Introduction

Guidance Note 1

Tools for Mainstreaming Disaster Risk Reduction *is a series of 14 guidance notes for use by development organisations in adapting programming, project appraisal and evaluation tools to mainstream disaster risk reduction into their development work in hazard-prone countries. The series is also of relevance to stakeholders involved in climate change adaptation.*

This preliminary note outlines the rationale underlying the series, introduces the guidance notes and highlights critical factors contributing to the successful mainstreaming of disaster risk reduction into development policy and practice.

1. The case for mainstreaming

Since the late 1990s, there has been increasing recognition of the need to 'mainstream' disaster risk reduction into development – that is, to consider and address risks emanating from natural hazards in medium-term strategic frameworks and institutional structures, in country and sectoral strategies and policies and in the design of individual projects in hazard-prone countries. Mainstreaming requires analysis both of how potential hazard events could affect the performance of policies, programmes and projects and of the impact of those policies, programmes and projects, in turn, on vulnerability to natural hazards. This analysis should lead on to the adoption of related measures to reduce vulnerability, where necessary, treating risk reduction as an integral part of the development process rather than as an end in itself.

This shift in perspective from a previously widely entrenched view of disasters as unpredictable, unavoidable events to be dealt with by emergency specialists has, in part, reflected increasing understanding of disasters as unresolved problems of development. Development initiatives do not necessarily reduce vulnerability to natural hazards. Instead, they can unwittingly create new forms of vulnerability or exacerbate existing ones, sometimes with tragic consequences (Box 1). The rising importance attached to poverty reduction has been particularly instrumental in contributing to this enhanced understanding. Exposure to risk and income shocks, including those emanating from natural hazards, has been widely acknowledged as one of the fundamental dimensions of poverty. This acknowledgement has triggered considerable focus on the analysis of forms and underlying causes of vulnerability and related initiatives to strengthen resilience.

Box 1 Ignoring hazards hurts

- In the Vietnamese city of Hue, expansion of infrastructure, including bridges, railway lines and roads, has created a barrier across the valley within which the city is located. As a result, excess rainfall can no longer soak away quickly and problems of flooding have become more severe.[1] Similar problems have occurred in several villages in Gujarat, India, following the construction of a donor-funded highway.
- Following widespread devastation caused by Hurricane Hugo in 1989, a new aid-funded hospital was built at the foot of a volcano in the Caribbean island of Montserrat. This hospital was subsequently destroyed by pyroclastic flows after the volcano began eruptive activity again in mid-1995.[2]
- Following the devastating 2004 Indian Ocean tsunami, some housing in Aceh, Indonesia, was reconstructed in flood-prone areas, leaving families vulnerable to future hazard events.

1 IFRC. *World Disasters Report: Focus on recovery*. Geneva: International Federation of Red Cross and Red Crescent Societies, 2001.
2 Clay, E.J. et al. 'An Evaluation of HMG's Response to the Montserrat Volcanic Emergency'. 2 Vols. *Evaluation Report EV635*. London: Department for International Development (UK), 1999.

The rising interest in mainstreaming risk has also been fuelled by a gradual upward rise in reported disaster losses, primarily due to the increasing vulnerability to natural hazard events of economic and social assets and the well-being and livelihoods of populations. Between the 1950s and 1990s, the reported global cost of disasters increased 15-fold in real terms while numbers affected rose from 1.6 billion over the period 1984–1993 to almost 2.6 billion during the subsequent decade.[3] In more recent years, there has been a rapid succession of catastrophic events causing substantial human and economic losses, including the Indian Ocean tsunami in 2004 and Hurricanes Katrina and Rita in the United States of America and the South Asian earthquake centred on Kashmir in 2005. Although the largest absolute economic losses occur in developed countries, developing countries suffer far worse in relative terms. According to the World Bank, losses can be up to 20 times greater as a percentage of gross domestic product in developing countries than in industrialised nations, while over 95 per cent of all disaster-related deaths occur in developing countries.[4] Indeed, disasters are increasingly recognised as a potential threat to sustainable development, poverty reduction initiatives and the achievement of a number of the Millennium Development Goals.

