) ensuring that policies, programmes and dialogues with partners facilitate action to address the challenges identified in the Stockholm Policy Forum. This included: (a) working through existing regional institutions to foster trans-boundary and regional cooperation for adaptation efforts; (b) supporting local actors for sustainable action to reduce climate risks, with an appropriate balance between infrastructure and technical solutions and strengthening people's existing adaptive capacity and resilience; and (c) harnessing the resources, imagination and mobilising power of the private sector to support innovative and widespread risk management in a changing climate, particularly among the most vulnerable sectors of the global population (World Bank 2009).

In a more technical context, the GFDRR and UNISDR (2008) publication *Climate Resilient Cities: A Primer on Reducing Vulnerabilities to Climate Change Impacts and Strengthening Disaster Risk Management in East Asian Cities*¹⁴ is a practical tool for urban planners, which will be helpful in designing and conducting the ongoing UNISDR global campaign on 'Safer Cities and Urban Risk' for 2010-2011. The United Cities Local Governments (UCLG) worked with Mayors to develop political momentum to invest in risk reduction as means for climate change adaptation.

4.2.3 Bilateral and multilateral financing of DRR/CCA

The 2009 OECD DAC policy guidelines on adaptation (OECD 2009) highlight the need for DRR and CCA convergence at national levels to integrate climate change adaptation into development cooperation. Similarly, the World Bank's Strategic Framework on Climate Change and Development includes a commitment to integrate the Bank's work on disaster risk management and adaptation. The main approaches to adaptation focus on financing climate resilience and adaptation, expanding knowledge and forging partnerships. Despite such guidance and policy objectives such as the Stockholm Forum communiqué, few bilateral or multilateral donors have integrated their support for DRR and CCA.

Many DRR programs are funded from humanitarian budgets and coordinated from humanitarian aid departments. In most cases, this segmentation of the DRR agenda is making it more difficult to achieve integration with CCA, but even with the broader development agenda. Funding DRR by allocating a standard (often 5–10 per cent) percentage of humanitarian aid does help to raise budgets for DRR, but may increase separation of DRR projects from regular sectoral development. Indeed, the World Bank Independent Evaluation Group's review of the World Bank's efforts in disaster management (*Hazards of Nature*, 2006) noted that efforts towards vulnerability reduction were hampered by the fact that many of those efforts were integrated in emergency recovery loans (ERLs), which may not be the best vehicle for risk reduction (particularly as these loans need to be prepared quickly and

¹⁴See www.worldbank.org/eap/climatecities

have limited three-year life spans). Similar risks may apply when coupling DRR financing to humanitarian response funding.

Conversely, some donors are also concerned that conflating DRR funding with humanitarian assistance budgets means humanitarian assistance is complicated by the DRR/development imperative. However, at some points in the disaster cycle (mitigation, preparedness, response and recovery), particularly around preparedness for humanitarian response, the conflation of DRR and humanitarian assistance is helpful. For example, where early warning signals a potential disaster (such as in the form of seasonal forecasts, long-run hurricane track predictions or certainty in climate change science), the best humanitarian response is likely to combine humanitarian preparedness to respond with community-based awareness raising and organisation, and DRR integrated into development, including infrastructure design and spatial planning. Few donors have systematically explored how these different dimensions need to be coordinated and which funding channels would apply where.

CCA, on the other hand, is typically funded by environmental departments within bilateral development agencies. Within their own agencies, they struggle in a similar way as humanitarian aid departments to integrate their efforts into regular development operations, be it other sectors (infrastructure, agriculture, health) or within budget support policy dialogues. Many of these departments are trying to make the case for integration of adaptation into development through a risk-based approach, screening development activities and portfolios for climate risk¹⁵. By nature, this approach is closely linked to DRR perspectives (looking at risks to development, identifying opportunities for risk reduction within regular development, and at least avoiding contributing to disaster risk and maladaptation). While highlighting risks to projects and sectors, it has not yet led to systematic mainstreaming of adaptation to climate change (or broader climate risk management) into bilateral development assistance (OECD 2009).

Partly because it remains difficult to spend substantial CCA budgets through their own bilateral assistance, and partly for political reasons, bilateral donors (again, through their environment departments) also channel quite a substantial amount of their CCA funding through multilateral channels, particularly the climate funds managed by the GEF and the CIFs co-ordinated by the World Bank. However, there is some scepticism about the extent to which those modalities will achieve the integration everyone agrees is needed. Several bilateral donors are also investing directly in capacity building in developing countries as well as through science networks and NGOs – as an effective means to support integration in regular policy and practice, particularly at local level. For instance, DANIDA is supporting the Government of Bangladesh to improve the integration of DRR and Climate Change into development policies. The Danida CCA/DRR mission states that ‘there is potential for initiating several activities both as integrals of the sector programme support and as separate interventions’. (DANIDA 2007:3)

Most activities are complementary to the suggestions put forward in the Bangladesh NAPA with respect to CCA and thereby support the implementation of the NAPA:

- i) Integrating CCA/DRR in the DANIDA supported programmes within the agricultural and water and sanitation sectors;
- ii) Strengthening CCA/DRR data and forecasting;
- iii) Incorporating CCA/DRR into development planning and implementation activities and raising public awareness (DANIDA 2007).

