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## Supporting Disaster Risk Reduction in Developing Countries

A study for the European Union

Roger Few, Sergej Anagnosti

2010

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International Development UEA & School of International Development,  
University of East Anglia , Norwich, NR4 7TJ, United Kingdom

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## EXECUTIVE SUMMARY

The study was commissioned to assist implementation of the EU Strategy for Supporting Disaster Risk Reduction (DRR) in Developing Countries, by providing an overview and analysis of current and planned activities in DRR within the development cooperation of Member States (MS) and Commission services, together with a set of recommendations to inform the preparation of an Implementation Plan. This version of the report focuses mainly on the overview and analysis (although information on the recommended actions is included in Appendix 1). The report also draws information and insights from the activities of international and regional organizations engaged in DRR. Information from the study was drawn primarily from interviews with staff, and from consultation of reports, policy papers and other documents. The study encompassed activities promoting policy development and integration of DRR into broader policy of EU+MS and of developing countries, as well as specific targeted investment on disaster prevention, mitigation, preparedness and recovery. Geographically, the scope of the study encompassed activities in all developing countries, but attention was focussed especially on the regions with highest physical and social vulnerability to disasters. Special attention was paid to the linkage of DRR with climate change adaptation.

For MS, the degree of engagement with DRR varies greatly. In most EU countries responsibility for driving or coordinating DRR in development cooperation lies within the development department of the ministry of foreign affairs or its equivalent. However, the full diversity of activities relating to DRR means that in many MS a wide range of other government organizations is also engaged in the process (providing assistance with e.g. civil protection training, emergency health care, and support to meteorological services). Activities at policy and project level are typically a combination of support to multi-donor initiatives and bilateral activities at country and regional levels. At present, three member states have developed specific strategic policy documents on DRR in development cooperation, and at least 7 others are developing strategies or taking key steps in this direction. For other MS the emphasis in disaster-related activities at present tends to remain within emergency response and relief efforts. However, it is crucial to recognize that DRR activities may well be 'hidden' within wider programmes and projects, including those related to food security, health systems and environmental management.

Within the Commission, DRR policy in development cooperation is led by DG DEV in coordination with other services engaged in development activities (RELEX, AIDCO), humanitarian action (ECHO), specific hazards (e.g. CLIMA, ENV, SANCO) and research (JRC, RTD). The EU Strategy on DRR in developing countries was adopted in 2009, and is expected to become the foundation for a coherent approach

to DRR within the EU, building on existing disaster-related activities in policy dialogue, policy development assistance and targeted investments at country and regional levels. The European Development Fund (EDF) is now the main financial mechanism for DRR: under the 9<sup>th</sup> and 10<sup>th</sup> (current) EDF an Intra-ACP funding stream has been set up that is specifically oriented to disaster risk. Other major funding instruments include DIPECHO and development cooperation funds available under Thematic Programme funds (e.g. on food security, environmental management) and the Global Climate Change Alliance. Both MS and Commission services collaborate with a wide range of international organizations active in DRR including NGOs, the IFRC, UN agencies, the World Bank's GFDRR and a series of inter-governmental and independent regional organizations.

For MS with strongly developed institutional structures in DRR, activities typically combine policy work at international, regional and national scales with targeted investments in projects and programmes at country and regional levels. These broadly correspond with the EU Strategy's 7 main 'areas of intervention', covering promotion of DRR as a policy priority and integration of DRR into wider policies, as well as investments in: identification, assessment and monitoring of disaster risks; reduction of risk factors; institutional support; improvement of analytical tools; and capacity-building, education, training and dissemination.

Activities in policy promotion and integration (or mainstreaming) at international, regional and national scales are well-developed mainly by MS that are able to take a more pro-actively strategic approach to DRR, but it is important to note that many targeted projects and humanitarian interventions effectively have a policy-strengthening dimension, if not always explicitly. Several MS attempt to promote integration of risk reduction in the poverty reduction strategies of hazard-prone partner countries, and expectation of DRR inclusion is being progressively incorporated in their country strategy processes, with technical support/guidelines often provided. Within the Commission activities, integration of DRR is beginning to be included in some country strategy papers, although it is not yet driven systematically and most country and regional strategy papers do not yet address disaster risk.

For many MS and Commission services, investment in scientific aspects of hazard assessment/monitoring and EWS tends to be among the most prominent of disaster-specific interventions (or at least the most easily-labelled as such). Nevertheless, major gaps and operational deficiencies undoubtedly remain on the ground in developing countries and the need for investment remains high. One of the key challenges in the use of this hazard information is to be able to combine it effectively with vulnerability information for the full analysis of risk, and to assess capacities for effective response and adaptation. Support for techniques of vulnerability assessment is increasingly likely to be incorporated in disaster risk management

projects of MS at regional, national and local scales, and has been advanced particularly within projects on climate risks.

Capacity-building and institutional support for managing disaster events are major external activities for the EU+MS. Training is one of the main channels through which many of the newer MS engage in disaster-related cooperation, including training in emergency preparedness, which is commonly implemented by civil protection organizations of the MS as well as by the Civil Protection unit within ECHO. Another key aspect of institutional support that could be built on at national and especially local level is assistance by some MS and Commission services in development of disaster management and emergency preparedness plans.

To date, the more long-term prevention and structural mitigation aspects of DRR are not so strongly evident in targeted development cooperation activities that could be labelled as 'disaster-specific', though some activity exists in areas such as flood control and building safety, as well as in small-scale mitigation activities at community level. Where such activity takes place it commonly does so during the window of opportunity presented by post-disaster reconstruction - although much still remains to be done in promoting DRR in the recovery phase. Risk transfer is one non-structural mitigation activity that has taken a higher profile within the Commission, with major contributions, for example, under the 9<sup>th</sup> EDF to risk insurance mechanisms. However, preventive and mitigative aspects of DRR are perhaps more evident in interventions by MS and the Commission that are 'non-disaster-specific' but that have clear linkages with disaster risk, such as actions on disease control, environmental management and food security. These actions can reduce both the physical hazard and the underlying social vulnerability of populations exposed to hazards.

In common with the operationalization of DRR by most international actors, the predominant focus of the EU+MS in terms of DRR appears to be on hydro-meteorological hazards (especially rapid-onset events) followed by geophysical hazards. Biological and technological hazards tend to be the focus of other branches of assistance, with which coordination is seldom strongly-developed. In sectoral terms, strong need remains for DRR in housing, infrastructure, agriculture and livelihoods, but there are other impacted sectors less conventionally addressed by EU+MS interventions, including health and education. Despite gender mainstreaming activities within development cooperation and growing international initiatives on gender dimensions in DRR, little evidence emerged to date of systematic targeting of gender issues within disaster-related interventions by MS and the Commission.

Current annual expenditure of MS and Commission services on DRR in development cooperation is tentatively estimated to be in the order of 170-250 million Euros.



Geographically, there is high variability among countries in terms of levels of actual or potential receipt of EU+MS assistance for DRR, shaped at least in part by historical ties. Regionally, though high social vulnerability means that African countries are commonly priority recipients of EU+MS aid, qualitative judgement suggests that key gaps remain in DRR funding and DRR progress in much of the continent, with West Africa possibly in greatest need of assistance. It may be difficult to match level of need with level of investment, however, because of difficulties in working in and with some countries. Other world regions, like the Caribbean region, are highly disaster-prone but (with the notable exception of Haiti) appear to be successfully developing disaster management capacities with external assistance.

Linkages between climate change adaptation and DRR are made in multiple, diverse ways through dialogue, strategy papers, mainstreaming activities and fields of interventions including risk assessment, preparedness, mitigation and prevention. For some MS strategic action on climate change adaptation predates and/or is advancing faster than progress specifically on DRR, and potential benefits can be gained from linkage with the climate change agenda, in terms of its political momentum and its potential funding streams. Conversely, climate-related initiatives should build on DRR expertise and experience, and there is a need to integrate the two fields more closely.

Convergence with DRR is almost inevitable when implementing adaptation initiatives at a community scale in many developing countries. The importance of supporting local-scale action and community involvement is another dimension of DRR emphasized in the EU Strategy and by a wide range of actors working on DRR and climate change adaptation. The community scale may be particularly important for addressing small-scale 'extensive hazards', which have tended not to catch the attention of donors. For the MS and ECHO, action at the community scale commonly takes place via support for IFRC branches, NGOs and community-based civil society partners. One of the challenges to work at this level, raised both by some MS and by ECHO, is the issue of scaling up. Better mechanisms are needed so that lessons and models from local-scale and community-based actions can feed into national and regional governmental initiatives.

## 1 INTRODUCTION

The study was commissioned to support the ongoing development of an Implementation Plan for the EU Strategy for Supporting Disaster Risk Reduction (DRR) in Developing Countries. This report of the study provides an overview and analysis of current and planned activities in this field by the EU – across its Member States (MS) and Commission services. The report also draws information and insights from the activities of international and regional organizations. The study was oriented toward meeting the ‘implementation priorities’ and ‘areas for intervention’ set out in the Council Conclusions of 18 May 2009, and yielded a set of recommendations for the ongoing development of an Implementation Plan for the EU Strategy. These are tabulated in Appendix 1.

### Implementation priorities and areas for intervention set out in the Council Conclusions

*(with alphabetic identifiers added)*

<b>implementation priorities</b>	<p><b>A</b> Dialogue on DRR</p> <p><b>B</b> Regional Action Plans on DRR</p> <p><b>C</b> Integration of DRR into the EU's external action</p> <p><b>D</b> Coordination of EU support for key DRR investments</p>
<b>areas for intervention</b>	<p><b>a</b> Promoting DRR as a priority at national, regional and local level, as well as in relevant UN fora;</p> <p><b>b</b> Supporting the integration of DRR into policies and planning, in particular into national development and poverty reduction strategies;</p> <p><b>c</b> Promoting the identification, assessment and monitoring of disaster risks, including by enhancing early warning and its effective linkage with early reaction;</p> <p><b>d</b> Promoting the reduction of risk factors, including through adaptation to climate change;</p> <p><b>e</b> Providing institutional support to national and local authorities and stakeholders;</p> <p><b>f</b> Supporting the improvement of analytical tools (data monitoring stations, vulnerability assessment), including joint analysis with partner countries;</p> <p><b>g</b> Supporting capacity building, education, training, as well as dissemination of risk information to the relevant authorities and communities.</p>

## Scope of the study

As stated in the draft Terms of Reference for the study, and in line with the text of the EU Strategy and the Council Conclusions, key elements of the emphasis and scope of the study were as follows.

- The study encompassed the following activities:
  - integration of DRR in development policy/strategy/sectoral plans (including adaptation to climate change) of EU and of developing countries and humanitarian policy;
  - support for DRR-specific policies/institutions;
  - specific targeted investment on disaster prevention, mitigation and preparedness<sup>1</sup>.
- The study was designed to provide a general overview of activities across the EU+MS in order to identify the main characteristics of DRR activity – it did not attempt a detailed ‘mapping’ of countries’ or organization’s project portfolios.
- The activities under scrutiny were those that matched the ‘implementation priorities’ and ‘areas for intervention’ (see above), together with other texts established in the Council Conclusions:
  - The study encompassed activities in relation to the full OECD/DAC list of ODA recipients, as well as OCTs (Overseas Countries and Territories), but attention was focussed especially on the more disaster-prone regions, the least developed and most vulnerable countries and areas, as well as the most vulnerable groups of people;
  - Following the guidance in the Strategy, analysis was oriented particularly to the regional scale and regional-level initiatives;
  - The study focused on DRR in the context primarily of natural (biological, geophysical and hydro-meteorological) and technological hazards;
  - The study examined aspects of prevention, mitigation, preparedness and recovery; though the remit did not extend to emergency response and relief efforts *per se*, information and insights were gained on efforts to integrate DRR principles in EU humanitarian aid and implementing Linking Relief, Rehabilitation and Development (LRRD) from a DRR perspective;
  - The study paid special attention to the linkage with climate change adaptation (through dialogue, policy/strategy and targeted actions);

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<sup>1</sup> The terms prevention, mitigation and, preparedness are used to categorize DRR actions. The UN-ISDR has developed a set of carefully worded definitions for them, which is followed in the Strategy and in this report. Hence, prevention ‘aims to avoid the adverse impact of hazards outright’; mitigation ‘aims to limit the adverse impacts’ of hazards; and preparedness ‘aims to boost the resilience and coping capacity of vulnerable people to better face hazards’ (Annex 1 to COM(2009) 84). It should be noted from the outset, however, that there is not necessarily a neat separation between these actions in practice. Moreover, many programmes and projects address multiple aspects of DRR.

- The study also sought to obtain cross-cutting information on gender-sensitive approaches to DRR.

## **Methodology**

Following the Terms of Reference, the study was based on three strands of data collection from:

- relevant Ministries and agencies in the MS and from the Commission's Directorate Generals (DGs) (*this formed the main component of data gathering*);
- international organizations (UN agencies, IFRC and NGOs networks);
- regional organizations (inter-governmental and non-governmental).

Together with secondary data (reports, policy papers, web documents etc), interviews with contacts in MS, the Commission and key international agencies were the prime sources of information for this study. These were undertaken through visits where feasible, and through telephone interviews. Follow-up enquiries were also undertaken through email, and the study also drew on responses to a previous questionnaire survey circulated to MS by DG DEV in 2009. Through these means, direct inputs to the study were obtained from staff in 20 out of 27 member states.

Section 2 provides an overview of progress and modalities in DRR development cooperation. Section 3 gives an account of current and planned EU+MS activities in relation to the seven areas of implementation listed in the Council Conclusions. In section 4 further analysis of progress is presented based on a series of cross-cutting themes. Section 5 of the report provides conclusions.

## **2. OVERVIEW OF DISASTER RISK REDUCTION ACTIVITIES IN DEVELOPMENT COOPERATION**

This section provides a summary overview of DRR activities of member states and the EC targeted to lower and middle income countries. This information is complemented with a contextual overview of the activities of some of the other major international actors engaged in DRR assistance. It also looks at the roles and functions of regional organizations in relation to DRR. It should be underlined, however, that this contextual information is partial in terms of its coverage of non-EU actors<sup>2</sup>.

### **Member States**

As explained below the degree of engagement with DRR varies greatly between member states. It needs to be underlined at the outset that not all EU countries are actively engaged in DRR activity, although from our understanding all but two (Estonia and Lithuania) have identified focal points within government for liaison with the Commission on development of the EU Strategy.

In most EU countries responsibility for driving or coordinating DRR in development cooperation lies within the development department of the ministry of foreign affairs (or its equivalent; though in Germany the leading ministry is the Federal Ministry for Economic Cooperation and Development - BMZ). In many cases, including Ireland, Finland, Netherlands and the UK, the drive toward DRR currently rests with humanitarian assistance units of the development departments. In several countries, development aid implementing agencies such as GTZ (Germany), SIDA (Sweden), and AECID (Spain) play a pivotal role.