'Win-win' solutions for securing sustainable development, reducing poverty and strengthening hazard resilience, therefore, need to be explicitly and actively sought, particularly as climate change looks set to increase the incidence of droughts and floods and the intensity of windstorms.[5] Such solutions are best derived by integrating disaster risk reduction strategies and measures within the overall development framework, viewing disaster risk reduction as an integral component of the development process rather than as an end in its own right. As a recent World Bank report stated, "…it would be well to remember that there is no period when disaster risks can be safely ignored or set aside, specially for the subgroup of countries that is highly vulnerable to disasters".[6] Instead, hazard-related issues need to be considered in national and sectoral development planning, country programming and in the design of all development projects in hazard-prone countries, seeking both to protect the development investments themselves against natural hazards and to strengthen the hazard resilience of the communities they serve. Hazard-proofing individual structures may not even cost much.[7] Although figures vary, the United States Federal Emergency Management Agency,[8] for instance, estimates that mitigation measures increase construction costs for new facilities by as little as 1 to 5 per cent while potential returns may be considerably higher (Box 2). As such, due consideration of disaster risks may represent an important aspect of international efforts to enhance aid effectiveness.

Box 2 Disaster risk reduction pays

- A Vietnam Red Cross mangrove planting programme implemented in eight provinces in Vietnam to provide protection to coastal inhabitants from typhoons and storms cost an average US$ 0.13 million a year over the period 1994 to 2001, but reduced the annual cost of dyke maintenance by US$ 7.1m. The programme also helped save lives, protect livelihoods and generate livelihood opportunities.[9]
- Spending 1 per cent of a structure's value on vulnerability reduction measures can reduce probable maximum loss from hurricanes by around a third in the Caribbean, according to regional civil engineering experts.[10]
- One dollar spent by FEMA on hazard mitigation generates an estimated US$ 4 on average in future benefits according to a study of FEMA grants (including for retrofitting, structural mitigation projects, public awareness and education and building codes).[11]
- Only two schools were left standing in Grenada after the passage of Hurricane Ivan (September 2004). Both had been subject to retrofit through a World Bank initiative. One of the schools was used to house displaced persons after the event.[12]

3 World Bank (2006).
4 http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTURBANDEVELOPMENT/EXTDISMGMT/0,,menuPK:341021~pagePK:149018~piPK:149093~theSitePK:341015,00.html
5 The 2006 Stern Review similarly argues in relation to climate change that adaptation, including efforts to enhance hazard resilience, should be mainstreamed into development and specifically states that "the key to successful DRR [disaster risk reduction] is ensuring it is integrated into development and humanitarian policy and planning" (HM Treasury and Cabinet Office (2006) p. 566).
6 World Bank (2006) p. 67.
7 See, for instance, FEMA. *Protecting Business Operations: Second Report on Costs and Benefits of Natural Hazard Mitigation*. Washington, DC: Federal Emergency Management Agency, 1998; IACNDR. *Inter-American Strategic Plan for Policy on Vulnerability Reduction, Risk Management and Disaster Response.* OEA/Ser G.Permanent Council Document 3737/03. Inter-American Committee for Natural Disaster Reduction, 2003.
8 See footnote 7 (FEMA,1998).
9 IFRC. *World Disasters Report: Focus on reducing risk*. Geneva: International Federation of Red Cross and Red Crescent Societies, 2002.
10 World Bank. *Managing Catastrophic Risks Using Alternative Risk Financing and Insurance Pooling Mechanisms*. Discussion draft. Washington, DC: World Bank, Finance, Private Sector and Infrastructure Department, Caribbean Country Management Unit, Latin America and Caribbean Region, 2000.
11 MMC/NIBS. *Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities.* Washington, DC: Multihazard Mitigation Council of the National Institute of Building Sciences, 2005.
12 World Bank. *Grenada, Hurricane Ivan: Preliminary Assessment of Damages, September 17, 2004.* Washington, DC: World Bank, 2004. Available at: http://siteresources.worldbank.org/INTDISMGMT/Resources/grenada_assessment.pdf