The United Nations Environment Programme/UNDP joint programme funded by the Danish Government – CCDARE¹⁶ – provides financial and technical support to 15 sub-Saharan Africa countries to remove barriers and create opportunities for integrating CCA into national development planning and decision-making frameworks. The programme is designed to complement and strengthen ongoing and planned nationally-based CCA and risk management in the region.

In recent years the EC has also taken significant steps to try to reduce the impact of disasters on vulnerable populations through integrating DRR into their aid policies and practice. The

¹⁵Klein et al (2007) Portfolio Screening to Support the Mainstreaming of Adaptation to Climate Change into Development Assistance, Tyndall Centre for Climate Change Research Working Paper 102; Tanner, T.M. et al (2007) ORCHID: Climate Risk Screening in DFID India Research Report, IDS Research Report, Brighton: IDS
¹⁶CCDARE -Climate Change and Development: Adapting by Reducing Vulnerability, see: www.ccdare.org

2009 DRR strategy framework of the EC, which outlines the European Union (EU) strategy for supporting DRR in developing countries and the EU strategy for minimising and adapting to climate change, represent further achievements in mainstreaming these issues in European policies.

4.3 Convergence at national level

A review of all the 2009 national HFA reports reveals that several countries have initiated DRR-CCA links in policy and institutional terms, however many challenges remain ahead (see Box 1). Annex 2 features some of the more promising examples of DRR-CCA linkages in development processes, both regionally and nationally.

Although a few countries have indicated formal institutional linkages between national climate change committees and national platforms for DRR, these instances are the exception rather than the rule. For example, in the South Asian region, most countries highlight the need for better coordination between climate change and DRR authorities and expertise (SAARC 2010) but few have completed a formal integration process within government (see Box 1). While a holistic approach towards the integration of DRR and CCA has not been translated into national policies in most countries, evidence shows that efforts are already taking place, particularly those aiming at sectoral level integration such as water and agricultural management (UNISDR 2009a; UNFCCC 2008).

HFA country reports

This review concentrated on the integration of DRR and CCA at national policy level as reported in the 2009 HFA country reports. Important results emerging from the review include:

1. The specific indicator for monitoring progress of the integration of DRR and CCA is covered under indicator 4.1 Disaster risk reduction is an integral objective of environment related policies and plans, including for land use natural resource management an adaptation to climate change. Around 30 per cent of countries state that the integration of risk reduction and environmental-related policies are in place. Projects and programmes related to environment and natural resources management include disaster/environmental risk reduction in existing mechanisms. However, the environmental bias of the indicator, translates into countries looking at integration through environmental means. A multidisciplinary approach is required for comprehensive disaster risk management that integrates DRR and adaptation, and this depends on significant resources and influence that may go beyond the traditional remit of the environmental sector.
2. More than 80 per cent of countries state that institutional commitments for integration have been attained but however without comprehensive achievements in terms of strategies and plans in place. Countries recognise limitations in key aspects, such as financial resources and/ or operational capacities.
3. A few countries (The Maldives, Malawi, Bangladesh, for example) indicate that formal institutional linkages have been made between national climate change committee and national platforms for disk risk reduction, however in most countries, the need for better coordination between climate change and disaster reduction authorities and expertise has been highlighted.
4. Financial barriers to the integration of adaptation and DRR relate both to the insufficiency of funds and to the nature of the funds available, which are identified as inappropriate for the required cross-sectoral, multilevel and flexible framework. While political momentum exists to create new institutional systems, lack of dedicated resources from national budgets (and of trained personnel to implement plans) hampers the operation of such systems. Countries with strong DRR mechanisms and political commitment towards integrated efforts highlight the lack of financial support, appropriate processes, frameworks and programme guidelines for integration of DRR in CCA at policy levels and lack of capacity on climate risk management as the main drawbacks for convergence. A major focus is therefore needed on designing, testing, promoting and supporting institutional arrangements that integrate DRR and CCA into national development planning and public investment.
5. The availability of technical and baseline data is still a key challenge to providing information towards the integration of vulnerability and risk assessments of climate related hazards. The mapping and vulnerability/hazard assessment process is heavily dependent on external funding. This process is also seen as a singular activity instead of a continuous process, which can be informed as events occur. In order for the investment of funds to be realised the mapping and vulnerability/hazard assessment processes must receive reliable and significant long-term funding to ensure coverage across the territory.
6. From an integrated adaptation/DRR point of view, at national levels, countries are still struggling to balance short-term actions to reduce immediate impacts and longer-term actions needed to resolve the underlying causes of vulnerability so that reactive measures and humanitarian aid are not called on indefinitely.
7. In 20 per cent of countries the challenge still remains to manage the transition from response-centred disaster management activities to risk reduction and multi-sectoral initiatives that can be integrated at a national level.