But the full diversity of activities relating to DRR means that in many MS a wide range of government actors is also engaged in the process of DRR in developing countries. These commonly include ministries of the interior (or their equivalent) providing civil protection training, ministries of health contributing to emergency health care, and ministries of environment contributing especially support to meteorological services for climate risk management. Mechanisms for coordination of such activities across ministries do not appear to be strongly developed in any MS, although existing and new national platforms for DRR may be expected to perform this function where they exist. France has a working group of its national platform

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<sup>2</sup> The remit of the study focussed on DRR assistance and did not extend to analysis of policy and actions undertaken by developing countries themselves. It also did not include the activities of several major donor countries outside the EU that are engaged in DRR assistance.

specifically dedicated to international action on DRR. In other countries, such as Ireland, coordination would be expected to take place via broad inter-departmental committees on development cooperation. For Malta it was suggested that coordination of future international activity in DRR might possibly be best served through extension of the mandate of the national Civil Protection Council.

At present, three member states have developed specific strategic policy documents on DRR: UK, Sweden and Denmark. The UK DFID policy paper on DRR dates from 2006, and emphasizes both policy mainstreaming and specific investments targeted to disaster-prone countries. For Sweden, Sida adopted a conceptual framework for DRR in 2006, and is currently developing a new policy for environment and climate issues in development cooperation, with DRR as central theme. Since 2008, Denmark has a policy document on guidelines and activity plans on DRR in development and humanitarian assistance – and this is reflected in its current humanitarian strategy, including staff capacity-building (for both climate change adaptation and DRR).

In France a working group of the national platform for DRR is currently preparing a proposal for a national strategy on DRR within international action, while in Finland the newly-formed national platform is producing a national plan that will encompass both internal and external DRR activities. Germany does not have a formalized policy structure because DRR is not one of the 15 established priority areas in development cooperation. But DRR is engaged as a ‘non-priority’ issue, with mainstreaming activity under way within the priority areas, and special funds are reserved for DRR within the emergency department. Italy, Spain and Czech Republic are taking steps toward DRR via concentration on strategic approaches to humanitarian assistance within the guidelines of the Hyogo Framework for Action. Ireland is concentrating on developing long-term risk reduction approaches in recovery phases (LRRD) as a prelude to full DRR.

For other MS the emphasis in disaster-related activities at present tends to remain within emergency response and relief efforts, and development of active engagement with DRR in policy and intervention is pending. In Malta, and possibly in other MS with small or newly-established development cooperation structures, the driving role for both the domestic and external DRR agenda may well lie within the civil protection division of the ministry of interior (or equivalent). This draws on existing concentration of disaster management expertise but potentially raises barriers in terms of building the long-term developmental aspects inherent in the movement toward DRR.

However, as later sections will go on to reiterate, it is crucial to recognize that DRR activities may well be ‘hidden’ within wider programmes and projects, including those related to food security, health systems and environmental management. It is also important to note that in many MS progress in DRR strategy development is now being paralleled or surpassed by the development of strategies on climate

change, in which management of climate risks tends to be highlighted and/or there is explicit reference to support for DRR. The degree of inter-linkage of DRR with climate change adaptation will be examined in detail later, but suffice to note here that the commonality between the two in terms of objectives and interventions was underlined repeatedly in the study by interviewees and is a central tenet of the EU Strategy.

For MS with strongly developed institutional structures in DRR, activities typically combine policy dialogue/policy development assistance at international, regional and national scales with targeted investments in projects and programmes at country and regional levels. (See section 3 for more details on these areas of intervention). DRR-related funding assistance is a combination in most cases of support to multi-donor initiatives and bilateral activities at country and regional levels. MS may also work in partnership on initiatives, and for smaller countries such as Cyprus, which typically provides development assistance via partnerships in initiatives led by larger donor countries, current or potential DRR aid is likely to follow a similarly trilateral or plurilateral model. Most MS additionally provide support to their respective Red Cross/Red Crescent National Societies and national humanitarian (and/or development) NGOs or their networks, whose work commonly includes aspects of DRR.

### **Commission Services**

In the Commission, DRR policy in development cooperation is led by DG **DEV** in coordination with other Directorate Generals – principally the other services engaged in development activities (DG **RELEX** and DG **AIDCO**) and those engaged in relation to humanitarian action (DG **ECHO**) and specific hazards (DG **CLIMA** with respect to climate change risks, DG **ENV** with respect to technological hazards, DG **SANCO** with respect to human, animal and plant epidemics). EC activities in the area of scientific research (**JRC**) and support for research (DG **RTD**) also contribute in this arena.

The EU Strategy on supporting DRR in developing countries was adopted in 2009, with two main tracks: policy integration at international, regional and national scales; and targeted investments in projects and programmes. Development and monitoring of an Implementation Plan for the Strategy is a process led by DEV, in collaboration with other DGs and the MS, and in consultation with international organizations. The Strategy is expected to become the foundation for a coherent approach to DRR within the EU+MS, building on the existing disaster-related activities of Commission services, which typically combine policy dialogue/policy development assistance with targeted investments at country and regional levels. (See section 3 for more details on these areas of intervention).

The European Development Fund (EDF) is the main financial mechanism for DRR. Set up under the Cotonou Agreement of 2000, it applies only to ACP (African, Caribbean and Pacific) countries. To date funding for DRR within country and regional envelopes has been limited, but under the 9<sup>th</sup> and 10<sup>th</sup> (current) EDF an Intra-ACP funding stream has been set up that is specifically oriented to disaster risk.

Other existing or potential DRR funding for developing countries via Commission services consists mainly of:

- DIPECHO funds for disaster preparedness and mitigation, managed by ECHO;
- Development Cooperation Instrument (DCI) funds for non-ACP countries, managed by RELEX;
- DCI Thematic Programme funds (especially Environment and Sustainable Management of Natural Resources including Energy (ENRTP); Food Security (FSTP));
- RELEX Instrument for Stability;
- Climate change initiatives, such as the Global Climate Change Alliance (GCCA -which combines funds from EDF and DCI) ;
- Support for epidemic surveillance capacity, managed by SANCO;
- Grants for research projects related to risk assessment, disaster response and climate change, managed by RTD.

Currently, funding for targeted DRR actions – current or projected – is available principally under the EDF's DRR budget, EDF/DCI wider funds (e.g. GCCA, ENRTP, FSTP) and DIPECHO. RTD's contribution to research on disasters in developing countries is constrained by the emphasis in the current FP7 framework on European research issues – to date only one of the calls for proposals under the sub-activity Natural Hazards has been targeted specifically at developing countries (drought in Africa). In terms of human health, SANCO's ability to directly fund epidemic risk reduction in developing countries is also limited by a Eurocentric mandate, and its contribution is principally in terms of monitoring disease outbreaks (the same appears to apply also to SANCO's work on plant and animal health).

## **International organizations**

A wide range of international organizations are active in DRR in developing countries: their roles, approaches and priorities provide important context to the activities of the Commission and MS.

The **International Federation of Red Cross and Red Crescent Societies (IFRC)** has a long-standing engagement in all aspects of disaster management, and a strong



presence at community level through its national societies. Its Disaster Policy and Preparedness Department places emphasis on community safety and resilience, with a key role for community-based preparedness. Its Disaster Services Department focuses on institutional preparedness, early warning systems (EWS), response and recovery (including the principle of 'building back better').

Many of the **international non-governmental organizations** (INGOs) working in developing countries are oriented toward humanitarian action or to development programmes, although increasingly the two arms are converging in their actions under DRR. INGOs engage in policy advocacy at all scales, and have formed networks to facilitate this at international level including **VOICE** (which liaises with the Commission on DRR issues) and the **Global Network** of Civil Society Organizations for Disaster Reduction. Again, a key strength of INGOs lies in their strong presence at community level via the emphasis on project operations at local scale.

The United Nations family of organizations includes several active in DRR. The **International Strategy for Disaster Reduction** (ISDR) undertakes a coordinating role for DRR globally, regionally and nationally via the system of platforms on disaster reduction. It collaborates on strategic studies and reports, collates knowledge resources, and monitors progress toward implementation of the Hyogo Framework for Action 2005-2015 on DRR (HFA) adopted by 168 Governments at the World Conference on Disaster Reduction in Kobe, Japan in 2005.

The **United Nations Development Programme** (UNDP) operates primarily through its network of offices in 168 countries. Its Bureau of Crisis Prevention and Recovery (BCPR) has a specialist Disaster Risk Reduction and Recovery team, whose mandate includes an emphasis on 'early recovery', with preventive orientation. Most targeted activities in DRR are technical advisory work, though some funding is directed to 'hard' investments such as shelters and demonstration retro-fitting of buildings.

The **United Nations Environment Programme** (UNEP) has a Post-conflict and Disaster Management Branch with expertise in response and recovery, but which is further developing its work in broader aspects of DRR. The focus is on environmental management and ecosystem-based approaches: mainstreaming, knowledge-building, and programme design assistance at global, regional, national and sub-national scales. The Joint UNEP-OCHA Environment Unit focuses on technological hazards creating environmental emergencies.

The **World Food Programme** (WFP) is oriented toward fighting hunger and providing food relief in emergencies, including disasters. Its objectives include preparing for, responding to and aiding recovery from emergencies. In its focus on hunger and nutrition, it works closely with its sister UN agencies - the Food and Agriculture Organization (FAO) and the International Fund for Agricultural

Development (IFAD) – as well as other international partners.

The **United Nations Children's Fund (UNICEF)** advocates especially for child-focussed approaches in DRR. It has an Office of Emergency Programmes (EMOPS) which emphasizes early warning, preparedness, response and early recovery, with DRR seen as a bridge between humanitarian action and development. The disaster work is closely integrated with UNICEF's sectoral priorities, especially education, nutrition, water sanitation and hygiene, and child protection. At country level work involves advocacy, pilot projects and support for the continuation of projects

The **World Health Organization (WHO)** engages in work on prevention of disease epidemics and health protection during other forms of disaster. It's Health Action in Crises team has coordinated a Safe Hospitals programme and launched the thematic platform on health and disasters. The unit is currently initiating a framework for risk reduction, preparedness and response via a health sector-wide approach – empowering the health sector to play a role in risk reduction and emergency management.

The **World Meteorological Organization (WMO)** has a Disaster Risk Reduction Division, which provides data and information support to countries on hazards and facilitates coordinated projects on EWS. A central aim of the unit is to strengthen hydro-meteorological services and hazard assessment/monitoring capacities at country levels, with a focus on full ('end-to-end') EWS that incorporates effective communication of warning information.

The World Bank manages the **Global Facility for Disaster Reduction and Recovery (GFDRR)**, which is run in partnership with ISDR to support implementation of the HFA. The Facility provides technical and financial assistance (grants, which may be complemented with larger World Bank loans) to strengthen DRR in low- and middle-income countries. Its 3 funding tracks are targeted toward: global and regional partnerships (via ISDR); mainstreaming DRR in development (the largest share); and sustainable disaster recovery.

## **Regional organizations**

A wide range of regional entities is engaged in cooperation and DRR activities with MS, Commission services, international organizations and UN Agencies. The majority of them are regional and sub-regional organizations established on political and economic development agendas, such as **The African, Caribbean and Pacific Group of States, African Union, Southern African Development Community (SADC), Arab League, Association of Southeast Asian Nations (ASEAN), South Asian Association for Regional Cooperation (SAARC), Indian Ocean Commission,**

the **Southern Common Market (MERCOSUR)**, **Andean Community** and **Caribbean Community (CARICOM)**. Mechanisms such as the **Asia-Europe Meeting (ASEM)**, **European Neighborhood Partnership Instrument (ENPI)** and **Plateforme d'Intervention Régionale Amérique Caraïbes (PIRAC)** have been explored for providing assistance to the respective regions.

Among those, for example, the African Union and its Commission present the leadership in mobilizing political support and advocating for DRR in Africa. The African Union has facilitated the development of the African Regional Strategy for Disaster Risk Reduction, launched the Africa Regional Platform for DRR and contributed to the decision of African Ministers of Finance reached in Lilongwe, Malawi (March 2010), to 'support efforts towards enhancing national and regional capacities to mitigate exposure to disaster risk through institutionalizing effective financial and other instruments such as strategic grain reserves, budgeted contingency funds as well as through sharing risk across [sub]regions'. Similarly, ASEAN, a geo-political, economic organization located in South-east Asia, shares a strong commitment to DRR and addressing global challenges. The ASEAN Agreement on Disaster Management and Emergency Response (AADMER) is regional legally binding agreement, which has been expected to enter in force by the end of the year 2009.

Several organizations, such as **Asian Disaster Preparedness Centre (ADPC)**, **Indian Ocean Consortium**, the **Pacific Islands Applied Geoscience Commission (SOPAC)** and **Environment and Security Initiative (ENVSEC)** have been originally created as a UN family initiative or project. The Regional Consultative Committee on Disaster Management established by ADPC represents 26 countries from Asia and Pacific regions and contributes to the identification of disaster-related needs and priorities of Asia and the Pacific countries, promotion of regional and sub-regional cooperative programs, and development of regional action strategies for disaster reduction. Other organizations, **Comité inter-Etats de Lutte Contre la Sécheresse dans le Sahel (CILSS)**, **Observatoire du Sahara et du Sahel (OSS)**, the **Disaster Environment Working Group for Asia (DEWGA)**, the **Andean Committee for the Prevention and Attention of Disasters (CAPRADE)**, the **Center of Coordination for the Prevention of the Natural Disasters in Central America (CEPREDENAC)**, the **Caribbean Disaster Emergency Management Agency (CDEMA)** and **Disaster Preparedness and Prevention Initiative (DPPI)**, have been established to address regional and sub-regional hazards and risks throughout the whole disaster management cycle on a permanent basis.

The collaboration with all these organizations has been achieved mainly at the institutional and policy level, and through tangible project activities. The cooperation encompasses: political dialogue; policy and institutional level cooperation; strengthening and reinforcing regional/national capacities, institutions and

governance capabilities; organizing conferences, seminars, trainings of experts and scientific studies; raising awareness; advisory services for disaster risk management, contingency planning, developing plans and strategies, studies and appraisals; and direct investment in DRR, climate change adaptation and related areas at regional and sub-regional level.

### **3. DRR ACTIVITIES IN RELATION TO THE EU STRATEGY'S AREAS OF INTERVENTION**

In order to assess current progress in relation to the EU Strategy, this section discusses the principal DRR activities (current and projected) across MS and the Commission, under headings that match the strategy's main recommended areas of intervention. However, it should be noted that this division of activities is not strictly applied - many actions cut across these categorizations, simultaneously addressing two or more of the intervention areas. There may also be actions that are not necessarily represented by these headings.

Because of severe limitations in the data available to this study, and the difficulties in identifying non-disaster specific DRR activities, it is not presently possible to provide an accurate figure for current annual expenditure of MS and Commission services on DRR in development cooperation. However, based on the information we did receive on funding specifically related to disaster prevention, mitigation and preparedness, and/or specifically labelled as DRR spend, we would estimate that it is currently of the order of 170-250 million Euros per annum.

#### **a) Promoting DRR as a policy priority**

The EU Strategy refers to promoting DRR at international, regional, national, and local levels, with dialogue on DRR listed as a key implementation priority. At the **international** level, several MS provide support to key multilateral initiatives on DRR including the ISDR, the GFDRR and the UNDP's BCPR. Support entails both active engagement in the governance process – Denmark and Sweden, for example, have chaired the GFDRR's consultative group – and financial assistance for the work of these bodies.