- Between 27 August and 18 September 1995, Hurricanes Luis and Marilyn damaged 876 housing units in Dominica, causing a total loss of US$ 4.2 million. The small wooden houses that were destroyed did not comply with local building codes. But all the buildings that had been retrofitted via simple modifications to local construction techniques under the Caribbean Disaster Mitigation Project's Safer Construction Program funded by the United States Agency for International Development (USAID) successfully withstood the hurricanes.[13]

Increasing appreciation of the need to mainstream disaster risk reduction into development was formalised in January 2005 when the Hyogo Framework for Action 2005–2015 was adopted by the World Conference on Disaster Reduction with 168 nation and multilateral institution signatories. The Hyogo Framework is centred around three principal strategic goals, the first of which is "the more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction".[14]

Progress to date: Policy and institutional change

Against this backdrop, a number of development organisations have begun efforts to mainstream disaster risk reduction into their work, undertaking various related institutional, policy and procedural changes. In terms of institutional changes, for instance, following the 1997–1998 United Nations (UN) reform process, responsibility for 'natural' disaster mitigation, preparedness and prevention within the UN system was transferred from the Office for the Coordination of Humanitarian Affairs, whose work primarily involves post-disaster response, to the United Nations Development Programme (UNDP), the UN's development agency. In 1998 the World Bank established a Disaster Management Facility (now renamed the Hazard Risk Management team) to improve its disaster prevention and mitigation practices and emergency response. The Hazard Risk Management team's mandate is to provide a more strategic and rapid response to disasters and to promote the integration of disaster prevention and mitigation efforts into the World Bank's development activities. Both the Inter-American Development Bank (IDB) and the Asian Development Bank (ADB) have established new disaster management focal points, in part tasked with supporting the mainstreaming of disaster risk reduction into their respective organisations' development programmes.

As regards policy changes, ADB and the United Kingdom's Department for International Development (DFID) have both approved substantially revised disaster policies over the past few years, with IDB also expected to approve a new Disaster Risk Management Policy in the first part of 2007. The new ADB policy, approved in 2004, "shifts the emphasis from only responding after disaster strikes to also supporting activities that anticipate and mitigate the likely impact of disasters that might occur".[15] Underlying principles include "mainstreaming disaster risk management as an integral part of the development process".[16] DFID's new disaster risk reduction policy, published in March 2006, has three basic objectives, the first of which is to "integrate risk reduction better into development and humanitarian policy and planning … [including] better integration into DFID's own programming as a regular part of country-office approaches to sustainable development in areas most affected by disaster risk".[17] IDB's new draft Disaster Risk Management Policy has two interrelated objectives, the first of which is "to strengthen the Bank's effectiveness in supporting its borrowers to systematically manage risks related to natural hazards by identifying these risks, reducing vulnerability and by preventing and mitigating related disasters before they occur".[18] The World Bank is similarly revising its operational policy on emergency recovery assistance (which also covers prevention and mitigation), in part to support the integration of disaster risk reduction principles into its development operations. A recent World Bank evaluation has also recommended the development of a strategy or action plan for assistance related to disasters which, as well as supporting improved emergency response operations, should "make provisions to give more attention to natural hazards during the appraisal of investment projects generally, and specifically in the preparation of PRSPs [Poverty Reduction Strategy Papers], CASs [Country Assistance Strategies], and other strategic documents".[19] The Hazard Risk Management team is carrying this recommendation forward by targeting the CASs of highly vulnerable countries and providing assistance on mainstreaming disaster risk management into the documents.

13 CDMP. *Toolkit: A Manual for Implementation of the Hurricane-resistant Home Improvement Program in the Caribbean.* Caribbean Disaster Mitigation Project publication series. Washington, DC: Organization of American States, 1999. Available at: http://www.oas.org/cdmp/document/toolkit/toolkit.htm
14 UN/ISDR (2005) p. 3.
15 ADB (2004) p. 20.
16 Ibid. p. 20.
17 DFID (2006) p. 3.
18 IDB (2006) p. 2.
19 World Bank (2006) p. 73.