¹⁷See www.proventionconsortium.org/?pageid=32&projectid=13

4.4 Convergence in knowledge and practice

In the past few years, there has been a focus on improved sharing of DRR and CCA tools with the purpose of increasing learning and reducing duplication. Work in this regard has been conducted by the ProVention Consortium¹⁷ through a set of workshops led by bilateral organisations and research groups (GTZ, DFID, IDS, IISD and the World Bank¹⁸) and

proposed under the UN-ISDR Working Group on Climate Change and DRR¹⁹. Many civil society organisations are also placing emphasis on integrating DRR and CCA tools so as not to burden country office staff and partners with confusing parallel approaches²⁰. Many of these compendiums of tools are currently hosted on the growing number of web portals set up to support DRR and CCA communities. Most include both adaptation and DRR resources, but are often poorly organised; in all cases they are each more familiar with one or other community. Box 2 provides an overview of the best known of these portals.

Box 2: CCA and DRR web-based portals

PreventionWeb (DRR focus with some climate)

www.preventionweb.net

For the DRR community to share experience in support of UNISDR and implementation of the HFA; includes a considerable flow of information on climate change and shares details of many climate change events.

ProVention Consortium (DRR focus with some climate)

www.proventionconsortium.org

Forges partnerships and networks traditionally among the DRR community, promotes dialogue and agenda setting, improves practice and manages knowledge through advancement, gathering and sharing. From 2010, the ProVention Consortium will no longer be fully operational.

Adaptation Learning Mechanism (adaptation focus)

www.adaptationlearning.net

Develops tools and resources to support adaptation practices, integration of climate change risks and adaptation into development policy and capacity building.

Eldis (adaptation focus with some DRR; includes Linking Climate Adaptation and CBA-X)

www.eldis.org/go/topics/resource-guides/climate-change

Summary of current thinking on climate adaptation issues with access to relevant and up-to-date resources and publications for researchers, practitioners and policy formers; includes 1000-member email-based network and 1,100 summarised documents.

WeAdapt/WikiAdapt (adaptation focus)

www.weadapt.org

Working collaboratively on CCA, pooling expertise from a wide range of organisations, developing and distributing new and innovative tools, methods and datasets, sharing experience on practical planning and building capacity.

World Bank Climate Change Portal (Climate change focus)

www.sdwebx.worldbank.org/climateportal

Quick, accessible climate and climate-related data for policymakers and development practitioners; includes mapping visualisation tool (webGIS) displaying important climate variables and climate-related data.

Partly to fill a gap in its 2007 Fourth Assessment Report, the IPCC is developing the Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX), based on a proposal by Norway and UN-ISDR (IPCC 2010). The development of this report involves experts from the DRR and climate change communities, including practitioners whose perspective and input will be sought for the adaptation, risk, and other relevant chapters. The report will be released in the second half of 2011.

4.5 Humanitarian and civil society efforts towards convergence

For several decades, humanitarian organisations have realised that response alone is insufficient to effectively manage the humanitarian burden of disasters. Several have initiated large DRR programs focusing on preparedness to respond, but also on livelihoods resilience and sometimes even long-term development, directly or through policy dialogues. However,

¹⁸See www.iisd.org/pdf/2007/sharing_climate_adaptation_tools.pdf

¹⁹ See: <http://community.eldis.org/.5994ce60/Sharing%20Climate%20Adaptation%20Tools/>

¹⁹See www.unisdr.org/eng/risk-reduction/climate-change/cc-working-group.html

²⁰See, for example, Tearfund (2008) Linking climate change adaptation and disaster risk reduction, London, UK; Red Cross/Red Crescent Climate Centre (2007) Red Cross/ Red Crescent Climate Guide, The Hague, The Netherlands

these efforts are often hampered by internal segmentation and the current financing modalities (with strong separation between development and humanitarian financing).

In the past decade, many humanitarian organisations have also realised the additional threats of climate change. Some have started to integrate climate information more systematically into their operations, and taken an active role in the climate negotiations. Their main policy focus in those discussions has been to suggest a strong role for DRR in climate adaptation frameworks.