Denmark, Finland, France, Germany, Netherlands, Spain, Sweden and the UK all indicated provision of financial support to the work of ISDR in coordinating action on the HFA. Finland, for example, provides an annual core contribution to the ISDR, and in 2009 provided an additional contribution to fund participation of humanitarian actors from developing countries in the 2<sup>nd</sup> Global Platform for Disaster Risk Reduction. The biennial Global Platform functions as a global forum for monitoring progress of the HFA and sustaining advocacy for disaster reduction. EU+MS financial support has also been provided to ISDR via the DCI, for preparation of the 2011 Global Assessment Report on progress toward the HFA.

Several MS (Sweden, Denmark, UK, Germany, France, Spain, Italy, Ireland, Netherlands, Luxembourg) and the EU also provide funding to the GFDRR, mainly to track 2 which funds mainstreaming activities and direct investments. Italy's

funding is split 80% to track 2 and 20% to track 3 (recovery). In participating in the GFDRR, donors have negotiated some degree of country targeting. Spain's contribution is 50% earmarked to Latin American countries (Guatemala, Costa Rica, Ecuador and Colombia) that are outside the GFDRR's 20 priority country list. One third of the Intra-ACP budget allocation for DRR under the 10<sup>th</sup> EDF has been channelled to the GFDRR, and will be used exclusively for ACP countries.

Dialogue and support is also aimed at other multilateral and international organizations. For example, the UK has a programme of financial support for 2007-2010 to the IFRC, part of which is targeted to DRR activities; Denmark provides funds to the IFRC's Climate Centre, which focus on the linkages between DRR, development and climate change; Ireland has supported the Global Network in its research on local perspectives on progress toward the HFA; Malta contributes to the Commonwealth Fund for Technical Cooperation, the activities of which include capacity building for DRR. Many MS, including states with small cooperation budgets such as the Slovak Republic, also provide funds to WFP and UNICEF (which, presumably, may be used for disaster management operations), as well as core funds to DG ECHO.

At the level of **regional** inter-governmental bodies and non-governmental initiatives, MS support for promoting DRR as a policy priority has been mainly undertaken as a part of the overall political dialogue, since the majority of regional/sub-regional partners are organizations established on political and economic development agendas. Several MS have provided support to such organizations in this work. Thus, Greece is supporting the African Union to address climate change adaptation, as well as the Indian Ocean Commission and CARICOM, also supported by Austria. Germany is providing funding for acting with common purpose to implement the HFA in Latin America and the Caribbean, while UK is cooperating with SADC and ASEAN. EU+MS provides support through the EDF for DRR capacity building and GCCA activities in regional organizations. Commission-led discussion on similar topics also presents the opportunity for potential inclusion of DRR into policy dialogue, for example in RELEX's dialogue with ASEAN on crisis management. Regional DRR cooperation and collaboration have been also strengthened and enhanced through the ISDR-managed GFDRR Track 1 – through regional advocacy and partnerships efforts, development of regional disaster risk profiles to extending DRR promotion capacities.

Dialogue and policy support at **national** level tends to link closely with efforts to support mainstreaming and integration (see subsection b). Certainly, there is a strong opportunity for both MS and the Commission to engage in policy dialogue when developing strategy documents to guide country-level development cooperation (such as the Commission's Country Strategy Papers). A few MS also indicated provision of support to partners specifically for development of DRR strategies. The

UK, for example, provided support to Myanmar via ADPC for developing a national DRR strategy and action plan, and Germany has been providing policy advice to Mozambique on disaster risk management since 2006. The Commission (through DG RELEX) has also engaged in political dialogue with some countries on DRR, including China and Vietnam, and has particular policy influence among European Neighbourhood and Euro-Mediterranean countries through existing agreements and programmes on DRR, and with candidate and potential candidate countries in the context of internal EU DRR mechanisms.

At **local** level policy support largely comes via the programming of targeted investments. As focal points in France and Germany underlined, many targeted projects effectively have a policy-strengthening dimension. Germany supported post-earthquake activities in Pakistan at the community level on disaster recovery, but at the same time implemented activities with the ministry of construction and other organizations to mainstream DRR into the construction sector. MS also refer to promoting principles of LRRD during relief and recovery activities – though this is not always evidenced or explicit within interventions. DIPECHO projects are aimed also at advocacy and capacity-building, especially at local scale.

Finally, some EU FP7 international cooperation research calls that target natural hazards, climate change and infectious diseases (see subsection c) will have ancillary benefits for non-EU country partners in terms not just of building an information base and research capacity, but also raising public and political awareness of DRR and enhancing regional and sub-regional cooperation and coordination.

main findings	relevant to Implementation Priority
<ul style="list-style-type: none"> <li>• Several MS and Commission services have been active in international policy dialogue on DRR, and EU+MS as a whole provide key support to multilateral and other international initiatives</li> </ul>	A
<ul style="list-style-type: none"> <li>• DRR policy promotion at the regional/sub-regional level has largely been carried out as a part of the overall political and economic dialogue on development agendas</li> </ul>	A
<ul style="list-style-type: none"> <li>• For most MS and Commission services, active policy engagement on DRR at regional and national level is relatively limited at present</li> </ul>	A
<ul style="list-style-type: none"> <li>• Local level policy support tends to take place as a component of targeted investments, and there may be scope to formalize this process more effectively</li> </ul>	A

## **b) Integration of DRR into policies and planning**

Support for integration of DRR within country policies and planning is of course closely linked to dialogue processes, and the two are combined within with the first priority of the HFA. Most MS advocate mainstreaming of DRR across sectors of government, and one of the strongest messages received during interviews for this study was the need to view DRR not as a narrow (and relatively poorly funded) specialist activity, but as an integral component of all development actions in hazard-prone contexts.

The EU Strategy again emphasizes integration as an implementation priority, and additionally notes the importance of building DRR approaches within national development and poverty reduction strategies. To date, only a few countries were highlighted by MS for success in integrating DRR in poverty reduction strategy papers (PRSPs), with Germany pointing to this achievement in Bangladesh, but overall this process has been slow. However, several MS attempt to promote this process - Finland, for example, promotes integration of risk management and emergency preparedness in the poverty reduction strategies of hazard-prone partner countries such as Mozambique, Ethiopia, Kenya and Nicaragua. The Netherlands also underlines the importance of stimulating integration of DRR in sectoral policies, and the UK is providing funding over 3 years to UNDP for a project on mainstreaming DRR into development planning in Indonesia.

In parallel with these efforts directed to national governments, expectation of DRR inclusion is being progressively incorporated in the country strategy processes for many donor MS (e.g. France, Ireland, UK) with technical support/guidelines often provided. A number of countries supported by Ireland (Ethiopia, Zambia, Malawi and Uganda) have adopted a 'vulnerabilities approach' to the country programme, enabling the integration of DRR considerations. Irish Aid has provided technical support for incorporating vulnerability and risk reduction into the plans. UK's DFID provides training, tools and appoint focal points in country offices to lead the process of integration within Country Assistance Plans. As a result several country offices have taken on DRR as a programme themselves following mainstreaming support from the centre, for example in Mozambique, Malawi and China (where DRR is targeted as a component of climate change adaptation). The UK expects that, in disaster prone countries, where there is a decision not to invest in DRR by country offices an explanation must be included in the Country Assistance Plan. Similarly, in 2005, 2007 and 2009 the embassies of Denmark in its 15 partner countries were requested to follow up on the policies and strategies developed for mainstreaming climate change and DRR into development cooperation. However, one MS suggested that risk prevention is largely absent from current partnership framework



documents, which according to the principles of the Paris Declaration should align with the priorities of third countries – such priorities, at present, rarely include disaster prevention .

Within the Commission activities, integration of DRR is beginning to be included in some country strategy papers (CSPs - e.g. Bangladesh, Vietnam). Though it is not yet driven systematically by the Commission, DRR could be fully included in the next CSP cycle starting 2014. Integration of DRR is also feasible within regional strategy papers, but there has been very limited inclusion to date, mainly through references to action on climate change. This is strongest in the RSP for the Pacific region, but is also written into RSPs for the Caribbean region and Western Africa respectively. The Implementation Plan for the Strategy could be one vehicle with which to strengthen this process<sup>3</sup>.

Mainstreaming is also evident in relation to project activities. Finland, for example, is incorporating DRR into new guidelines being prepared during 2010 for programme managers of bilateral activities. Finnish legislation also requires strategic EIAs for projects – and this could be an entry to additional screening from a DRR perspective. It is suggested also that the Post-disaster Needs Assessment (PDNA) process supported by the EU+MS has contributed to mainstreaming in the Bangladesh government (recommendations on how to prevent disaster recurrence have informed the national development strategy).

main findings	relevant to Implementation Priority
• Strong agreement exists among MS over the need to mainstream DRR much more closely within development, through advocacy, coordination and support	C
• Some MS (only) currently provide support for integration of DRR into partner countries' policies and plans	C
• Integration of DRR into EU+MS development cooperation plans and projects with partner countries and regions is at an early stage (in most cases)	B, C
• Integration depends heavily on investment in awareness and training of staff at all levels to build technical knowledge and catalyse the mainstreaming process	B, C

<sup>3</sup> In this respect, it is useful to note that UN guidance exists on the process of integrating DRR into development assistance activities via the Common Country Assessment and UN Development Assistance Framework (UNDAF).

### **c) Identification, assessment and monitoring of disaster risks**

The first of series of targeted investment activities promoted under the EU Strategy is improvement of systems for identifying, assessing and monitoring the hazards that can trigger disaster events, including the enhancement of early warning and its effective linkage with early reaction. This area of intervention closely matches the second priority of the HFA.

Across the MS, existing intervention in this field is relatively well developed. Investment in scientific aspects of hazard assessment/monitoring and EWS tends to be among the most prominent of disaster-specific interventions (or at least the most easily-labelled as such). Nevertheless, major gaps and operational deficiencies undoubtedly remain on the ground in developing countries and the need for investment remains high.

French development cooperation is a case in point. Assessment/monitoring of risks and EWS are the fields in which France's risk prevention action is most visible and significant, and the fields that have generated most cross-sectoral involvement. EWS support spans hydro-meteorological hazards (including drought), geophysical hazards and emerging diseases. The National Meteorological Office regularly cooperates with third countries, building capacity for meteorological regional or local services, to allow better information and prediction in sub-Saharan Africa, South-east Asia, Caribbean countries, North Africa and Eastern Europe. Another office, the BRGM (Bureau des Ressources Géologiques et Minières) plays a leading international role in earthquake risk prediction. The ministry of economy and finance has also funded a series of projects since 2006 involving satellite surveillance and monitoring of hazards.

Finland has also placed emphasis on strengthening regional and national meteorological services (e.g. in Southern Africa, the Caribbean and south-eastern Europe). Other MS providing information on interventions in this field include Austria, Czech Republic, Denmark, Germany, Greece, Italy and the UK. The Czech Republic, for example, draws on domestic expertise in its delivery of technical assistance on monitoring a range of natural and technological hazards, and Greece has funded meteorological stations in Jamaica. Italy and Germany are among several MS that became engaged in projects designed to develop tsunami EWS following the devastating Indian Ocean tsunami of 2004. The information management aspects of tsunami warning systems have been targeted by the UK, and 'end-to-end EWS' emphasizing effective communication will be a new cooperation theme for Finland. Increasingly, there is recognition that an effective EWS must go beyond the provision of monitoring technology to investment in the management of information and attention to the social dimensions of effective communication of hazard alerts.

Within the Commission, several DGs have become engaged in interventions in this field. Global monitoring of disease outbreaks is one of the prime activities of SANCO. As part of a set of tools in place for health crisis management in Europe, SANCO developed the system MEDISYS – a global detection system for infectious disease outbreaks and other health threats. Though only partly dependent on epidemiological surveillance, it provides an impetus for capacity building in developing countries' health systems through EU development cooperation. The JRC provides technical support in various aspects of hazard and disaster monitoring (e.g. in China, Ukraine and Moldova), and has developed the Global Disaster Alert and Coordination System (GDACS), which is a single portal to access information primarily on geophysical and hydro-meteorological hazards. The DIPECHO programme includes support for local scale EWS in many of its numerous projects across disaster-prone countries. EWS for food emergencies, including those related to hydro-meteorological hazards, is also emphasized in EU+MS cooperation policy on food security.

RTD manages collaborative research calls on themes that commonly relate to hazard assessment. Under FP7 these can include partner research institutes in all countries, although the typical model would be for external partnership to be based on deriving lessons for disaster management in Europe. Recent international cooperation projects have included one on volcanic eruptions (partnered with South American institutions) and forest fires (partnered with Tunisia, Morocco and South Africa). A small number of Special International Cooperation Actions (SICA) calls are specifically targeted to regions and or countries. For the 2010, work programme the closely relevant ones are on drought prediction/early warning, urban disaster vulnerability, and vector-borne diseases – all are in Africa.

A wide range of other international actors are also engaged in technical support, advocacy and/or interventions on hazard monitoring and early warning, including collaborative initiatives with MS and the EC. They include IFRC, INGOs within the Hunger Alliance, UNICEF, WHO and WMO. WMO is coordinating the task of developing capacity and coordination within a global network of centres engaged in monitoring and forecasting of a wide range of hazards. Since 2006 it has also started bringing donors and agencies together with the aim of developing a series of coordinated projects on end-to-end EWS. Among regional organizations, Observatoire du Sahara et du Sahel (OSS) is improving early warning and monitoring systems for drought, food security and agriculture in Africa. Interestingly, in West Africa, IFRC have recently used their funds to undertake preparedness work after a seasonal forecast suggested floods were likely in the region. This was one of the first times disaster preparedness activity has been funded as a result of an advance forecast. Additional support for such activity, however, was prevented by donors' funding norms.

main findings	relevant to Implementation Priority
<ul style="list-style-type: none"> <li>• There is a strong track record of EU+MS intervention in identification, assessment and monitoring of disaster risks – especially the more technical/scientific aspects</li> </ul>	D
<ul style="list-style-type: none"> <li>• EWS is supported at a range of scales and for a range of hazards</li> </ul>	B, D
<ul style="list-style-type: none"> <li>• Most experts interviewed underlined a need for continuing investment in data, information and communication, including expansion of ‘end to end’ approaches to EWS across all hazards</li> </ul>	B, D
Advances in long-range forecasting may make it all the more feasible to issue advance warning of climatic hazards and use those (very) early warnings to trigger preparedness activities	B, D

#### d) Reduction of risk factors

Promotion of the reduction of risk is central to the DRR approach, and attention to reducing underlying risk factors is the fourth priority for action of the HFA. It draws attention to long-term preventive actions as well as to mitigation and recovery actions that reduce underlying social vulnerability, including aspects such as livelihood diversification, social safety-nets and risk transfer mechanisms. This is also the field of DRR actions which is perhaps most complex in its linkages to aspects of development that stretch beyond activities that may be conventionally defined as disaster-related.

Across the MS, the more long-term prevention and structural mitigation aspects of DRR are not so strongly evident in targeted development cooperation activities that could be labelled as ‘**disaster-specific**’, though some activity exists in areas such as flood control and building safety. For example, Spain has supported the canalization of two rivers for flood control in one municipality in Bolivia, the Czech Republic has recently supported flood prevention projects in Moldova, Kyrgyzstan and Peru, and Germany is supporting flood protection measures in South-east Asia.

The UK has funded some preventive and mitigative activities via its ‘10% commitment’ following disaster events (see Box 1), including preventive investments in hillside protection and river bank enforcement in Haiti and flood plain management in Mozambique. Building and physical infrastructure safety is addressed most commonly in post-disaster reconstruction activities, such as ongoing investments by Germany in Bangladesh, Indonesia and Peru. Much of the DRR

activity in reconstruction is undertaken by IFRC and NGO actors supported by MS. International programmes by ISDR and WHO also focus on disaster-resilient building and retrofitting of educational and health facilities, respectively.