Other bilateral donors currently engaged in mainstreaming disaster risk reduction concerns into their development policies and programmes include the Canadian International Development Agency (CIDA), the Danish International Development Agency (DANIDA), the European Commission (EC), Germany's Gesellschaft für Technische Zusammenarbeit (GTZ), the Norwegian Ministry of Foreign Affairs, the Swedish International Development Cooperation Agency (Sida) and the Swiss Agency for Development and Cooperation (SDC). Some non-governmental organisations (NGOs) are undertaking a similar process including, for instance, ActionAid, CARE, Christian Aid, Plan International, Practical Action and Tearfund.

Governments have also committed to various mandates to integrate disaster risk reduction into development. For instance, the Inter-American Committee for Natural Disaster Reduction (IACNDR)[20] reports that, as of 2003, member states of the Organization of American States (OAS) had taken on collectively, as regional groups or individually, over 30 acquired commitments, many of which incorporate this approach. Many governments were also signatories to the 2005 Hyogo Framework of Action. Development organisations are supporting governments in this mainstreaming process. For instance, the African Union (AU)/New Partnership for Africa's Development (NEPAD), African Development Bank (AfDB) and the United Nations International Strategy for Disaster Reduction (UN/ISDR) Africa have been working together since the beginning of 2003 to seek ways to provide strategic guidance and direction to policy-makers in the region in mainstreaming disaster risk reduction into development.[21]

Turning policy into practice

Much of the progress to date on the mainstreaming of disaster risk reduction into development relates to policy and institutional changes. The next crucial step is to alter development practice in hazard-prone countries. Various initiatives are under way in support of this process, including:

- *Development and application of operational guidelines.* Some work has been initiated on the development of operational guidelines and related tools to support the mainstreaming of risk into country programming and project design:
  - The Caribbean Development Bank and the Caribbean Community (CARICOM) have developed a sourcebook on the integration of natural hazards into environmental impact assessment (**see Guidance Note 7**).
  - IDB has developed an overview risk management checklist to support analysis and assessment of natural hazards and related risks in its lending programmes (**see Guidance Note 5**, Box 2).
  - As part of its Global Disaster Reduction Mainstreaming Initiative (see below), UNDP, in collaboration with UN/ISDR, has produced guidance on the integration of disaster risk reduction into the UN system's country programming tools, the Common Country Assessment (CCA) and the United Nations Development Assistance Framework (UNDAF) (**see Guidance Note 4**, Box 4).
- *Development and application of disaster risk indicators*. Increasing recognition of the importance of mainstreaming disaster risk reduction within broader development has spawned a number of initiatives to develop indicators of national and sub-national risk, including by the World Bank/ProVention, UNDP, IDB and the EC (**see Guidance Note 4**, Box 2). Such indicators are intended to allow development practitioners to judge the relative importance of disaster risk in decisions on country programming and project design and respond accordingly. For instance, drawing on the World Bank/ProVention 'Hotspots' study, the World Bank website now includes an interactive map-based tool which identifies geographic areas of highest relative disaster risk potential, supporting Bank staff and others in determining where to prioritise disaster risk reduction investments and better informing development efforts.[22] Disaster risk reduction indicators also provide a quantification of risk for use in monitoring and evaluating programme performance.
- *Development and delivery of training materials*. Various development organisations, including DFID, IDB and the World Bank, are currently preparing training materials on the mainstreaming of disaster risk reduction into development.
- *Support to governments.* Development organisations are actively supporting governments in mainstreaming disaster risk reduction into their own policies, strategies and operations. For instance, in September 2006 the World Bank and UN/ISDR launched a major new initiative, the Global Facility for Disaster Reduction and Recovery (GFDRR), which will provide technical assistance grants to vulnerable countries in support of national capacity-building efforts for disaster reduction and global and regional partnerships in support of national programmes. UNDP is also

20 See footnote 7 (IACNDR, 2003).
21 African Union (2004).
22 See http://geohotspots.worldbank.org/hotspot/hotspots/disaster.jsp

implementing a Global Disaster Reduction Mainstreaming Initiative aimed at integrating disaster risk reduction into UNDP's work planning and processes and those of its development partners, with a particular focus at the country level.