A key example is the Red Cross/Red Crescent, which has had a designated Climate Centre since 2002, working on integrating climate information into disaster risk management and health programmes, and promoting integrated climate risk management approaches in many national Red Cross and Red Crescent societies as well as in the International Federation of the Red Cross and Red Crescent Societies (IFRC) (see, for example Van Aalst et al 2007). The Organisation for the Coordination of Humanitarian Affairs (OCHA) and UN-ISDR as well as the IFRC play a leading role in the Inter-agency Steering Committee's (IASC) efforts to engage the humanitarian community in the UNFCCC and to enhance capacity for integrating climate risk information into humanitarian policy and practice. This includes coordination between the IASC, UN-ISDR and the Munich Climate Insurance Initiative (MCI) on submissions to the UNFCCC.

5. Obstacles to disaster risk management and climate change

adaptation convergence

DRR and CCA international frameworks, political processes, funding mechanisms, information exchange fora and practitioner communities have developed independently and generally continue to be separate (Thomalla et al. 2006). While the trajectory towards convergence is reasonably rapid and evidence of integration is growing, a number of significant obstacles to full convergence remain.

5.1 Obstacles in international policy processes

Despite the relevance and importance of DRR to CCA agreements, strategies and approaches, the incorporation of DRR into UNFCCC decision texts on adaptation has been on the whole ad hoc and piecemeal. There are a number of reasons for this. Key donor governments and institutions are still struggling to ensure good communication and collaboration between their own disaster management and climate change departments and units, affecting their ability to influence UNFCCC processes.

DRR proponents use the HFA as the international justification and architecture for scaling up DRR efforts in the UNFCCC. However, the HFA is not legally binding and gains little recognition outside the DRR community. Efforts to have more explicit linkages to the HFA in the UNFCCC may help engage the DRR community in the adaptation arena and would possibly ensure stronger attention for DRR in climate change debates. Adopting a negotiating/advocacy position solely based on the strength of the HFA is unlikely to be successful. Instead, the case for DRR in the context of the UNFCCC should be made in terms that will engage the real stakeholders that need to come on board to implement adaptation in developing countries: sectoral stakeholders and ministries of finance and planning.

Furthermore, anecdotal evidence suggests that key donor governments (and the major polluters) are opposed to further integrating DRR and humanitarian assistance language into UNFCCC text as the UNFCCC only talks about human-induced climate change while the IPCC also includes climate variability. In the view of some of the major polluters, commitments to link adaptation with disaster risk reduction and humanitarian assistance more closely under the UNFCCC would create complex and potentially expensive overlaps associated with commitments to finance disaster relief. This leaves the unhelpful spectre of working out what proportion of disasters can be attributed to anthropogenic climate change and how much to existing climatic variability.

5.2 Obstacles in multilateral and bilateral institutions

Within major bilateral and multilateral institutions, adaptation and DRR commonly reside in different parts of the organisation and may even be managed in different geographic locations, though steps are being taken to address this. For instance, UNDP's Bureau for Crisis Prevention and Recovery Overview (BCPR) is based in Geneva (closer to many humanitarian agencies), while the adaptation-oriented UNDP/GEF is administrated from the Bureau for Development Policy (BDP) at the headquarters in New York. However, UNDP has expressed a clear intention to more closely align and even integrate its support on disaster risk reduction and climate change adaptation to developing countries, and is also taking concrete steps to ensure closer collaboration between BCPR and BDP at headquarters as well as in the field. In the World Bank, the Climate Change Team, the Hazard Management Unit and GFDRR team are now located within the same Sustainable Development Vice-Presidency (previously they were separated), however, there is limited day-to-day interaction, joint development of tools or analyses, or joint programming on climate risk management.

A number of the authors' consultations, with NGOs in particular, pointed to the fact that convergence of adaptation and DRR should start with reorganisation within organisations. Many felt that bringing DRR and adaptation into the same organisational home would send a clear message to other multilateral, bilateral and civil society organisations to do the same. Some expressed concern that the persistence of the close relationship between humanitarian assistance (mainly disaster response) and DRR in terms of organisational structures is damaging the profile of DRR as a development issue and is inhibiting the ability of DRR people to communicate effectively with key development and climate change counterparts.

Seeing DRR primarily as a humanitarian concern was described as 'an anachronism that must be countered'.

5.3 Obstacles in financing mechanisms

The multilateral adaptation financing mechanisms are closely tied to the UNFCCC, which in the past has not paid much attention to extremes, partly due to lack of scientific clarity on attribution of changes in extremes to anthropogenic climate change. In recent years, this has changed and many requests for funding from the GEF-managed adaptation funds include attention to management of extremes.

Nevertheless, a remaining barrier preventing DRR-oriented actors to start using the adaptation funding, is the need to demonstrate 'additionality' – the project, or at least the portion of it for which financing is sought, needs to address the changes in climate, rather than just variability and extremes in the current climate. In practice, the GEF has demonstrated substantial flexibility in its treatment of this requirement, but some rationale must be included. This is often a challenge for DRR-oriented programs. DRR actors perceive these requirements as ineffective, forcing attention on climate change rather than the most urgent disaster risk.