**Box 1 DRR during the recovery phase**

Recovery refers to the phase following disasters when interventions are turning from emergency relief efforts toward rehabilitation and reconstruction. According to many actors, this is a key phase in which DRR actions (in prevention, mitigation and preparedness) need to be incorporated more effectively into humanitarian and/or post-disaster development efforts. The GFDRR has a funding track specifically targeting recovery. Some MS have instituted or are working towards setting aside a fixed proportion of humanitarian funding to DRR activities (the UK is one country that had already established a 10% commitment, before the allocation of 10% of humanitarian budget to DRR was recommended at the 2nd Global Platform on DRR in 2009).

Key concepts for sustainable, long-term recovery, such as LRRD and building DRR into early recovery, are promoted by organizations such as UNDP, UNICEF and WHO and are widely endorsed by MS and EC services. Yet financing and/or implementation gaps remain, and some MS could not conclude, for example, that reconstruction efforts they supported had met the need for 'building back better'. A more effective means to bridge the funding gap between humanitarian financing and development financing may be needed – including within the EU funding instruments. Working with communities to incorporate DRR during rehabilitation and long-term recovery is also a process that takes time, and hence the duration of funding also becomes critical. Support is also likely to be needed at national level too, to build capacity for managing recovery processes in partner countries, and to provide incentives to ensure recommendations from PDNAs are incorporated into development strategy and implemented.

Within the Commission, the policy focus of DG DEV is most closely allied to longer-term preventive and mitigative aspects of DRR, including risk avoidance during recovery. To date, however, funding for such activities appears to have been limited. One example of prevention is an urban flood control infrastructure project in Burkina Faso. Risk transfer has taken a higher profile, with major contributions under the 9<sup>th</sup> EDF to the CCRIF risk insurance facility for the Caribbean region and to the GIIF global weather and catastrophic risk index insurance facility for ACP countries.

RELEX's emphasis has generally been on crisis management and hence on post-disaster phases, though the DG is increasingly bringing aspects of long term DRR into its activities. RELEX has worked closely with ISDR and the World Bank to develop the PDNA methodology, which includes assessment of what would be required to reduce ongoing disaster risk. PDNAs have been applied in some 20 cases to date, most recently for the 2010 earthquake disaster in Haiti, which tragically underlined the need for structural mitigation measures in building and infrastructure. Small-scale mitigation actions at community level may also be included in DIPECHO programmes.

Among the other international actors setting the agenda of disaster reduction that were interviewed for this study there is a general engagement spanning the different aspects of disaster management. However, there is relatively minor activity in prevention by most of these actors. Engagement in mitigation activities is more common, especially in post-disaster situations. IFRC undertakes some preventive and mitigative works, but mainly concentrates on preparedness, relief and recovery. For the GFDRR, mitigation via risk transfer mechanisms is one strong focus of attention, along with promotion of disaster-resilient infrastructure.

It is important to underline here, however, that the scope of DRR is not sharply defined. Preventive and mitigative aspects of DRR are perhaps more strongly evident in interventions by MS and the Commission that are '**non-disaster-specific**' but that have clear linkages with disaster risk, such as actions on disease control, environmental management and food security. These can reduce both the physical hazard and social vulnerability aspects of disaster risk.

Prevention is of course an inherent concept within preventive health activities such as disease control and health promotion, and such activities logically contribute to the prevention of epidemic disasters. Control of infectious disease can be supported through investments in the health sector (including environmental health). Unfortunately, it was not feasible in this study to focus on disease control or general public health aspects of development cooperation, although support to health systems is certainly a major component of development assistance for many MS and for the Commission. In terms of global epidemic and pandemic control, SANCO operates surveillance mechanism as described above and cooperates with the strategic activities of WHO and the World Animal Health Organization.

Several MS provided details of targeted investment activities in environmental management that are likely to provide inherent benefits in terms of risk reduction. Water and river basin management has relevance both for flood and drought risks. France has long been active in dryland management in the Sahel region, providing support often through regional agencies such as CILSS on drought risk management, while Poland has recently been engaged in a water supply management project in

Kenya. Finland provides long-term support for desertification issues in the Middle East and North Africa region, and has take steps to strengthen the management of water resources in the Eastern Nile countries. Finland is also active in sustainable forest management, which is likely to provide benefits in terms of reducing hazards such as flash floods and landslides. The Commission similarly provides support for environmental management which may have ancillary DRR benefits, such as a current environmental governance project in Ghana.

Action on food security is another regular priority area for development cooperation among MS, and has strong linkages to DRR in relation to managing risks to agriculture and livelihoods from natural hazards, especially from drought. For Ireland, hunger and food security is a leading theme of Irish Aid, which funds many community level projects in Africa on mitigative aspects such as drought-resilient farming and social safety nets. The UK is looking toward preventive approaches through comprehensive food security strategies that include a move from periodic food relief efforts toward stable government led safety net programmes in Africa. For the Commission, food security actions are funded through both the EDF and the DCI, including current programmes under the FSTP on agricultural risk management at household/smallholder level in Africa, a drought contingency planning project for eastern Africa (under negotiation), and financial risk management for agriculture in ACP countries. An EU policy framework to assist developing countries in addressing food security challenges makes clear links with DRR, emphasizing promotion of LRRD principles in relief work, safety nets and use of weather/index insurance. Food security is also central to the EU’s newly-approved Global Plan for Humanitarian Actions in the Sahel region of West Africa.

In all these aspects above, reduction of current and future risk factors must also be viewed in the context of climate change impacts on weather extremes, hazards, health, natural resources, water and food. The linkages between DRR and **climate change adaptation** are made in multiple, diverse ways by MS and the Commission, through dialogue, strategy papers, mainstreaming activities and (explicitly and implicitly) through targeted interventions including risk assessment, training and prevention. The integration between DRR and CC adaptation is a key aspect of the EU Strategy for DRR and is explored in full in Section 4.

main findings	relevant to Implementation Priority
<ul style="list-style-type: none"> <li>• Reduction of risk factors, though central to the concept of DRR, is not yet strongly evident in ‘disaster-specific’ interventions, though some examples of prevention and mitigation activities by EU+MS exist in fields such as flood control and risk insurance</li> </ul>	D

<ul style="list-style-type: none"> <li>• Post-disaster situations provide one opportunity to direct attention to prevention and mitigation (e.g. via 10% commitment, PDNAs and DRR in reconstruction); a more effective means to bridge the funding gap between humanitarian financing and development financing may be needed within the Commission funding instruments</li> </ul>	D
<ul style="list-style-type: none"> <li>• Wider development interventions that are ‘non-disaster-specific’ (such as in preventive health, environmental management and food security) also provide critical contributions to the reduction of disaster risk</li> </ul>	D
<ul style="list-style-type: none"> <li>• DRR is also inherent in most strategic and targeted activities related to climate change adaptation (see under 4)</li> </ul>	D

### e) Institutional support

The Strategy’s fifth area of implementation refers to provision of institutional support to national and local authorities and stakeholders. This area cross-cuts the HFA priorities, and many aspects of institutional support relate to the other areas listed here of policy support, integration, and investments in terms of information systems, analytical tools and especially capacity-building. However, one aspect of institutional support at national and especially local level not covered elsewhere is assistance by some MS and Commission services in development of disaster management and emergency plans.

Germany is providing support for disaster risk management in a range of countries and at different scales, including China, Philippines, Laos, Vietnam, Cambodia, Pakistan, Tajikistan, Armenia, Azerbaijan, Georgia, El Salvador and Guatemala. These range from a transnational project (cross-border) in the South Caucasus through provincial a project in Pakistan to a community-based activity in Tajikistan. Spain is working with a sub-national authority in the Philippines to develop a shelter network system around an active volcano. At the community level, the UK has used its 10% commitment to support community-based DRR in Myanmar, and contributes to a large number of community-based disaster preparedness and contingency planning projects via its funding to UK-based INGOs.

Recent and ongoing EU+MS development cooperation includes major disaster management support to institutions in Bangladesh (in partnership with DFID and UNDP), Haiti, China, and the Caribbean overseas territories, and a programme to strengthen community-level preparedness in the Caribbean region.

ECHO’s emphasis is on humanitarian response, but it has a specific budget line for disaster preparedness – which, via the DIPECHO programme, includes support for



emergency planning by national and local communities and institutions (together with activities such as establishment of local EWS, shelter networks, rescue teams and emergency water supply facilities). Ongoing projects of this type are currently under way in DIPECHO's Caribbean, Central America, South America, Pacific, South Asia, Central Asia, South Caucasus, and South-east Africa/South-west Indian Ocean regions. ECHO is also engaged in a major drought preparedness programme in the Horn of Africa, focussing especially on water sources, rangeland access and preventive health measures.

main findings	relevant to Implementation Priority
<ul style="list-style-type: none"> <li>• Some EU+MS support is provided for disaster management and emergency planning in partner countries and regions</li> </ul>	B, D
<ul style="list-style-type: none"> <li>• Support to community-based institutions is provided largely via funding channelled through NGOs and Red Cross/Red Crescent</li> </ul>	D

## f) Analytical tools

The sixth area of intervention in the Strategy refers to support for the improvement of analytical tools (including data monitoring facilities and techniques such as vulnerability assessment), and to joint analysis with partner countries. This corresponds to elements in both the second and third HFA priorities. Support for collection and processing of hazard information via improvement of global, regional and national monitoring technologies and systems is a major activity promoted by organizations such as WMO, DG SANCO and JRC and by several MS, as discussed above under subsection 'c'.

One of the key challenges in the use of this hazard information is to be able to combine it effectively with vulnerability information to assess risk, and to gauge capacities for effective response and adaptation. Support for techniques of vulnerability assessment is likely to be incorporated in many disaster risk management projects of MS at different scales, and has been advanced particularly within projects on climate change risks.

France's contributions in this field includes vulnerability assessment elements in a regional Indian Ocean project aimed at reinforcing capacities in adaptation to climate risks, and a cartography project in Sri Lanka designed to identify zones of potentially high exposure to tsunamis. Denmark has assisted with generation of sea level rise scenarios for Vietnam and identification of implications for DRR. Finland contributes to the Environment and Security Initiative in Central Asia, South

Caucasus, Ukraine, Belarus and Moldova, which aims to identify environment and conflict risk hotspots via regional vulnerability assessments, information-sharing and scenario development. Finland has also supported work at the local scale, including community-based hazard, vulnerability and capacity assessments (leading to action planning) in Cambodia and Vietnam. The IFRC, whose branches receive support from many MS and DIPECHO, has been a pioneer of such techniques: its participatory vulnerability and capacity assessment (VCA) approach is oriented toward work with local communities on preparedness and resilience, and has been widely applied in many countries.

Within the Commission, the two research services have also contributed to analytical techniques. The FP7 research calls managed by RTD that are related to disaster risk and climate change include work on techniques in hazard assessment, epidemiology, forecasting, impacts/vulnerability and response/adaptation. JRC provides technical support to RELEX for PDNA methodology, especially in data collection through remote sensing complemented with field observation. The fundamental importance of holistic data/information on risk as a foundation for DRR is echoed in priority activities of GFDRR, UNDP, WHO and other organizations. WFP, for example, supports the establishment of early warning systems and vulnerability analysis capacities in order to prevent acute hunger resulting from disasters.

Finally, there remains the task of evaluation of DRR. The UK is one MS that is tackling this problematic but important activity, by developing a monitoring framework tool for country offices to enable them to assess the impact of DRR interventions. Evidence of the cost effectiveness of DRR actions – including through retrospective post-disaster assessments – may be one way to help promote political support for DRR .

main findings	relevant to Implementation Priority
<ul style="list-style-type: none"> <li>• EU+MS are quite widely engaged in development of analytical tools and support for their utilization on the ground, although work on social aspects of vulnerability assessment needs to match advances in hazard assessment.</li> </ul>	D
<ul style="list-style-type: none"> <li>• Analysis of climate change risks is helping to drive the development of methodologies for assessing risk from hydro-meteorological hazards and wider hazards</li> </ul>	D
<ul style="list-style-type: none"> <li>• Support for local scale risk assessment is commonly channelled via support to IFRC branches and NGOs</li> </ul>	D
<ul style="list-style-type: none"> <li>• Development of methodologies for evaluations and cost-effectiveness studies of DRR could play an important role in building support for investments</li> </ul>	A, C

### **g) Capacity building, education, training and dissemination**

The seventh area of implementation in the Strategy is support for capacity-building, education and training, together with dissemination of risk information to the relevant authorities and communities. This is most closely oriented to the third priority of the HFA, but also relates to its first and second priorities. To large extent aspects of capacity-building and information dissemination have been discussed already under some of the subsections above. This subsection will therefore focus primarily on education and training, as key elements of capacity-building.

Training, and to a lesser extent education, in relation to disaster management and DRR, continues to be a major external activity for MS. As well as being a component of much technical and institutional assistance for risk analysis and planning, it is also often a standalone activity. This is one of the main channels through which many of the newer MS engage in disaster-related cooperation. Poland's contributions have included funding for an NGO to undertake DRR education in schools in Tajikistan. Czech Republic has funded local level training in Mongolia for coping and recovery from 'dzud' (prolonged harsh winter weather). Estonia (in common with many MS) has supported the national Red Cross to work with their counterparts in Moldova, Ukraine and Belarus on training of trainers in first aid. Hungary has undertaken disaster preparedness training in Indonesia and Vietnam.

Training in emergency preparedness is in some cases implemented by MS' national civil protection organizations. Cyprus' civil defence authority has carried out external training activities, including a course in Lebanon on search and rescue. Sweden's civil contingencies agency has engaged in training/capacity building projects on emergency management, rescue, and wider aspects of DRR such as preventive education in the Western Balkans, Ukraine, Moldova, Armenia, Turkey, Pakistan, Nigeria, Liberia and Sierra Leone.

For the Commission, the Civil Protection unit within ECHO coordinates capacity development programmes in the countries proximal to the EU: in the Western Balkans and Turkey ('IPA beneficiaries'), European Neighbourhood countries and Euro-Mediterranean countries. The Prevention, Preparedness and Response to Natural and Man-made Disasters programme contributes to the development of stronger prevention, preparedness and response capacities in civil protection in 12 Mediterranean Partner Countries. It is managed by a consortium led by the Italian Department for Civil Protection and including the ISDR and the civil protection authorities of France, Egypt and Algeria. The ENPI programme for the prevention, reduction and management of natural and man-made disasters (PPRD East) is being developed for Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russian Federation

and Ukraine. Farther afield, the DIPECHO programme’s remit within its regional programmes also includes community training and capacity building, as well as awareness-raising on disaster preparedness.

main findings	relevant to Implementation Priority
• Support for training and education is a major activity for MS, and is especially significant in the disaster-related cooperation activities of many newer MS	D
• Civil protection organizations in some MS and the Commission engage in emergency preparedness training, and in some cases wider aspects of disaster prevention	D

## 4. CROSS-CUTTING THEMES

This section of the report builds on the previous section to present an analysis of development cooperation activities in DRR on the basis of a series of cross-cutting themes. It examines the balance of activities in relation to hazard types, sectors and geographical spread. It then draws out a series of further dimensions on regional scale activity, climate change linkages, gender-sensitive approaches and community-based DRR.