A ProVention project on Tools for Mainstreaming Disaster Risk Reduction has contributed to this process, extending the work being undertaken on the development and application of operational guidelines to develop a series of guidance notes for use by development organisations on the incorporation of disaster risk analysis into tools of country programming, project appraisal and evaluation. This guidance note is part of this ProVention series.

ProVention's Tools for Mainstreaming Disaster Risk Reduction project

The ProVention guidance note series is based on a set of principles relating to the nature of vulnerability to natural hazards and the findings of a preliminary detailed review, undertaken as part of the ProVention project, of standard tools used by development organisations in designing and evaluating projects:[23]

- Vulnerability to natural hazards is complex and multi-faceted, requiring analysis and solutions from environmental, economic, social, institutional and technical perspectives and thus related tools to accomplish this.
- Existing programming, appraisal and evaluation tools and guidelines often cover risk in the broadest sense (relating to operational risk, financial risk, political risk and so forth) but typically contain few specific references to hazard-related issues.
- In consequence, natural hazards and related vulnerability are rarely considered in designing and appraising development projects, other than dedicated risk reduction projects, even in high-risk areas.
- Many of the existing programming, appraisal and evaluation tools could easily be extended to indicate countries, sectors and individual potential projects at risk from natural hazards, generate detailed information on the nature and level of risk and help ensure that appropriate risk reduction measures are taken.
- Collectively these tools would allow project and programme planners to explore hazard-related issues from a wide range of perspectives and areas of expertise, in keeping with the multi-faceted nature of vulnerability.
- There is nothing intrinsically difficult about either appraising disaster risks or designing and evaluating risk reduction measures if these tasks are approached thoughtfully and knowledgeably and are adequately resourced.

A series of 14 guidance notes (including this one) was therefore developed for use by development organisations in adapting programming, project appraisal and evaluation tools and guidelines to support the mainstreaming of disaster risk reduction into development. The guidelines are deliberately intended as short, practical briefs supplementing existing guidelines on programming, appraisal and evaluation tools, rather than providing full, comprehensive guidance on all aspects of each tool. They focus specifically on where and how to take hazard-related concerns into account in each of the tools covered, ensuring that disaster risk and related opportunities for reducing vulnerability are adequately and systematically considered in hazard-prone countries.

The guidance notes are directed primarily at development organisations, as already indicated. The scope, level of detail and emphasis of country programming and project appraisal and evaluation practices obviously vary between different organisations depending on their area of specialism, developmental approach and the scale of assistance provided. The ProVention guidance notes are not tailored to any particular development organisation and may not dovetail exactly with individual procedures. However, they can be adjusted to fit accordingly.

The series is also of relevance to stakeholders involved in the mainstreaming of adaptation to climate change into development. As the Organisation for Economic Co-operation and Development (OECD) states, "[C]limate change adaptation needs to be brought into the mainstream of economic policies, development projects, and international aid efforts."[24] The ProVention guidance notes identify entry points in the planning and provision of development assistance for considering the impact of potential hazards on development and the impact, in turn, of development initiatives on vulnerability to natural hazards. These entry points are also of relevance in seeking to ensure that development is climate-friendly, leading to a reduction in greenhouse emissions, and that development is more resilient to the impacts of climate change.

23 Benson and Twigg (2004).
24 OECD (2006) p. 1. See also HM Treasury and Cabinet Office (2006).

2. The ProVention guidance note series

The purpose and scope of each guidance note in the ProVention series on Tools for Mainstreaming Disaster Risk Reduction is described below.

A broad schema indicating how the guidance notes fit together and collectively support the mainstreaming of disaster risk reduction concerns into individual development projects in hazard-prone countries is presented in Figure 1 (**see also Guidance Note 5**, Table 1).[25] Other key influences determining the quality of disaster risk management practice are also indicated, in acknowledgement of the fact that development projects are not designed and implemented in a vacuum. Such factors may similarly require some form of strengthening to help support improved disaster risk management (see Section 3).

Guidance Note 1: Introduction. This preliminary note outlines the rationale underlying the series, introduces the guidance notes and highlights critical factors contributing to the successful mainstreaming of disaster risk reduction into development policy and practice.