Another challenge for integrating DRR in the adaptation financing mechanisms, is the strong role of the national climate change and GEF focal points, which have to approve the applications for funding from the adaptation funds. They are usually based in environment ministries and often prefer projects with a strong role for their own ministry and coordination through the climate change mechanisms in the country, rather than leave the initiative to the DRR actors and/or their inter-sectoral coordination mechanisms.

The World Bank-managed Pilot Program for Climate Resilience (PPCR), part of the CIFs, is less constrained by UNFCCC guidance and more closely aimed at integrating into development and establishing useful examples of how integrated climate risk management can be mainstreamed into development, particularly through budgetary support modalities. Within DRR funding mechanisms, especially the GFDRR, the integration faces less formal obstacles, although for instance the GFDRR guidelines emphasise the need for coordination through the national platforms for DRR, rather than leaving more flexibility regarding the use of other coordination mechanisms (as long as they achieve integration of risk reduction into development). Within regular development financing, especially within budget support and policy dialogues, both adaptation and DRR face the same obstacles: they lack strong demand from recipient countries and are often perceived as donor interests. Both need to make a stronger case for economic and planning dimensions of integrated risk management to focus policy attention at that level. This has worked, for instance, in the Pacific Islands Region (see World Bank 2000, Bettencourt et al 2006, for example).

5.4 Obstacles at the national scale

In practice, the implementation modality for the GFDRR and much of the HFA are the so-called 'national platforms for disaster risk reduction', promoted by the ISDR. The UNFCCC on the other hand, has focal points in ministries of environment, or sometimes the meteorological office. The preparation of national reports to the UNFCCC (such as National Communications and NAPAs) does require some form of inter-ministerial coordination process, but the UNFCCC focal point has typically assumed the lead. In most countries, these coordination mechanisms exist largely in isolation from each other. Both coordination mechanisms struggle to influence planning and budgeting in major sectors. In guidance for the GFDRR, climate change is very explicitly integrated. However, there is no explicit role for climate change focal points or coordination mechanisms.

As a contribution to the interagency Vulnerability and Adaptation Resource Group, the EC funded a research project to look at links between climate change and DRR in Mexico, Vietnam and Kenya, which reported in 2006 (Few et al 2006). It found no concrete evidence of systematic integration of disaster risk management and adaptation in terms of project activities, coordination and fundraising. At the project's wrap-up workshop, participants stressed the need for national DRR and adaptation budgets to enable joint programming;

however, for this to be achieved, a clear cost-benefit, cost effectiveness case needs to be made to convince finance ministries that public spending is justified.

In stimulating better risk management, there is no one-size-fits all solution, such as integration of the DRR agenda into the climate change coordination structures, or vice versa. Instead, donors should build on existing capacities. This may mean working with well-functioning DRR mechanisms where they exist, particularly when they are well-integrated in sectoral planning. A review of the 2009 National HFA reports reveals that even countries with strong DRR mechanisms and political commitment towards integrated efforts are lacking financial support, appropriate processes, frameworks and programme guidelines for integration of DRR in CCA at the policy level.

This is accentuated by a lack of capacity to understand and implement climate risk management approaches. In other cases where the DRR infrastructure is still weak, it may be better to focus on the institutions coordinating the new adaptation funding, using them as an entry points for better DRR through existing climate change co-ordination mechanisms. Where political will for the joint agenda is strong, another solution may be top-down integration of both agendas, for instance under the leadership of the prime minister or head of state.

5.5 Obstacles to sharing integrated knowledge, experience and guidance

Historically, there are separate communities of policymakers, practitioners and researchers working on DRR and CCA, with limited overlap in networks, meetings, methods or tools. Some DRR specialists are sceptical of the sudden popular interest in adaptation and the adaptation community's perceived focus on a long-term agenda that only encompasses part of the entire array of hazards (excluding earthquakes, for instance). Some DRR experts feel that the adaptation community often focuses too much on climate as the main driver and fails to acknowledge the social factors behind vulnerability. Adaptation experts have tended to focus on longer-term issues, particularly on changing averages (which are easier to get from GCM modelling), and feel that the DRR community fails to address these. An additional complication is that the two communities often use different words for similar issues.

It is clear that the driver for closer integration is the growing demand from the applications side, where projects or plans want to address the full spectrum of risk at once (but currently fail to find proper guidance or documented experience). In recent years, there has indeed been an increase in mutual interest and a growing number of joint sessions at major events, knowledge portals and guidance documents, but there is still some way to go. Bilateral and multilateral donors can support the emerging initiatives for integrated knowledge, experience and guidance, particularly by focusing on applications rather than theoretical explorations.