### Hazard types

The EU Strategy covers natural and technological hazards – the former including biological, geophysical and hydro-meteorological hazards, and the latter referring to human-induced hazards such as industrial accidents and severe environmental contamination. The balance of activity in developing countries under DRR initiatives by MS, Commission services and the majority of other international actors is heavily skewed toward natural hazards. This matches the statistical evidence on total numbers of people affected by these hazards, as compiled in global databases such as EM-DAT, but may also be influenced by issues of existing expertise and established practice within organizations centrally engaged in disaster management.

For the institutions in MS, the Commission and other organizations identified as central actors in disaster-related development assistance, activities to reduce the impact of **hydro-meteorological** and **geophysical hazards** are the predominant focus. These are the principal forms of disaster risk responded to by MS departments of development cooperation and by the EC's development and humanitarian services. Hydro-meteorological and geophysical hazards also predominate in RTD's research funding related to DRR in developing countries. The explicit DRR programmes of UNISDR, WMO, UNDP and UNICEF all focus on natural hazards, and primarily engage on hydro-meteorological hazards and geophysical hazards.

The DRR interventions on hydro-meteorological hazards in turn appear to focus most on preventing, mitigating and preparing for rapid-onset floods and tropical cyclones. Due emphasis needs to be given to the deep and often long-lasting livelihood impacts of slow-onset hazards, especially drought. However it should be added that actions by MS and EC bracketed under 'food security' may well include actions relevant to drought risk reduction such as soil and water management practices, EWS, building food and fodder stocks, social safety nets and weather/index insurance.

Disaster events related to geophysical hazards – such as volcanic eruptions, earthquakes and tsunamis – occur less frequently across the globe than hydro-

meteorological disasters, but their effects in terms of lives lost and destruction of assets can be enormous, as evidenced by the 2010 earthquake in Haiti and the 2004 Indian Ocean tsunami. Contacts for the study from Germany emphasized the need to balance attention to them vis-a-vis hydro-meteorological hazards. This may be particularly important to stress, given the growing focus on climate risk management.

**Biological** hazards refer principally to large-scale outbreaks of acute infectious disease, in humans and in livestock, and to outbreaks of crop diseases and pests (e.g. locust swarms) of sufficient scale to threaten food security in a country or region. The government units driving DRR development cooperation in MS show little direct engagement with biological hazards, and responsibility for supporting action on such hazards (e.g. surveillance and control of human and livestock epidemics and agricultural pests) would tend to come under different ministries or units within development departments (e.g. public health, agriculture). Little evidence emerged in this study of coordination between such units in terms of a DRR agenda.

For the Commission, SANCO has prime responsibility in relation to biological hazards, but its territorial focus is on the EU and its neighbouring region, and its activities that involve third countries are primarily related to strengthening global monitoring of disease outbreaks as opposed to control within those countries (although surveillance and monitoring assistance is highly valuable in itself). Support for epidemic management is within the remit of ECHO, however, which acts on all forms of natural hazard. Action on animal and crop diseases also falls within the priorities of the EU policy framework on food security in developing countries, which emphasizes aspects such as linking weather data with information on disease outbreaks.

**Technological** hazards are also seldom referred to by DRR units within MS and EC services in terms of support for developing countries. For the UK, for example, technological hazards are included within DFID's DRR policy, but little action on them has been taken because of the relative infrequency of large-scale hazard events of this kind in developing countries. Nevertheless, action on technological risk reduction may be 'hidden' within other sectors of development assistance beyond disaster management, such as assistance by Finland on hazardous waste management in North Africa and Southern Africa through the foreign affairs ministry's environment policy.

Technological hazards may possibly be a stronger potential DRR theme in eastern European and former Soviet countries, where they are commonly addressed together with natural hazards because of their historical industrial legacies. In this respect, the EU Seveso I and II directives are likely to be an important force for risk reduction in the EU accession process. Technological hazards are also the focus, in part, of

training activities by the Commission civil protection unit and civil protection authorities of Slovenia and Sweden in the regions bordering the EU. At the multilateral level, the Joint UNEP-OCHA Environment Unit provides assistance on the prevention and management of environmental emergencies.

**Conflict** is explicitly not included in the EU Strategy, but INGO contacts both in VOICE and the Global Network argued that its linkages with disaster must be recognized, especially in the generation of complex emergencies. Donors also need to consider the operational difficulty of working on non-conflict disasters that occur in a conflict zone

Another key dimension of hazard is scale, and the notion of **extensive risk**. Extensive risk refers to risk from small scale, localized but widely distributed and often frequent hazards such as landslides and flash floods. The potential impact of such hazards, on local populations and, in an aggregate sense, on wider development goals, is noted in the EU Strategy and was underlined by some interviewees for the study.

Equally, there is a need to recognize and address the existence in localities of **multiple risks**. This calls for an integrated multi-hazard approach based on assessment of risks from different forms of potential hazard (which could encompass technological and biological hazards). RTD funding streams exist for multi-hazards, and this could be more oriented to developing country contexts where the potential for combined hazards may be heightened. Part of the rationale for this is that certain DRR approaches and disaster management guidance should be applicable to all hazard types, as suggested in interviews with UNISDR, UNDP, WHO and IFRC. The WHO argues for an ‘all hazards’ approach – claiming that there is no need to compartmentalize hazard types – when it comes to major tools such as EWS they can work in essentially similar ways.

Key points	link to Implementation Priority
<ul style="list-style-type: none"> <li>The predominant focus in the activities of DRR units of Commission, MS and international organizations is on natural hazards associated with extreme events (hydro-meteorological and geophysical hazards)</li> </ul>	D
<ul style="list-style-type: none"> <li>There is stronger emphasis overall on rapid-onset hazards as opposed to slow-onset hazards such as drought (although some action to combat drought risk takes place under food security and other fields of intervention)</li> </ul>	C, D
<ul style="list-style-type: none"> <li>The growing focus on climatic risks is vital, but should not reduce attention to geophysical hazards</li> </ul>	D

<ul style="list-style-type: none"> <li>• Greater attention needs to be given to DRR for small-scale natural hazards – ie to ‘extensive’ as well as intensive risk</li> </ul>	D
<ul style="list-style-type: none"> <li>• Cooperation activities related to biological and technological hazards tend to be driven by units not centrally engaged in DRR, but there is scope for improved coordination especially through greater application of multi-hazard approaches</li> </ul>	D
<ul style="list-style-type: none"> <li>• Linkages with conflict units should be strengthened, especially in relation to management of complex emergencies and of non-conflict disasters occurring within conflict zones</li> </ul>	C

## Sectors of intervention

Disasters impacts on many sectors, and the task of addressing disaster risks logically should cut across sectors. In terms of impacts, some of the most commonly addressed natural hazards such as floods and earthquakes can bring destruction and disruption to housing and infrastructure, agriculture and food supply, health care, water and sanitation, education and social welfare. Unfortunately in this study it has not been feasible to compile a detailed sectoral breakdown of targeted investments by MS in DRR, but examples from Germany illustrate the breadth of sectors that can be engaged. The German government’s disaster risk portfolio in development cooperation currently includes projects on: preventive reconstruction in Peru; rehabilitation and reduction of economic vulnerability of small-scale agriculture in Haiti; DRR in health service management in Indonesia; and DRR components in education for social cohesion in Sri Lanka.

A number of comments relating to DRR and sectors were collected during the course of the study, however, and it is valuable to discuss some of these points here. Promotion of DRR in provision and reconstruction of **housing** and **built infrastructure** is a key element in reducing loss of life, disruption of wellbeing and economic damages. One of Greece’s collaborations with CARICOM has included infrastructure projects for combating extreme events in St Lucia. It was underlined by AIDCO that action to ensure safer buildings should address the whole spectrum of good governance issues in construction, including weak legislation and regulation, lack of technical knowledge, development of building codes including quality of construction materials, and issues of maintenance. The ACP Secretariat pointed out that in the aftermath of a disaster there is often a high expectation from countries for assistance in rebuilding infrastructure that is seldom matched by the finance available. The ACP would like to see more funds being made available for reconstruction, but on the basis of ‘building back better’ approaches to avoid reproduction of risk.



Support for risk reduction efforts in **agriculture** and **food security** are also common fields of intervention, although not always formally identified under the umbrella of DRR. Food security and hunger are emphasized in Ireland's development cooperation, for example, and both France and Finland are strongly engaged in dryland management projects for strengthening rural livelihoods in drought risk areas. The Czech Republic is providing grants during 2010 for reduction of impacts on farming of drought in Ethiopia and Somalia and of dzud in Mongolia. Support for food security in conditions of disaster risk is also a major field of intervention for the Commission services in developing countries, with strategic approaches and a thematic programme in place. Preparedness for food emergencies is one of WFP's five objectives, together with preventive and recovery actions.

**Health** remains a sector that receives relatively little attention within the DRR-specific development cooperation activities of EU+MS. However, it is one sector in which Germany, for example, is trying to build more DRR integration, in line with recent advocacy and technical assistance through the Hospitals Safe from Disasters initiative for structural and functional disaster mitigation in health facilities led by WHO, GFDRR and ISDR. WHO underlined that the health sector has often suffered from a lack of focus in disaster risk management, yet in countries in Latin America and the Caribbean where health emergency preparedness programmes have been well-established the sector has shown potential to play a leadership role in galvanizing multi-sectoral disaster preparedness. DG SANCO also emphasized that the strengthening of health systems in developing countries – including surveillance systems and emergency plans – is a cornerstone for the effective implementation of the International Health Regulations, and for promoting global health security. Alongside support to health systems, WHO also campaigns for community preparedness in terms of threats to health from hazards. Closely allied with this are community-level actions in **water and sanitation** for DRR, championed by UNICEF and many INGOs.

To date UNICEF's strongest sectoral focus in DRR has been on **education**, and the organization aims to mainstream DRR in its education programmes through activities such as capacity-building, risk assessment, strengthening preparedness and early warning for schools. UNICEF, ISDR, GFDRR and other organizations are campaigning to make all schools in high-risk areas hazard-resistant through incentives in the construction of new schools and international assistance to fund retrofitting of existing schools. UNICEF's concerns in disasters are especially linked with child welfare. A related concern is malnutrition, and INGO networks such as the UK Hunger Alliance emphasize the links that need to be made between disaster mitigation and **social protection**, especially via cash transfers aimed at reducing risk of hunger and malnutrition.

Key points	link to Implementation Priority
<ul style="list-style-type: none"> <li>• Activities in DRR relate to various sectors, and the cross-sectoral scope of DRR interventions should be increased within EU+MS action</li> </ul>	A, C
<ul style="list-style-type: none"> <li>• DRR should be integral in construction and reconstruction activity, through design and construction to maintenance.</li> </ul>	D
<ul style="list-style-type: none"> <li>• Activities in agriculture and food security contribute to DRR: they are a high priority for many MS but are seldom explicitly linked with DRR</li> </ul>	C, D
<ul style="list-style-type: none"> <li>• Health and education are two sectors that are being championed by international organizations for greater DRR action, but action in these sectors is not yet strongly evident in DRR-specific work of EU+MS</li> </ul>	C, D

## Geographical dimensions

The EU Strategy covers all developing countries (defined as recipients of ODA on the OECD/DAC list) together with overseas countries and territories of MS. However, particular attention is accorded in the Strategy to disaster-prone regions, the least developed and most vulnerable countries and areas, as well as the most vulnerable groups of people. It was not feasible in this study to undertake a comprehensive geographical analysis of all DRR activities or of financial flows between donors and countries, primarily because of time limitations but also because of data limitations. Moreover, only two of the MS (UK and Spain) indicated priority countries specifically for DRR. Available information provided only a partial view of the span of activities, and, besides, there are complex routings of disaster finance through mechanisms such as multi-donor trust funds and support to INGO networks that in many cases exceed the volume of bilateral aid for DRR. A quantitative analysis of this kind is a highly complex undertaking, but one that would provide a valuable spatial dimension to information on DRR assistance.

This section therefore relies principally on expert judgement of interviewees to identify geographical regions that might be considered high priority on the basis of funding gaps or of persistent lack of progress on DRR in general. During the interviews in this study clear perspectives on this were gained from representatives from 5 MS and 3 international organizations.

The UK expert perceived a key gap in DRR progress in West Africa, where some NGOs are very active but there was seen to be little assistance provided through

bilateral and multilateral donors. The Ireland expert pointed to key areas of need for investment as the Horn of Africa and West Africa (stating that, in both, drought/floods and food security are major issues and better national/regional systems of response to EWS are needed to reduce humanitarian needs). Finland experts identified generally countries with governance limitations in West and Central Africa, Zimbabwe, Myanmar, and those emerging from conflicts (such as Sierra Leone and Liberia). Malta believes that future plans need to give priority to the concerns and needs of small and vulnerable island states. Spain emphasized the need in Latin America and the Caribbean, and the desire to see more countries in the region targeted by the GFDRR. The UNDP BCPR emphasized the need that exists in most countries of Africa, where only a handful of countries has made significant progress on DRR. Africa and particularly West Africa was also seen by UNICEF as most in need of support and capacity-building, followed by the Caucasus and South-east Europe. The IFRC expert emphasized lack of progress in North Africa, parts of eastern Europe and sub-Saharan Africa (especially for drought risk management).

Taken together these responses highlight particular DRR funding/action gaps in:

- Africa generally (UNDP, UNICEF, IFRC) and especially West Africa (UK, Ireland, Finland, UNICEF), Horn of Africa (Ireland), Central Africa (Finland), North Africa (IFRC);
- Caucasus (UNICEF), Western Balkans (UNICEF, IFRC) and East European former Soviet states (IFRC);
- Latin America & Caribbean (Spain);
- Small island developing states (Malta).

It must be underlined that the need for enhancement of DRR is almost universal in developing countries. Moreover, there may also be significant variation in risk and DRR progress at the sub-national scale, especially in larger countries in which there are major physical and social differences between provinces. However, in terms of low levels of economic development and vulnerable groups of people as well as poor progress to date in DRR, sub-Saharan Africa stands out in terms of risk factors. The majority of least developed countries are located in Africa – poverty is a critical factor in social vulnerability to hazards. Africa is highly prone to drought, and though the continent as a whole tends not to be associated with very large-scale rapid-onset disasters, many areas remain prone to medium-scale and small-scale natural hazards. Though many MS are active in West Africa in terms of general development cooperation (all countries in West Africa are priority countries or partner countries for at least one MS, and some have priority status with several MS) the comments above suggest that funding for DRR in the region has been relatively low to date. Five countries in West Africa have been selected among 31 GFDRR priority countries (Burkina Faso, Mali, Senegal, Togo, Ghana), and Ghana is also one of the 11 priority countries targeted for DRR by the UK.

The most suitable method for targeting DRR investment should be to define regions, countries or areas which are the most at risk, taking into account projections of future climate change. Risk, however, is never likely to be the only criterion at work when decisions are made on funding. Investment also depends on receptivity to DRR priorities by the partner country and capacity to utilize donor finance and technical assistance effectively. The result is that there may be limited correlation between level of need and level of investment in countries. As pointed out by some MS and Commission interviewees, countries that are difficult to work with, because of poor governance, ongoing conflict or recent emergence from conflict are less likely to receive external investment in DRR.