Guidance Note 2: Collecting and using information on natural hazards. The second guidance note focuses on the basic processes of acquiring and using hazard information. It forms a central pillar of the guidance note series, supporting development organisations in identifying the level of hazard exposure in a particular country or region and determining whether or not disaster risk mainstreaming is necessary. The guidance note covers key elements of natural hazards information, its place in the project planning/management cycle, tools for gathering information, providers of information and issues to be considered when collecting and analysing data. Owing to the diversity of natural hazards and the varying types of related information and data collection methods, the note is intended purely as an introduction to this topic.

Guidance Note 3: Poverty reduction strategies. As development organisations increasingly align their programmes of support with recipient country government policies and objectives, it is essential that mainstreaming begins with government policies and strategies themselves. This guidance note therefore covers the integration of hazard-related issues into the preparation of poverty reduction strategies (PRSs) – the primary development planning tool in many low-income countries – and other poverty reduction initiatives in hazard-prone countries. It is intended for use by national governments in preparing PRSs and by international development organisations in supporting governments in this process.

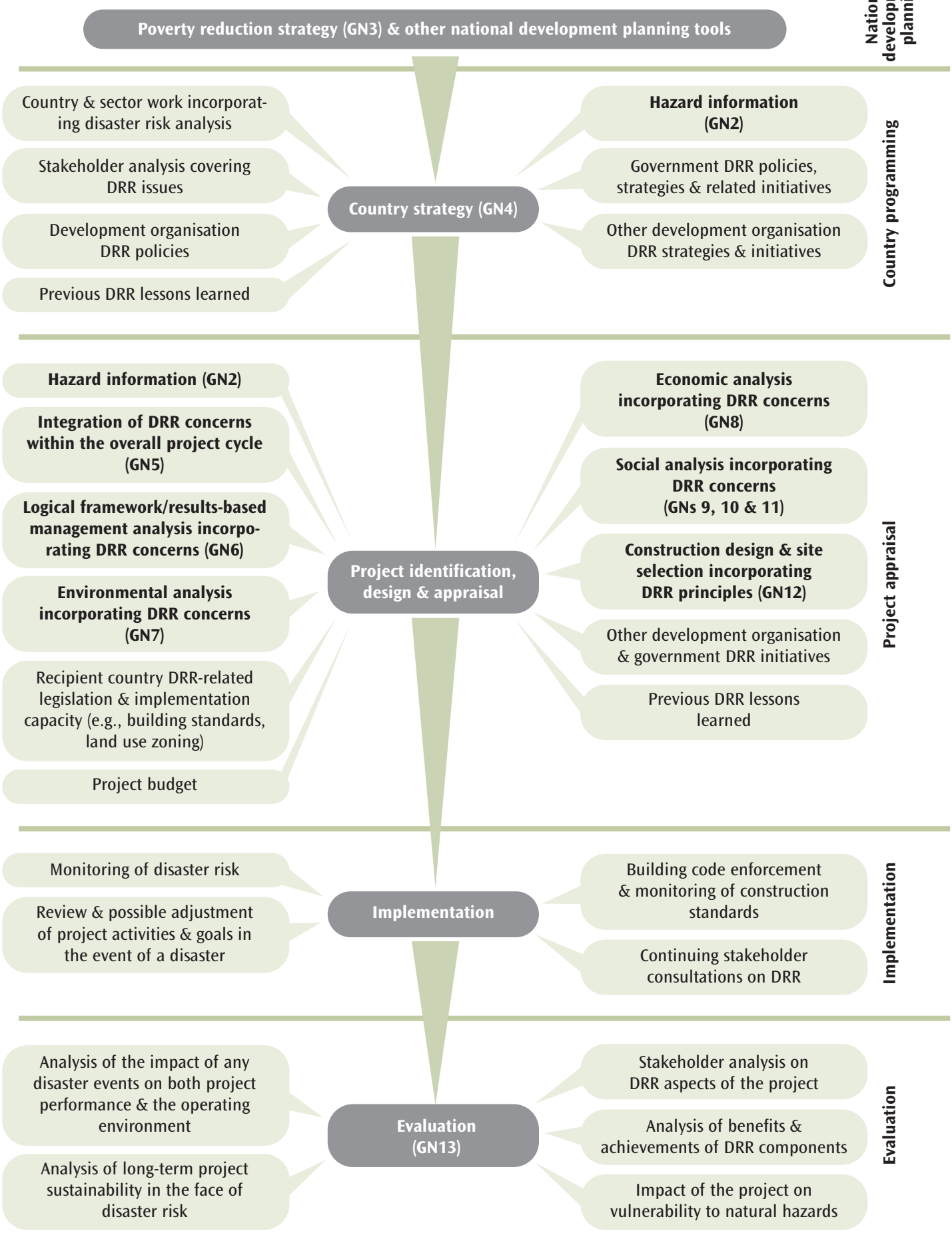
Guidance Note 4: Country programming. All international development organisations apply some form of country or regional programming framework through which problems, needs and interests are analysed, sectoral and thematic areas of focus identified and the broad level and composition of assistance outlined. This process provides an important opportunity to address disaster risk in a strategic and coordinated fashion, exploring the complex, cross-cutting and multi-faceted nature of vulnerability and identifying appropriate, proactive risk management solutions. The fourth guidance note in the series therefore addresses this topic, providing guidance on how to assess and address disaster risk within country programming in hazard-prone countries. It is intended as a basic, generic guide for use by all types of international development organisation, complementing existing country programming guidelines.