7. Annex 1: list of documents reviewed

6. Conclusion

There is substantial overlap of concepts and shared goals between DRR and CCA. The past few years have seen significant progress in the convergence of these two areas of practice, at least in terms of intentions and policy statements, as well as in some on-the-ground activities. However, we also observe that significant structural barriers to convergence in critical institutions remain and the risks of duplication of efforts and competing institutional structures are still significant.

Nevertheless, the growing attention and funding for both areas and the clear local interest in a coordinated approach offer ample opportunities for continued integration and shared learning. From the climate change perspective, after the hard landing of global policy efforts on climate change in Copenhagen, many have realised the need to be pragmatic and focus on concrete, tangible outcomes and on mainstreaming DRR and CCA into regular development. In addition, the pressure on global aid budgets has increased the need to make the case for risk management as an effective development strategy and to integrate it into regular development policy and practice. From both perspectives, the convergence agenda is an obvious way forward and is already reflected in a growing body of emerging plans and projects, with promising prospects for better development outcomes over the coming years and decades.

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National progress reports on the implementation of the Hyogo Framework for Action – reporting period 2007 – 2009

Africa

Ghana
Kenya
Malawi
Mauritius
Mozambique
Sierra Leone
Tanzania

Americas

Bolivia
Costa Rica
Ecuador
El Salvador

Asia

India
Indonesia
Bangladesh
Maldives
Cambodia
Philippines
Sri Lanka
Sierra Leone
Zambia

Available from: www.preventionweb.net/english/hyogo/progress/reports/?pid:222&pil:1

National Adaptation Programmes of Action (NAPAs)

Bangladesh
Cambodia
Ethiopia
Malawi
Republic of Maldives
Samoa
Tanzania

Available from http://unfccc.int/cooperation_support/least_developed_countries_portal/submitted_napas/items/4585.php

National Action Plans on Climate Change

India
Government of India (2008). Prime Minister's Council on Climate Change: New Delhi

Available from: http://pmindia.nic.in/climate_change.htm

8. Annex 2: Integrating disaster risk management and climate

change adaptation – selected examples of progress

At national level

Philippines

The Philippines Government enacted new legislation, called the Climate Change Act of 2009, which will integrate disaster risk reduction measures into climate change adaptation plans, development and poverty reduction programmes. Disaster risk reduction is embedded into the institutional framework for the national and local climate change policy. Under the new Act, a Climate Change Commission headed by the President of the Philippines will be created as the sole governmental policy-making body on climate change. Its primary function is to 'ensure the mainstreaming of climate change, in synergy with disaster risk reduction, into national, sectoral and local development plans and programmes'. The Act also gives local governments the primary responsibility for planning and implementing local climate change action plans, which will be consistent with national frameworks (Source: UNISDR 2009).

Malawi

DRR components have been mainstreamed in the environmental management policies in the country with the objective of underlying risk factors. For example, the requirement that Environment Impact Assessments (EIA) be undertaken for all major projects seeks to ensure that all developmental activities do not exacerbate the vulnerability of communities. DRR has also been mainstreamed into the National Adaptation Programme of Action (NAPA) in which DRR activities have been prioritised for implementation to reduce vulnerability of communities. (Source: UNISDR HFA report 2009)

Bangladesh

The issue of climate change has received greater attention in past several years in Bangladesh. The Government of Bangladesh (GoB) has proposed for the creation of a Climate Change Fund with bilateral and multilateral donors who are also exploring the possibility of creating a multi-donor trust fund to accelerate financing for research and adaptation in Bangladesh. At present the functions and institutional location of the Climate Change Cell are being reconsidered and it is possible that some of its functions and activities will be relocated within government to contribute to the broader GoB effort in addressing climate change. Ministry of Environment and Forests in partnership with relevant stakeholders have finalized and adopted the National Capacity Self Assessment for Environment and Natural Resource Management which addresses risk reduction issues in the policies and plans. This project identified the policy and planning gaps and in consensus recommended the road map for actions and development of capacity building plans and programmes. Since early 2008 the GoB is working in partnership with FFWC and ActionAid with support from Danida to understand effectiveness of expandable DRR approaches into climate change context in three agro-ecological zones. (UNISDR HFA report 2009)

Samoa

In Samoa, the government has undertaken a cross-sectoral approach that has facilitated coordination of disaster risk management and climate change adaptation. In its nationwide disaster management planning, Samoa has strategically addressed risk reduction and adaptation as complementary issues that are addressed together at both national and community levels. The NAPA shares implementation priorities and activities with the National Disaster Management Plan and both policy areas – disaster risk management and climate change adaptation – reside in the same Ministry of Environment and Natural Resources. (Source UNISDR 2009)

Maldives: Strategic action planning – integrating disaster risk reduction and climate change adaptation