Finally, it is useful here also to note variations in EU funding channels for DRR in terms of geographical eligibility:

- EDF funding for DRR applies to Africa, Caribbean and Pacific regions;
- GCCA applies to SIDS, Africa, Latin America and Caribbean, South and South-east Asia;
- ENRTP is available to all developing countries;
- DIPECHO funds projects in most regions eligible for DAC; in Africa it currently applies only to the south-east, but ECHO has DRR-oriented projects in the Horn of Africa and the Sahel.

Key points	link to Implementation Priority
<ul style="list-style-type: none"> <li>• Detailed analysis of the geographical distribution of DRR development assistance EU+MS requires an improved information base, a complex methodology and a specialist study in order to capture the full range and value of financial flows</li> </ul>	A, D
<ul style="list-style-type: none"> <li>• Because of factors such as funding absorption capacity, governance issues and ongoing conflict, as well as historical ties between countries, there is likely to be a mismatch between the geographical distribution of need for DRR and donor investment in DRR</li> </ul>	A
<ul style="list-style-type: none"> <li>• Most hazard-prone developing countries will benefit from increased investment in DRR, but, regionally, little progress in DRR has been achieved to date in most of Sub-Saharan Africa, and particularly in West Africa</li> </ul>	C

## **Regional level action**

The EU strategy has a strong regional focus, underlining the importance of action at this scale, especially through the development of action plans for disaster-prone regions. As noted in section 3, MS support to regional initiatives includes policy coordination, most commonly within comprehensive political dialogue addressing DRR as one of the topics, or under broad frames that implicitly include DRR (e.g. dry land water management or improved water resources management). MS have also addressed regional cooperation as part of various project activities: enhancement of the cross border disaster risk management and trans-boundary cooperation for regional stability and security (e.g. Eastern Europe, Central Asia, South Caucasus); strengthening national ability and competence through regional disaster management capacity building - DRR and disaster preparedness conferences, seminars and training courses (e.g. Indian Ocean Consortium, South-east Europe, Southern Africa, African Union); hazard monitoring and prediction, improved forecasting and EWS (e.g. Indian Ocean, Caribbean, South-east Asia); scientific studies on geological risk and disaster prevention, earthquake readiness (e.g. CARICOM region, Central America, Indian Ocean region); and improving disaster preparedness, civil protection and emergency response (e.g. Indian Ocean region, Central America and Caribbean).

The Commission has assisted regions mainly through the EDF and through ECHO instruments. The EDF supported DRR capacity building (e.g. establishment of National Disaster Facility with ACP Secretariat) and GCCA activities in regional organizations, EWS, Caribbean Catastrophe Risk Insurance Facility, community-level preparedness, recovery and reconstruction - mostly in the Caribbean/CDERA region. Support for food security/drought has been provided to regions of Africa under EDF and DCI; ECHO provided support for drought preparedness to the Horn of Africa and through the Sahel Global Plan. In addition to the support provided to country level projects, DIPECHO support also includes a regional project approach - implementing a project through one implementation partner in several countries of the region/sub-region (Caribbean, Central Asia, South Caucasus). European Civil Protection, through PPRD Programmes South and East, provided support in developing stronger prevention, preparedness and response civil protection capacities to Euro-Med and Euro-East regions. Though most research calls administered by RTD under FP7 are expected to have direct relevance to the EU, a small number are directly targeted toward regions only (especially Africa). Through Thematic Programme ACP Observatory, JRC has supported the ACP Secretariat and African Union Commission in, inter alia, delivery of warning systems about floods, fires and drought.

Integration of DRR is feasible within RSPs, but very limited inclusion has been achieved so far. Only the Pacific region has climate change and DRR within one of its

focal areas, but only climate change is included under specified “results” for funding. The Caribbean region RSP simply refers to climate change and DRR, while the Central America RSP included some wording on climate adaptation. The Western Africa RSP has climate change as a non-focal area under support to the environmental sector in general. Others have next to nothing. All existing RSPs are shortly to be in the process of mid-term review.

Among other international actors that have been interviewed for this study, ISDR is bringing government ministries and other stakeholders together at the regional level through regional platforms. Together with the World Bank, ISDR is enhancing through GFDRR the capacity of intergovernmental organizations in Asia (ASEAN, SAARC), Africa (AUC), Pacific (SOPAC), Americas (OAS) and the Middle East (LAS) to reduce risks from natural hazards. UNEP participates in several partnerships on disaster risk reduction at the regional level, such as the Disaster and Environment Working Group in Asia (DEWGA), while UNICEF has focused on mainstreaming DRR into education via DIPECHO funding in Latin America and the Caribbean, Central Asia and South Caucasus. The ADPC Regional Consultative Committee is implementing a programme on mainstreaming DRR into development planning and implementation, aiming to increase awareness and political support for adoption of mainstreaming in 11 member countries in Asia.

Disasters do not recognize borders. Disasters transcend borders and they often overwhelm the coping capacity of a single country, in both senses thus becoming a trans-boundary and a regional issue. Cooperation with political and technical regional and sub-regional organizations is important. Policy and institutional cooperation at the regional level serve to strengthen countries’ governance and capacity to act. Regional level activity is an important mechanism for liaison and interchange of information. As the ISDR experts noted, bringing government ministries together at regional level promotes knowledge transfer and can generate political momentum (and peer pressure) for action at country level. One issue is how to strike the correct balance between regional and national scale action, in terms of function. The UNDP experts noted that regional intergovernmental bodies can be problematic because they are fundamentally political bodies and tend to have limited implementation capacity. The primacy of the national/country level has to be recognized – and it may be that regional activities should be focused on exchange of information and lessons learned between countries, together with problem solving for issues that genuinely require regional cooperation and cannot be solved by one country alone.

Despite the challenges, there appears to be significant potential for developing regional action plans. Bilaterally, Spain has assisted development of a DRR Action Plan for Central America that is said to be a good example on how to coordinate partners at all levels. Several MS (Finland, Malta, France, Sweden) suggested that

there is a need to support DRR regional programs where feasible, to strengthen disaster management programmes, to focus regional programs on both political and technical level, to enhance knowledge exchange among stakeholders in DRR and climate change, and to inform national policy through preparation of joint (regional and sub-regional) strategies. UNICEF has developed sub-regional strategies addressing DRR for Latin America and Caribbean, Eastern Europe and Central Asia, and ADPC is active in the development and supporting implementation of regional programs on DRR management, specifically, ASEAN and SAARC. Three MS (Sweden, Finland and France) and an INGO (VOICE) emphasized that it is essential to find good partners to work with at regional level. Indeed, because successful regional and sub-regional initiatives and organizations exist (like ENVSEC, CILSS), wherever possible EU+MS should work with existing inter-governmental and non-governmental regional networks/regional initiatives to avoid overlap and duplication.

Capacity building of regional organizations and institutions is seen as crucial to enhance regional cooperation. Strengthening awareness and knowledge of regional focal points to liaise with the public, Commission and national governments is seen by the ACP Secretariat as a main concern. Simultaneously, national capacities have to be strong enough for countries to participate in regional cooperation, because in the end actions have to be implemented at country level. Strengthening governance capacities for risk reduction can be established in collaboration with ISDR, by strengthening Regional Platforms for DRR.

In terms of interventions, the contrast at the regional scale is perhaps strongest between the Caribbean and sub-Saharan Africa. Regional interventions can be observed in most DRR aspects in the Caribbean, with assistance provided by multiple donors and a well-developed capacity. In Africa, regional need is identified but little concrete activity has been observed on the ground and capacity seems relatively constrained at present: there is, however, a strong opportunity to develop the potential here, especially through linkage of DRR with climate change adaptation, in terms of project and financing (see below).

Key points	link to Implementation Priority
<ul style="list-style-type: none"> <li>MS support to regional initiatives includes financial and/or technical assistance to inter-governmental bodies and non-governmental initiatives, policy coordination and targeted interventions</li> </ul>	A, B, D
<ul style="list-style-type: none"> <li>The Commission has assisted regions mainly through EDF and ECHO instruments, also GCCA and Civil Protection Mechanism</li> </ul>	B

<ul style="list-style-type: none"> <li>• Inclusion of DRR into RSPs is feasible, although progress has been limited to date</li> </ul>	B, C
<ul style="list-style-type: none"> <li>• Good partners are essential to work successfully at the regional level – strengthening and capacity building of regional organizations and initiatives is seen as crucial to enhance regional cooperation</li> </ul>	B
<ul style="list-style-type: none"> <li>• Caribbean is the region with a well-developed absorption capacity and assistance provided in most DRR aspects by multiple donors; Africa is the region with the identified need, relatively constrained capacity and little concrete activity observed</li> </ul>	B

### Climate change adaptation

Management of risks from climatic hazards is central to climate change adaptation. The EU Strategy stresses the need to link DRR efforts with those for adaptation, and this section focuses on existing integration between the two closely-related fields of concern. Box 2 provides some introductory notes on the linkages between DRR and adaptation and their convergence in policy and practice.

For the MS' development cooperation activities, linkages between DRR and climate change adaptation are made in multiple, diverse ways through dialogue, strategy papers, mainstreaming activities and targeted interventions including risk assessment, training and prevention. For example, integration of risk related to climate change is expected in all Sweden's country cooperation strategies and into standard project environmental impact assessments. In Germany, strategic studies and a resulting climate and development programme of action in 2007 established the systematic assessment of climate risks across projects, and, where necessary, the integration of disaster risk management activities within an adaptation framework.

Examples of integration in targeted investments by MS include support from the Czech Republic for drought risk management and climate change adaptation in Ethiopia, and the ViGiRisC project supported by France and other donors, which is piloting improvements in EWS and management of risks from multiple hazards related to climate change in several African countries. Indeed, the linkage with climate is likely to be made explicitly or implicitly in most projects and programmes that address hydro-meteorological hazards. For the UK, the presence of climate change advisors in several countries (some of whom have dual responsibility for climate change and DRR) is beginning to have an influence on the choice of cooperation countries for DRR; in turn, DRR often forms the starting point for climate change adaptation activity in developing countries.



**Box 2 Climate change and DRR**

The scope of problems addressed by climate change adaptation and by DRR are distinct, but strongly overlapping. Climate change has implications not only for the generation of certain hazards (via sea level rise and changes in the intensity and frequency of occurrence of extreme weather events) but also for the underlying vulnerability of populations exposed to hazards (through its systemic environmental and economic impacts and its direct impacts on people's resources and livelihoods). DRR must therefore take into account climate change projections if it is to reduce risks in the long term. In doing so, DRR will contribute to the process of adaptation. In turn, most adaptation actions that address long-term risk should contribute to the reduction of current risk. This is especially the case for hydro-meteorological hazards, the magnitude and/or frequency of which are likely to intensify in many locations that currently experience these hazards. Integration between the two is therefore crucial in efforts to prevent, mitigate and prepare for climatic risks.

But the linkage can also apply to wider forms of hazards, as the argument for a multi-hazard approach suggests. Well-planned action taken to strengthen risk management – whether activated under general DRR or under climate change adaptation – should bring benefits both now and in the future. Convergence between DRR and climate change adaptation can become almost inevitable when implementing initiatives at a community scale – at the scale of people and their livelihoods. An expert from the Global Network emphasized that, if problems are dealt with holistically at the local level, it makes sense for there to be coherence between DRR and adaptation, because the resilience of people to disaster risks and to climate change impacts is so closely interlinked: in such cases the problems are broadly equivalent and the solutions are commonly the same.

As noted in section 3, for some MS strategic action on climate change adaptation predates and/or is advancing faster than progress specifically on DRR, at least in terms of political commitment and funding availability. From our judgement, this list includes at least Belgium, Denmark, Germany, Greece, Sweden and the UK. Sweden, for example, has taken a leading role also in global dialogue on climate change, hosting two major international meetings with GFDRR and ISDR in 2007 and 2009, and establishing the international Commission on Climate Change and Development. Since 2005, Denmark has in place a climate and development action plan, is undertaking detailed climate screening of country programmes, and is developing a climate change assessment process for project proposal preparation (which will incorporate DRR). Belgium has established climate change as a key priority for development cooperation, while Greece has entered into agreements with WMO, African Union, CARICOM and the Indian Ocean Commission on climate

change programmes. For some smaller countries, however, the lack of technical expertise in climate change within development cooperation departments is seen as an initial limiting factor to integration.

In the Commission, as for MS, the linkages extend through dialogue, strategy papers, mainstreaming activities and (explicitly and implicitly) targeted activities. The relevant DGs generally emphasize the importance of interlinking climate change adaptation and DRR at strategic and operational levels. For example, SANCO's policy and international dialogue (e.g. with WHO, the World Animal Health Organization and the Food and Agriculture Organization) emphasizes linkages between climate change and health. SANCO additionally emphasizes that, in research for health security, closer collaboration is needed among MS and other actors worldwide in research programmes, especially as a result of new disease threats (emerging and re-emerging) related to climatic and demographic changes.

EU policy guidance on climate and development emphasizes linkages with DRR. The Commission communication 'Climate Change in the Context of Development Cooperation' refers to linkage with LRRD, disaster preparedness, as well as surveillance of vector-borne diseases. Climate change is the focus of the GCCA, which has explicit DRR components. It is also one of the challenges addressed in the ENRTP, and is currently a topic for potential funding listed within the Pacific and Western Africa RSPs. Some comments from MS and others suggest that there is a need for strengthening the mechanisms of coordination between the EU working groups on climate change and on DRR in development cooperation.

In international organizations active in DRR, a consistently high profile is given to climate change impacts and its implications for DRR, again in diverse activities at various scales. Climate change is prominent in the advocacy and interventions of many INGOs, the IFRC, GFDRR and the UN family (including ISDR, UNDP, UNEP, WFP, WMO, WHO and UNICEF). Linkages are being made at programme/project level, for example, via BCPR's climate risk management thematic technical area (with initial country-level demonstrations of climate risk analyses carried out already in Indonesia, Mozambique, Armenia and Ecuador) and via IFRC's community resilience approach, in which climate change adaptation at local level in developing countries is articulated mainly as a component of DRR.

Several comments from interviewees in the study pointed to the benefits that the DRR agenda can gain from linkage with the climate change agenda, both in terms of its political momentum and its potential funding streams. The WMO expert noted that long-term action on risk is increasingly being carried out under a climate change adaptation imperative, and that linking DRR and climate adaptation creates a very solid approach in a political sense. The Czech Republic expert sees the political interest and momentum for climate change adaptation as particularly important in

sub-Saharan Africa, as a critical vehicle for bringing round governments to engage in DRR. Finland emphasized that investment in EWS is a practical way of demonstrating the integration of adaptation and DRR.

It can be argued that funding being made available through MS governments for global action on climate change is likely to become the main vehicle for DRR assistance in many MS. Major potential funding for climate risk management is also emerging from various international sources. At the Copenhagen COP-15 summit in 2009, world leaders stated a commitment to provide billions of dollars in 'fast-start' finance for assistance on climate change adaptation and mitigation in developing countries. This may include bilateral funding as well as increased contributions to multilateral instruments such as the World Bank's Pilot Program for Climate Resilience and funds set up under the UN Framework Convention on Climate Change administered through the Global Environment Facility (the Adaptation Fund, the Special Climate Change Fund and the Least Developed Countries Fund). The EU has pledged a contribution to fast-start funding for 2010-2012, which will be used in part to fund enlargement of the GCCA.