Guidance Note 5: Project cycle management. This guidance note shifts the focus of attention down to the level of individual projects, beginning by discussing some general questions about the integration of disaster risk management concerns within the project cycle as a whole, particularly in the planning phases. It explains the project cycle approach, provides overall guidance on mainstreaming within it and looks at available related tools. Such tools complement efforts to adapt specific individual appraisal tools commonly deployed within the project cycle to take hazard-related concerns into account. This guidance note is intended primarily for use by people working in development organisations on project design and management, but is also relevant for personnel of governments and private organisations.

Guidance Note 6: Logical and results-based frameworks. Logical framework and results-based management tools are widely used for overall project design and management purposes. This note provides guidance on the systematic consideration of hazard-related issues in the application of these tools to all projects in hazard-prone areas. It is intended for use by development organisation project preparation teams and implementing officers.

25 **Guidance Note 14** (Budget support) is not included in Figure 1 because the diagram focuses on the mainstreaming of disaster risk reduction into individual projects.

Figure 1 Mainstreaming disaster risk reduction (DRR) into development projects in hazard-prone countries



Guidance Note 7: Environmental assessment.[26] This guidance note focuses on environmental assessment, a key point in the design of a project to explore natural hazards and related risk. Natural hazards are themselves environmental phenomena, potentially damaging and disrupting projects, while the state of the environment, in turn, is a key factor determining vulnerability to natural hazards. The note therefore provides guidance in analysing the vulnerability consequences of potential projects via their impact on the environment and the potential threat to projects posed by natural hazards. The findings are intended to feed into other forms of appraisal and engineering design as relevant. This guidance note is intended primarily for use by development organisations but is also relevant for personnel of governments and private organisations involved in the design of individual projects.

Guidance Note 8: Economic analysis. Multilateral lending agencies routinely undertake some form of economic analysis as part of their project appraisal process. This guidance note outlines how to analyse disaster risk and related options for reducing vulnerability in hazard-prone countries from this perspective and to ensure that they are adequately and systematically examined where relevant. The guidance note is intended for use by development organisation economists, complementing their existing economic analysis guidelines. It is also of more widespread use in helping to support the development of a strong body of evidence on the net economic benefits of disaster risk reduction. The current paucity of such evidence has proved a major stumbling block in attracting interest and commitment to disaster risk reduction, as there is little sense of the likely economic returns to such investments.

Guidance Note 9: Vulnerability and capacity analysis. This guidance note is the first of three in the series relating to various tools for appraising projects from a social perspective as used by different development organisations. This first one covers vulnerability and capacity assessment and analysis (VCA), introducing basic approaches, explaining how VCA can be integrated into the project planning process and showing how natural hazards and disasters, in turn, can be factored into VCA. The issue of people's vulnerability and capacity in the context of natural hazards is very important in understanding their potential impact and making choices about development interventions. The guidance note focuses on the use of VCA in development projects, but the approach can also be used in disaster risk reduction and post-disaster recovery. It is aimed at staff from diverse disciplines.