The Maldives is among the small island states identified as one of the most vulnerable to climate change impacts. Since the aftermath of the Indian Ocean tsunami, reducing disaster risks has become an important cross-cutting development issue in the island state. Against this background, the government has recently initiated a process to develop a Strategic National Action Plan (SNAP) on disaster risk reduction and climate change adaptation. It aims to promote collaboration among policy makers, experts and practitioners of disaster

risk reduction and climate change adaptation throughout the country in order to develop a comprehensive risk management approach. Stocktaking of existing programmes and multi-sectoral consultations with local governments have been conducted to assess the gaps and challenges. The leadership of the President guided the process. The process was initiated with an agreement made during the meeting of the President with a UN mission team in July 2009. In addition to supporting the development of the SNAP, the President has committed to conduct a partners' forum on translating the plan to action and to host a leaders' forum to place the issue of DRR and CCA at the top of the global agenda. (Source: UNISDR 2009)

At regional level

CARICOM: Caribbean Community – Comprehensive Disaster Management Strategy

Articulated within a programme based on a 'results-driven' framework, the purpose is 'to strengthen regional, national and community level capacity for mitigation, management, and coordinated response to natural and technological hazards, and the effects of climate change'. The four priority outcomes are:

- (a) Enhanced institutional support for implementation of clean development mechanisms programmes at national and regional levels;
- (b) An effective mechanism and programme for management of comprehensive disaster management knowledge has been established;
- (c) Disaster risk management has been mainstreamed at national levels and incorporated into key sectors of national economies (including tourism, health, agriculture and nutrition);
- (d) Enhanced community resilience in Caribbean Disaster Emergency Response Agency States and territories to mitigate and respond to the adverse effects of climate change and disasters. (Source: UNFCCC 2008)

South Pacific: Comprehensive Hazard And Risk Management (CHARM)

Seeks to manage unacceptable risks associated with major hazards by adopting a holistic risk management containment strategy linked to national development strategy. It seeks to involve all stakeholders, national and regional. Its value is that it: (a) Involves monitoring and review at all stages of the process; (b) Provides clear definition of primary and secondary threats; (c) Is linked to national development planning; (d) it is linked to existing national and regional institutional mechanisms and programmes; (e) Includes a specific focus on climate-related hazards. (Source: UNFCCC 2008, Bettencourt et al 2006)

In-country: civil societies and international NGOs

Vietnam: World Vision

In Vietnam, World Vision and its local partners have focused on the preparation of Disaster Risk Management Plans at community and school levels, along with the promotion of diversified income sources to minimize the livelihood impact of losing crops or fishing equipment in extreme weather events. This has been done through provision of loans and revolving funds provided to the communities managed by the Vietnam Women's Union in cooperation with World Vision Vietnam. (Source World Vision 2009)

Nepal: Practical Action

Also in Nepal, disaster risk management planning and risk assessments were integrated into livelihood approaches. Following a vulnerability and needs assessment, the communities themselves identified the small size of their land holdings, their dependence on adequate and timely rain, and the impact of drought as major constraints to both their ability to earn a living, and to survive the impacts of natural hazards such as seasonal flooding. (Source: Practical Action, Nepal 2009)

Bolivia: Intercooperation

In Bolivia, the project supported and used traditional knowledge of climate prediction for better decision-making in agricultural production and risk management. Traditional agricultural and climatic knowledge was consolidated in groups of yapuchiris who were supported by Intercooperation to sell technological and financial services to local farmers. This has resulted in a significant reduction of crop losses from drought, hail, frost and

flooding, and has also led to the stabilisation of market access for local crops.
(Source: Intercooperation 2008)

Kenya: Oxfam

In North-western Kenya Oxfam undertook a cash-for-food pilot programme, based on the analysis that: 'Drought in itself was not the disaster. Rather, drought combined with a long-term decline in pastoral livelihoods left people extremely vulnerable and unable to cope when drought hit' (Oxfam 2009). The pilots targeted up to 10,000 people with timely and predictable cash transfers each month for between six and nine months. The work focused on infrastructure projects, which were identified by the community and were both labour-intensive and technically sound. These projects also contributed to reducing vulnerability – for example, by maintaining water sources. Those who could not work, such as elderly people, were provided direct assistance. The cash was provided alongside emergency food relief (when available), which ensured that the cash was used to support livelihoods development rather than all being spent on food. (Source: Oxfam 2009)

65 countries: Red Cross and Red Crescent Societies

In 2006-2009, 39 national Red Cross and Red Crescent Societies have screened their plans and activities for changing climate risks, especially including aspects of disaster management and disaster risk reduction (through the so-called 'Preparedness for Climate Change' programme). Many concrete follow-up activities were initiated, mostly mainstreamed into regular programming. Another 27 National Societies are undertaking a similar exercise in 2010. (Source: Red Cross/Red Crescent Climate Centre 2010)

The Climate Smart Disaster Risk Management Approach

Strengthening Climate Resilience

The questions in the approach are suggestions only and there may well be others



1. Tackle changing disaster risks and uncertainties

1a

Strengthen collaboration and integration between diverse stakeholders working on disasters, climate and development

To what extent are climate change adaptation, disaster risk management and development integrated across sectors and scales? How are organisations working on disasters, climate change and development collaborating?