Both the UNDP and ISDR interviewees argued that the funds becoming available for climate change adaptation require integration with DRR expertise if they are to be well spent, and UNICEF emphasized that climate-related initiatives should draw on DRR experience and should scale-up existing and effective DRR tools . There is a need to improve dialogue: to bring DRR and climate experts together to ensure they understand each other's approaches and capacities and work off each other's strengths. One mechanism for building trust and rapport is to engage both expert groups in a common technical initiative.

Key points	link to Implementation Priority
<ul style="list-style-type: none"> <li>Integration between DRR and climate change adaptation is advancing at strategic level and increasingly at operational level in the activities of international organizations, Commission services and MS that have established adaptation as a policy priority</li> </ul>	A, B, C, D
<ul style="list-style-type: none"> <li>In some smaller MS engagement with climate change may be constrained by perceived lack of technical expertise within development cooperation departments</li> </ul>	A, C
<ul style="list-style-type: none"> <li>Potential increases in funding for climate change adaptation represent a major opportunity to invest in long-term DRR, but the success of this depends on close integration of DRR expertise into adaptation planning and implementation.</li> </ul>	A, C, D

<ul style="list-style-type: none"> <li>• In terms of implementable actions on the ground, and especially at community level, adaptation to climatic risks converges strongly with DRR in terms of approaches, vulnerability assessments and practical solutions</li> </ul>	<p>D</p>
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**Gender-sensitive approaches**

The council conclusions on the EU Strategy underline the importance of a gender-sensitive approach to DRR. Gender is a significant component of differential vulnerability, because men and women tend to differ in their exposure and susceptibility to hazards. Empirical evidence has indicated that in many disaster cases, women bore a greater burden of disaster impact than their male counterparts. Gender dimensions also come into play in the management and response to disasters.

Galvanized by initiatives such as the Gender and Disaster Network, which has promoted recognition of gender issues in disasters at all scales, attention to gender is slowly but steadily rising within the international community. Its recognition is core in the work of the ISDR. In 2009, ISDR, UNDP and IUCN (International Union for the Conservation of Nature) published the document ‘Making Disaster Risk Reduction Gender-sensitive: Policy and Practical Guidance’. The BCPR has instituted an ‘Eight Point Agenda for Women's Empowerment and Gender Equality in Crisis Prevention and Recovery’, and 15% of funding through its trust fund for projects has to be focussed on gender – includes training of women, and community-level projects targeted to women’s groups. The IFRC also emphasizes gender dimensions in its policy advocacy and in its work on the ground, especially through vulnerability and capacity assessments and preparedness initiatives via women’s groups. WFP operates gender policies in relation to food security.

Gender dimensions are incorporated in at least some of the policy documents on DRR among the MS. However we found no evidence of systematic targeting of gender issues in terms of specific activities focussing on gender-sensitive approaches to risk reduction, though this may change in future. Finland, for example, has been active in gender in relation to climate change at strategic level, and will look to engage in targeted projects on gender issues. Other MS such as the UK maintain a policy commitment to gender mainstreaming in DRR, but look mainly to their INGO and Red Cross partners to implement gender and DRR activity on the ground, at community level.

Key points	link to Implementation Priority
<ul style="list-style-type: none"> <li>• Recognition of the gender dimensions of disasters is steadily gaining ground at policy level in EU+MS, as well as in many international organizations</li> </ul>	A
<ul style="list-style-type: none"> <li>• Progress in DRR implementation appears to be more limited, with no evidence yet of systematic investment by MS in specific gender-sensitive activities.</li> </ul>	D

**Community-scale/local participation**

The importance of local-scale action and community involvement is another dimension of DRR emphasized in the EU Strategy and by a wide range of other actors working on DRR and climate change adaptation. The ADPC, for example, recommends strengthening of community-based DRR through partnerships between local authorities, community organizations and external actors. In its Closing the Gap report, the Commission on Climate Change and Development underlined that local institutions have the knowledge base to understand best conditions of vulnerability in communities and the opportunities for building resilience. And, as noted by a Tearfund expert, the community scale may be particularly important for addressing extensive hazards through identifying where that risk is increasing and carrying out local level risk assessments and preventive action.

For the MS, action at the community scale commonly takes place via support for other organizations, including INGOs and the IFRC branches. These organizations typically work through local partners including community-based civil society partners. Within the Commission, ECHO is oriented toward work with vulnerable communities based on community participation and ownership. Its DIPECHO programme includes local awareness raising, community training and capacity-building, local EWS and emergency planning, implemented in many cases through IFRC branches and NGOs. Community-scale activity by IFRC and the NGO sector is seen as a critical contribution to overall DRR. The IFRC acts to empower communities to manage risks, take a long-term perspective and consider future climate change, often initially through undertaking participatory vulnerability and capacity assessments. The INGO networks approached for this study similarly emphasize a community-based approach, and argue that civil society increasingly provides the missing link between communities/local government and the development of national strategies.

One of the challenges to work at this level, raised both by some MS and by ECHO, is the issue of scaling up. The small scale of community projects arguably limits their

impact and better mechanisms are needed so that lessons and models can feed into national and regional governmental initiatives. According to the Global Network, because civil society cannot go to scale like government can, the ideal is then to have a responsive state that does provide an effective link with communities – that values community-based action and is ready to draw lessons from specific projects to support equivalent action elsewhere. This requires achieving a balance in development cooperation between top-down and bottom-up approaches. Most investment currently goes to the top-down level, but the building of community resilience is not well-served through a centralized process – it has to build on people’s perceptions and knowledge, and bring them into the planning process. One key way forward is to build partnership approaches with civil society organizations. From the experience of NGO networks, this rests first on processes of dialogue – which can be fostered through participatory monitoring and assessments of risks, followed by development of local action plans. These actions are not just instrumental but are also empowering processes in themselves (for example, through building consensus on local prioritization communities can develop the confidence and skills to engage more effectively in policy discussions at higher levels).

Several organizations approached in this study urge that implementation of the Strategy should ensure that the most vulnerable communities and those at the frontline of disasters are reached through community involvement and community-based approaches to disaster risk management. In some cases, this might require the EU to incentivize partner governments to facilitate community-based approaches and systematically engage with civil society at local scale.

Key points	link to Implementation Priority
<ul style="list-style-type: none"> <li>Widespread endorsement of the importance of fostering local-scale action and community participation in achieving DRR goals</li> </ul>	A, D
<ul style="list-style-type: none"> <li>Effective scaling up of localized achievements in DRR may require support and incentivization for forms of governance that are open to building on best-practice achieved through community-based initiatives</li> </ul>	A, D
<ul style="list-style-type: none"> <li>Building resilience at community level is served most effectively by bringing people as partners into the planning process through activities such as participatory risk assessment, monitoring and development of local action plans</li> </ul>	D

## 5. CONCLUSIONS

Drawing on the preceding discussions and on additional perspectives raised by interviewees, this section brings out key concluding points from the study and critical ideas for the way forward in DRR development cooperation. These in turn yielded a set of recommendations, which are tabulated in Appendix 1, and are designed to assist in development of an Implementation Plan for the EU Strategy for 2010-2013.

The EU Strategy is concerned with promoting DRR both in terms of strengthening policy at international, regional and national scales and in terms of strengthening targeted intervention ‘on the ground’. Activities in policy promotion and integration among EU actors are highly variable and best developed by MS that take a more pro-actively strategic approach to DRR. Contributions to policy dialogue by EU+MS are well developed at the international scale, but are less evident at national/regional scale. One mechanism to help advance the latter could be to reinforce existing national platforms on DRR and promote new platforms in countries where they are not yet established: these multiple stakeholder forums should have a role in policy dialogue at the earliest stage in government economic and development planning processes. Together with policy dialogue processes, another step that can be taken directly by MS and the Commission is to insist that DRR is a component within the process of preparing and reviewing country and regional funding strategies. Within the Commission activities, integration of DRR is beginning to be included in some CSP, although it is not yet driven systematically and most CSPs and RSPs do not yet address disaster risk.

It may be feasible to support targeted interventions that bring together governments departments and units to work on integrated themes and thereby help encourage governments to see the value of investing in DRR. In many contexts incorporation of support for DRR within large ‘mainstream’ sectoral projects may be the most effective vehicle for promoting and delivering DRR. The EU+MS could possibly foster an incentive-based approach to DRR in this sense, providing investment in programmes on the condition that they are DRR compliant, or providing matching funding for DRR elements in post-disaster reconstruction, as a means of bringing national budgets and aid flows behind DRR.

A contributory factor to improved policy dialogue and integration will also be an improved information base on DRR. Given its diffuse nature, development of methodologies for identifying and analyzing the full range of DRR activities in development cooperation and how they correlate with the physical and social distribution of risk could constitute a major contribution to the global toolkit for DRR arising from the EU Strategy. The World Bank and others are developing methods to

assess the cost-effectiveness of DRR in terms of damage avoidance, and such methods could perhaps be built into the Commission-supported work on post-disaster needs assessment (PDNA). Through Commission-managed funding there is also an opportunity to enhance the global research base on DRR, in terms of identification of research gaps for FP7 funding and creation of mechanisms for rapid-responsive research funding in post-disaster situations: liaison with RTD can facilitate both.

The findings of the study suggest that, although action is needed on all fronts, DRR interventions need strengthening most clearly in terms of prevention and mitigation, which are arguably the core aspects of DRR that set it apart from the more short-term concerns of traditional disaster management. As well as efforts to reduce human exposure to hazards and mitigate the impacts, DRR intervention should look also to the possibility of influencing underlying risk factors that help to generate social vulnerability, for example by linking with projects on development issues such as land tenure. There is an argument too for greater inclusion of sectors that have tended to be poorly linked with disaster management such as health, schooling/education and water and sanitation, all of which can provide a fundamental contribution to overall DRR.

Given the institutional architecture of DRR within the EU and elsewhere, there is likely to continue to be a focus on types of hazards that are not well-addressed by other fields of intervention particularly hydro-meteorological and geophysical hazards. It should be ensured that this includes slow-onset hazards (especially droughts). Attention also needs to be paid to small-scale extensive hazards, which tend to be neglected by major donors, yet may have major cumulative effects on livelihoods and society and are likely to become more prevalent in many areas as a result of climatic change. Given the potential impacts of climate change, as well as its growing profile as a global concern, there is a powerful argument that DRR should integrate as fully as feasible with climate change dialogue, policy development, interventions and funding streams, though there is need to beware the climate change agenda crowding out attention to non-climatic hazards. Linkages with climate change adaptation are expressed in many of the recommendations arising from this study.

Gender is a further dimension that is emphasized in the EU Strategy, but one that appears to have received little direct attention to date in the activities of EU+MS. Gender aspects of DRR need to enter the policy dialogue as well as become targeted in awareness-raising, capacity-building and practical interventions at the local scale. The importance of supporting local-scale action and community involvement is also a dimension of DRR emphasized in the EU Strategy and by a wide range of actors. This is the scale at which the most hazards take effect and from which most response activity takes place. It is also the scale in which differential vulnerability becomes manifest, including gendered differences in exposure, susceptibility and adaptation



to risk. Better mechanisms are needed for lessons and models from community-based actions to be able to feed into national and regional governmental initiatives. One of the key means to achieve this can be through support to civil society organizations and support for collaborations between civil society and governments, and there is a need in the implementation strategy to clarify the working basis between MS, Commission services and the NGO sectors in terms of their contribution to DRR on the ground.

Nevertheless the issue of scale and replication of community-based activities remain. One approach, within the basket of DRR modalities, could be for the EU+MS to engage in major coordinated investment in integrated DRR programmes that seek to draw lessons from good practice at community levels and that also bring together sectors at national or sub-national scale. For coherence, this might focus on a large-scale sectoral-based initiative or global DRR campaign area but ensure that there is engagement across contributory sectors. Such a programme could potentially leverage major support from national governments and other donors.

Geographically, though high social vulnerability means that African countries are commonly priority recipients of EU+MS aid, qualitative judgement suggests that key gaps remain in DRR funding and DRR progress in much of the continent, with West Africa possibly in greatest need of assistance. Small islands developing states (SIDS) also combine high risk with little targeting to date of EU+MS funding – although some funding is likely to come available to low-lying states under climate change instruments. Other world regions, like the Caribbean region, are highly disaster-prone but (with the notable exception of Haiti) appear to be successfully developing disaster management capacities with external assistance, and therefore can be considered to have relatively high absorption capacity for funding. This may be a major contributory factor for funding decisions by donors.

Regional action plans on DRR are being recognized as potentially a key mechanism for promoting regional cooperation and collaboration. In different regions different partnerships already exist, some represent wider inter-governmental political and economic development initiatives, some are established as technical disaster management organizations; some are efficiently collaborating for the mutual benefit, some are facing challenges. This study was able just to briefly present the variety of opportunities and possibilities for partnering that exist at the regional and sub-regional level. Supporting regional organizations through targeted institutional and individual capacity building will complement advocacy and partnering efforts in developing regional action plans on DRR. Such action plans should be built on innovative approaches and solutions that best serve the regions as a whole, while not losing sight of the need to attend to the specific country contexts.

One key rationale of the EU Strategy is to coordinate EU+MS activity and this requires effective dialogue and communication among a wide range of actors. Many interviewees expressed a need for greater clarity on roles, responsibilities and accountabilities of Commission services in relation to DRR and climate change adaptation, and on the EU funding instruments that can be applied in those fields. Equally, among MS there needs to be a mechanism for greater sharing and exchanging of experience and lessons learned on DRR in development cooperation, especially from those MS that have taken a strong lead in promoting DRR and/or climate change adaptation. The Steering Group for the EU Strategy can play a key role in this respect. The group should also operate in close dialogue with equivalent groups set up to support EU policies on climate change, food security and humanitarian action.

Following the perspectives of many of the interviewees for the study, it is hoped that implementation of the EU Strategy will help to build a common, long-term vision for DRR across the EU. The vision needs to be built on realistic but ambitious objectives, for the EU Strategy potentially presents an opportunity to address some of the key constraints in global progress on DRR to date.

## APPENDIX 1: Recommendations for the Implementation Plan of the EU Strategy on DRR in Developing Countries

In accordance with the EU Strategy, the following recommendations of this study were grouped in relation to the four ‘implementation priorities’ stated in the Council Conclusions. (These in turn can be seen to link with, or across, the seven ‘areas of intervention’ also noted in the Council Conclusions and discussed under section 3 of this report).

### Implementation priority A - Dialogue on DRR

*links with the intervention area ‘a’ (promoting DRR in policy)*

DRR remains an approach that is still only emerging on to the policy agendas of most countries, including many of the EU member states. One of the key roles of the EU Strategy can be to promote widespread recognition of the potential for DRR and the translation of that recognition into policy frameworks, in close integration with policies for climate change adaptation.

key findings	recommendations for action
DRR still has low profile in the policy agendas of most countries, and DRR and climate change adaptation need to be integrated more effectively into development planning. Gender aspects of DRR also need to enter the policy dialogue.	Strengthen national and regional level DRR policy through promoting new and more effective national DRR platforms, ensuring close policy integration with climate change, and systematically introducing gender aspects in policy dialogue.
Promotion of DRR should also be targeted at the local level. Higher-level dialogue should raise the potential for scaling up good practice achieved at community level and the importance of providing space within policy frameworks to enable this.	Strengthen conditions for action at local level and the potential for scaling-up by promoting local awareness of risk reduction approaches, and using national dialogue processes to build greater willingness in partner governments to value, work with and build on community-based achievements.
The responsibilities and actions of MS and Commission services in DRR and climate change adaptation should be better disseminated. Coordination	Promote coordination of DRR activity within the EU by clarifying roles of Commission services, creating and/or reinforcing mechanisms for sharing and

<p>should be strengthened. The role of the steering group should be clarified.</p>	<p>exchanging experience and lessons learned on DRR, and strengthening the functions and inputs to the steering group.</p>
<p>In order to better understand and evaluate current activities, there is a case for undertaking a detailed analysis of the distribution of funding for DRR to developing countries through MS and EU instruments.</p>	<p>Deepen the analysis of existing/planned EU+MS support for DRR by developing rigorous criteria and methodologies and undertaking subsequent analyses of funding flows in relation to national risk assessments.</p>
<p>Several MS and the Commission actively engage in high-level dialogue, but the EU does not present a common voice on DRR in international forums. The inputs of DRR experts and organizations into climate change forums and negotiations should also be strengthened</p>	<p>Strengthen EU dialogue at global level by providing a vehicle through which to present a coordinated EU perspective and input into international forums and negotiations on DRR and climate change (including Global Platforms on DRR and UNFCCC processes).</p>
<p>Research on hazards and DRR in developing countries needs strengthening. Critical lessons for DRR can be gained through research activities carried out post-disaster. Advances in measuring the potential cost-effectiveness of DRR could be applied following disasters to strengthen policy dialogue.</p>	<p>Promote the global research base on DRR and its effectiveness by actively communicating with funding organizations on research gaps, supporting responsive research activities, and drawing on cost-effectiveness methodologies in post-disaster contexts.</p>

## Implementation priority B - Regional actions plans on DRR

*links with all the intervention areas but especially 'c' (hazard information etc), 'd' (reduction of risk factors), 'e' (institutional support), 'f' (analytical tools) and 'g' (capacity-building)*

In order to develop regional action plans on DRR, DRR has to be understood, acknowledged and accepted, not only at the expert/technical level, which might already be the case, but strategically at the political decision-making level. We are suggesting focusing initial regional efforts on two regions as pilots: on **West Africa**, recognized as a region with greatest needs; and on the **Caribbean**, as a region with a greatest absorption capacity.

<b>key findings</b>	<b>recommendations for action</b>
As a building block for regional level action, there is a need to engage further in DRR policy promotion at the regional/sub-regional level, including within discussions on the overall political and economic development agendas.	Promote DRR as a priority at regional level by building awareness and knowledge on DRR among high-level political actors in the region; and enhancing policy advocacy on DRR by partnering with regional and sub-regional political and economic initiatives and organizations.
Action is needed to strengthen the institutional foundation for DRR and promote dialogue coordination among stakeholders active in the region.	Provide institutional support to authorities and stakeholders by promoting the strengthening and/or establishment of regional and sub-regional platforms for DRR, ensuring effective dialogue on DRR between countries and other DRR stakeholders, and undertaking capacity assessment of regional/sub-regional organizations and initiatives.
Good partnerships are essential in order to work successfully at the regional level – strengthening and capacity building of regional organizations and initiatives is seen as crucial to enhance regional cooperation.	Establish strategic partnerships by developing mechanisms for regular exchange of information with key donors/stakeholders active in DRR at the regional level, exploring opportunities for complementary action with key stakeholders, and assessing potential for joint investments to leverage political commitment at regional level.
Integration of DRR into EU+MS development cooperation plans and	Enhance the integration of DRR into policies and planning by using mid-term

<p>projects at the regional level is at an early stage (in most cases). Inclusion of DRR into RSPs is feasible, although not much has been achieved to date. Successful integration at regional scale rests on integration also at national scale.</p>	<p>RSP reviews to assess DRR integration, updating/adjusting RSPs by integrating DRR, and promoting inclusion of DRR assessments into national development practice within countries in the region.</p>
<p>Regional organizations vary in their technical capacity to engage in DRR and to absorb funds effectively. In some cases major support may be needed to build capacity for effective planning and implementation of regional action plans.</p>	<p>Embark on capacity building through improving the technical knowledge and policy awareness of staff in regional and sub/regional organizations and initiatives, undertaking targeted capacity building including learning-by-doing through regional demonstration projects, and disseminating best practices from demonstration projects.</p>
<p>Most experts interviewed underlined a need for continuing investment in risk assessment tools and EWS. It was suggested that application of technologies can help forge regional cooperation.</p>	<p>Assess and improve access to analytical tools in the region to identify and monitor disaster, and utilize the role technologies can play to forge greater regional cooperation.</p>

**Implementation priority C - Integration of DRR into the EU's external action**  
*links mainly with the intervention area 'b' (integration of DRR into policies and planning)*

EU+MS development cooperation presents a potentially powerful vehicle for promoting integration of DRR into policy and planning. At the outset, this requires integration within the structures for external action of MS and Commission services. Integration, or mainstreaming, at national level poses further challenges, but is crucial if significant strides are to be taken toward reducing risk in developing countries.

<b>key findings</b>	<b>recommendations for action</b>
Better integration is required within MS and within the Commission, across the development cooperation departments and services, in order to mainstream DRR and ensure that wider development activities do not increase risk.	Ensure DRR is integrated wherever relevant into EU+MS policy, planning and intervention through cross-departmental dialogue, procedures for project screening and impact assessment, and setting joint objectives for funding instruments for development, climate change, and humanitarian action.
Integration of DRR into wider development policies, plans and sectoral programs within developing countries is essential if wide-reaching and sustained progress is to be made in DRR.	Promote the mainstreaming of DRR in developing countries' wider policies and plans by integrating DRR within country-level donor strategies and CSPs, supporting cross-departmental projects, widening involvement in national platforms, and supporting DRR components in sectoral programmes.
In order to bring national budgets and aid flows behind DRR it may be possible to use an incentive-based approach in development aid and post-disaster assistance. National performance in integration can be monitored using mainstreaming indicators developed for DRR.	Consider use of indicators and incentives to encourage partners to achieve integration, including indicators of mainstreaming to monitor progress toward integration, incentives for DRR-compliance within wider development assistance, and matching grants for DRR following post-disaster assessments.
Integration is also needed at all levels across institutions and policies relating to different forms of hazard. It is logical to build synergies with the management	Promote a multiple hazards and cross-hazards approach to DRR, by building dialogue between different branches of hazard management within the

<p>of biological hazards, technological hazards, food emergencies and conflicts (there are likely to be benefits that can be drawn from a multiple risks approach).</p>	<p>Commission, MS and partner countries, and by implementing joint actions that address multiple hazards.</p>
<p>Technical knowledge capacity can act as a constraint to effective integration. Certain specialist capacities in areas such as vulnerability assessment and climate change adaptation may be needed to make DRR effective. Awareness-raising on DRR may also be targeted to high-level decision-makers may also</p>	<p>Invest in training and awareness-building on integration of DRR and climate change in development, among staff at headquarters level in MS and across the Commission services, in regional and country offices and in partner governments. There may also be strategic value in building awareness and knowledge among high-ranking government officials and MS diplomatic staff.</p>



## **Implementation priority D - Coordination of EU support for key DRR investments**

*Links with all the intervention areas but especially 'c' (hazard information etc), 'd' (reduction of risk factors), 'e' (institutional support), 'f' (analytical tools) and 'g' (capacity-building)*

The EU Strategy seeks to identify and foster key areas for investment on the ground, particularly in terms of risk assessment, reduction of vulnerability factors, early warning and emergency planning, sustainable recovery and capacity-building for disaster risk management. Though continuing progress is required in all aspects of DRR, especially within developing countries, the series of recommendations here highlight key needs and gaps identified in the study,

<b>key findings</b>	<b>recommendations for action</b>
The importance of improving systems was underlined by most interviewees in the study. Though hazard assessment, monitoring, forecasting and early warning are common areas of DRR intervention, the need remains to continue development and installation of data and information systems and mechanisms for forecasting and projections.	Support the development and utilization of information systems for hazard assessment and early warning, vulnerability assessment, and analysis of the dynamics of risk. Consider funding mechanisms for preparedness activities triggered by long-range forecasts.
Climate change adaptation and DRR overlap in critical areas. There may be greater opportunities to engage in DRR activities through the funding mechanisms coming available for climate change adaptation, and it is essential that DRR expertise is engaged in this process to bring vital lessons learned from DRR work.	Develop joint initiatives on climate change adaptation and DRR to strengthen the focus on prevention and mitigation of risk, using joint expertise. Identify key opportunities for demonstration projects that combine DRR, adaptation and development objectives, and foster the dissemination of best practice.
The opportunity to bring preventive and mitigative aspects of DRR into post-disaster phases may be under-utilized in many contexts, in part because of limited institutional capacity for recovery planning but also because of the disjuncture commonly found between instruments for humanitarian assistance and DRR instruments	Promote DRR in recovery activities through capacity-building, facilitating LRRD via the 10% commitment to DRR in humanitarian aid, and engaging Commission development services at an early recovery stage in ECHO activities to ensure that short-term objectives lead to long-term goals.

following development funding modalities.	
Disaster management attention tends to focus more on large-scale events than on localized, but often highly frequent, small-scale hazards, the development implications of which can be severe.	Increase attention to small-scale disasters and ‘extensive’ risk by fostering greater understanding of extensive risk among EU+MS actors and partner countries, together with funding of risk assessment studies at national and local scales leading to DRR measures in identified ‘mini-hotspots’.
In hazard-prone areas, there is enormous scope for awareness and capacity-building in local authorities and communities, and for community-scale or community-based action to reduce risk. Participatory projects can also serve to build trust and capacity at community level to engage in policy dialogue with government.	Enhance DRR practices at sub-national level by supporting activities that build capacity within communities to identify and act on disaster risk, fostering gender-sensitive DRR at community level, and strengthening working relationships between EU+MS actors and civil society organizations.
Large-scale projects have the potential for leverage of funding and political commitment to DRR. But, given the cross-cutting nature of DRR and the importance of local scale action, donors should be cautious of major investment in programmes that are narrowly sectoral or that are heavily top-down in approach.	Support large-scale integrated intervention programmes that bring together vertical and horizontal aspects of DRR: that build on good practice at local level and that are inter-sectoral in approach. Potentially focus on a major sectoral-based initiative, but ensure that the programme is inter-sectoral in its engagement.

## **APPENDIX 2: List of Abbreviations**

AADMER - The ASEAN Agreement on Disaster Management and Emergency Response

ACP – Africa, Caribbean and Pacific States

ADPC - Asian Disaster Preparedness Centre

AECID – La Agencia Española de Cooperación Internacional para el Desarrollo – Spanish International Development Cooperation Agency

AIDCO – EuropeAid Co-operation Office

ASEAN - Association of Southeast Asian Nations

ASEM - Asia-Europe Meeting

AUC – African Union Commission

BCPR - Bureau of Crisis Prevention and Recovery (of UNDP)

BMZ – German Federal Ministry for Economic Cooperation and Development

BRGM - Bureau des Ressources Géologiques et Minières

CAPRADE - The Andean Committee for the Prevention and Attention of Disasters

CARICOM - Caribbean Community

CC – Climate Change

CCRIF – Caribbean Catastrophe Risk Insurance Facility

CDEMA - The Caribbean Disaster Emergency Management Agency

CEPREDENAC - The Center of Coordination for the Prevention of the Natural Disasters in Central America

CILSS - Comité inter-Etats de Lutte Contre la Sécheresse dans le Sahel

COM – EC Communication

COP 15 - The 15th Conference of the Parties to the UN Framework Convention on Climate Change

CSPs - Country Strategy Papers

DCI - Development Cooperation Instrument

DEWGA - The Disaster Environment Working Group for Asia

DFID – UK Department for International Development

DG(s) – Directorate(s)-General

DG CLIMA – Directorate-General for Climate Action

DG DEV – Directorate General for Development and Relations with African, Caribbean and Pacific States

DG ECHO – Directorate-General Humanitarian Aid & Civil Protection

DG ENV – Directorate-General for the Environment

DG RELEX – Directorate-General for External Relations

DG RTD – Directorate-General for Research

DG SANCO – Directorate General for Health and Consumer Affairs

DIPECHO – DG ECHO Disaster Preparedness Programme

DPPI - Disaster Preparedness and Prevention Initiative

DRR – Disaster Risk Reduction

EC – European Commission

EDF – European Development Fund

EIAs – Environmental Impact Assessments

EMOPS - UNICEF Office of Emergency Programmes

ENPI - European Neighborhood Partnership Instrument

ENRTP – EC Thematic Programme For Environment and Sustainable Management of Natural Resources including Energy

ENVSEC - Environment and Security Initiative

EU – European Union

EU FP7 - European Union's Seventh Framework Programme

EWS – Early Warning System

FSTP – EC Food Security Thematic Programme

GCCA - Global Climate Change Alliance

GDACS - Global Disaster Alert and Coordination System

GFDRR – Global Facility for Disaster Reduction and Recovery

GTZ – The Deutsche Gesellschaft für Technische Zusammenarbeit –German Federal Agency for International Development

HFA – Hyogo Framework for Action

IFRC – International Federation of Red Cross and Red Crescent Societies

INGOs – International Non-governmental Organizations

IPA – Instrument for Pre-Accession Assistance

ISDR - International Strategy for Disaster Reduction system

IUCN - International Union for the Conservation of Nature  
JRC – European Commission Joint Research Centre  
LAS - League of Arab States  
LRRD - Linking Relief, Rehabilitation and Development  
MEDISYS - DG SANCO Medical Intelligence System  
MERCOSUR - The Southern Common Market  
MS – Member States  
NGOs – Non-governmental Organizations  
OAS - Organization of American States  
OCHA – United Nations Office for the Coordination of Humanitarian Affairs  
OCTs - Overseas Countries and Territories  
ODA – Official Development Assistance  
OECD/DAC – The Organization for Economic Cooperation and Development  
/Development Assistance Committee  
OSS - Observatoire du Sahara et du Sahel  
PDNA - Post-Disaster Needs Assessment  
PIRAC - Plateforme d'Intervention Régionale Amérique Caraïbes  
PPRD - The Prevention, Preparedness and Response to Natural and Man-made  
Disasters Programme  
PRSPs - Poverty Reduction Strategy Papers  
RSPs – Regional Strategy Papers  
SAARC - South Asian Association for Regional Cooperation  
SADC - Southern African Development Community  
SICA - Special International Cooperation Actions  
SIDA – Swedish International Development Cooperation Agency  
SIDS - Small Islands Developing States  
SOPAC - The Pacific Islands Applied Geosciences Commission  
UN – United Nations  
UNDAF - UN Development Assistance Framework  
UNDP - United Nations Development Programme  
UNEP - United Nations Environment Programme  
UNFCCC - UN Framework Convention on Climate Change

UNICEF - United Nations Childrens' Fund

UNISDR – United Nations International Strategy for Disaster Reduction secretariat

VCA - Vulnerability and Capacity Assessment

ViGiRisC project - “Vigilance et Gestion Intégrée du Risque Climatique (VigiRisC Afrique)” - “African Early Warning and Advisory Climate Services (AEWACS Project)”

WFP - World Food Programme

WHO – World Health Organization

WMO – World Meteorological Organization