1b

Periodically assess the effects of climate change on current and future disaster risks and uncertainties

How is knowledge from meteorology, climatology, social science, and communities about hazards, vulnerabilities and uncertainties being collected, integrated and used at different scales?

1c

Integrate knowledge of changing risks and uncertainties into planning, policy and programme design to reduce the vulnerability and exposure of people's lives and livelihoods

How is knowledge about changing disaster risks being incorporated into and acted upon within interventions? How are measures to tackle uncertainty being considered in these processes? How are these processes strengthening partnerships between communities, governments and other stakeholders?

1d

Increase access of all stakeholders to information and support services concerning changing disaster risks, uncertainties and broader climate impacts

How are varied educational approaches, early warning systems, media and community-led public awareness programmes supporting increased access to information and related support services?

2. Enhance adaptive capacity

2a

Strengthen the ability of people, organisations and networks to experiment and innovate

How are the institutions, organisations and communities involved in tackling changing disaster risks and uncertainties creating and strengthening opportunities to innovate and experiment?

2b

Promote regular learning and reflection to improve the implementation of policies and practices

Have disaster risk management policies and practices been changed as a result of reflection and learning-by-doing? Is there a process in place for information and learning to flow from communities to organisations and vice versa?

2c

Ensure policies and practices to tackle changing disaster risk are flexible, integrated across sectors and scale and have regular feedback loops

What are the links between people and organisations working to reduce changing disaster risks and uncertainties at community, sub-national, national and international levels? How flexible, accountable and transparent are these people and organisations?

2d

Use tools and methods to plan for uncertainty and unexpected events

What processes are in place to support governments, communities and other stakeholders to effectively manage the uncertainties related to climate change? How are findings from scenario planning exercises and climate-sensitive vulnerability assessments being integrated into existing strategies?

3. Address poverty & vulnerability and their structural causes

3a

Promote more socially just and equitable economic systems

How are interventions challenging injustice and exclusion and providing equitable access to sustainable livelihood opportunities? Have climate change impacts been considered and integrated into these interventions?

3b

Forge partnerships to ensure the rights and entitlements of people to access basic services, productive assets and common property resources

What networks and alliance are in place to advocate for the rights and entitlements of people to access basic services, productive assets and common property resources?

3c

Empower communities and local authorities to influence the decisions of national governments, NGOs, international and private sector organisations and to promote accountability and transparency

To what extent are decision-making structures de-centralised, participatory and inclusive? How do communities, including women, children and other marginalised groups, influence decisions? How do they hold government and other organisations to account?

3d

Promote environmentally sensitive and climate smart development

How are environmental impact assessments including climate change? How are development interventions, including ecosystem-based approaches, protecting and restoring the environment and addressing poverty and vulnerability? To what extent are the mitigation of greenhouse gases and low emissions strategies being integrated within development plans?

This publication is part of the Strengthening Climate Resilience Discussion Series, which aims to elaborate concepts and application of the Climate Smart Disaster Risk Management approach. All papers are available free to download through the Strengthening Climate Resilience (SCR) website: www.csdrm.org

The Resilience Renaissance? Unpacking of Resilience for Tackling Climate Change and Disasters. Bahadur, A.; Ibrahim, M. and Tanner, T. (2010) Strengthening Climate Resilience Discussion Paper 1, Brighton: IDS

Assessing Progress on Integrating Disaster Risk Reduction and Climate Change Adaptation in Development Processes. Mitchell, T., Van Aalst, M. and Silva Villanueva, P. (2010) Strengthening Climate Resilience Discussion Paper 2, Brighton: IDS

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Post-Disaster Housing Reconstruction in a Conflict-affected District, Batticaloa, Sri Lanka: Reflecting on the Climate Smart Disaster Risk Management Approach. Ibrahim, M. (2010) Strengthening Climate Resilience Discussion Paper 6, Brighton: IDS

Other publications from SCR on the Climate Smart Disaster Risk Management Approach:

Climate Smart Disaster Risk Management in Brief. Mitchell, T. and Ibrahim, M. (2010) Strengthening Climate Resilience, Brighton: IDS

Climate Smart Disaster Risk Management. Mitchell, T.; Ibrahim, M.; Harris, K.; Hedger, M.; Polack, E.; Ahmed, A.; Hall, N.; Hawrylyshyn, K.; Nightingale, K.; Onyango, M.; Adow, M., and Sajjad Mohammed, S. (2010), Strengthening Climate Resilience, Brighton: IDS

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