Guidance Note 10: Sustainable livelihoods approaches. Sustainable livelihoods (SL) thinking and methods offer a second tool of social analysis for supporting the incorporation of natural hazards and associated disaster risk into development project planning. By giving prominence to vulnerability and external shocks as central to the ways in which livelihoods are shaped, SL approaches provide good opportunities for including hazard and disaster awareness in project planning. This guidance note briefly introduces SL thinking and explains its application to projects and programmes, with particular emphasis on its relevance to hazards and disasters. It reviews methods used in SL approaches to assess hazards, vulnerability and risk, and discusses other factors in applying SL to project cycle management.

Guidance Note 11: Social impact assessment. The third guidance note on social appraisal tools addresses social impact assessment (SIA). By providing an understanding of a community and its social processes, SIA facilitates the identification of the direct and indirect social consequences of disaster risk and the development of appropriate and effective mitigation mechanisms which harness community resources and recognise community reactions to events. The guidance note outlines the principal approaches and methods used in SIA and identifies entry points for introducing natural hazards and related risks. The note is intended for use by project planners and managers in multilateral and bilateral development agencies, national and local government departments, NGOs and private sector organisations. Users will include those managing or undertaking an SIA, supporting them in incorporating disaster risk into their social assessment. The guidance note can also be used by those undertaking disaster risk assessments to understand how techniques of SIA can assist the assessment and mitigation of disaster risk.

Guidance Note 12: Construction design, building standards and site selection. A considerable share of human and direct economic losses from natural hazard events occur as a direct result of damage to the built environment, in turn reflecting poor construction and sometimes inappropriate land use. This guidance note therefore focuses on construction design, building standards and site selection, and their role in risk reduction. The note provides general guidance for design professionals and development organisations concerning the construction of new infrastructure, the strengthening of existing infrastructure and post-disaster reconstruction in hazard-prone countries.

26 This guidance note was jointly prepared by the ProVention Consortium and the Caribbean Development Bank (CDB). Section 2 is based on CDB and CARICOM Secretariat (2004).

Guidance Note 13: Evaluating disaster risk reduction initiatives. This guidance note moves on from tools of project appraisal to address the evaluation of disaster risk reduction activities. This can be a challenging task because the success of disaster risk reduction is ultimately measured in terms of something – a disaster or a particular form or level of loss in the event of a disaster – that does *not* happen. The guidance note sets out the main steps in planning such evaluations, collecting and analysing data and using results, and discusses the main issues associated with these activities. The note is intended for programme managers and policy-makers in organisations of any kind that are involved in any form of disaster risk reduction activity, either free-standing or within wider development or post-disaster recovery initiatives. (See also Box 3.)

Box 3

The ProVention Disaster Risk Reduction Monitoring and Evaluation Sourcebook

The Tools for Mainstreaming Disaster Risk Reduction project has also included the development of a web-based *Disaster Risk Reduction Monitoring and Evaluation Sourcebook*. This sourcebook complements and extends Guidance Note 13 on monitoring and evaluation (M&E), providing many practical examples of M&E, as well as links to useful reference material online and a bibliography of off-line publications. The sourcebook provides background on the general purpose and approaches to M&E. It also looks specifically at why disaster risk reduction M&E is different from 'normal' M&E, including the neglect of M&E in many disaster risk reduction projects and the reverse logic in measuring disaster risk reduction impacts and benefits.

Specific topics covered by the sourcebook include:

- Definitions and terminology
- A typology of disaster risk reduction programmes and projects
- Resource availability and scope in M&E
- Approaches and methods specific to disaster risk reduction, including alternative approaches to measuring disaster risk reduction
- Selection of the measurement approach and indicators
- Qualitative and quantitative data collection methods
- Processing and analysing data
- Report writing and presentation of results
- Summaries of disaster risk reduction M&E case studies

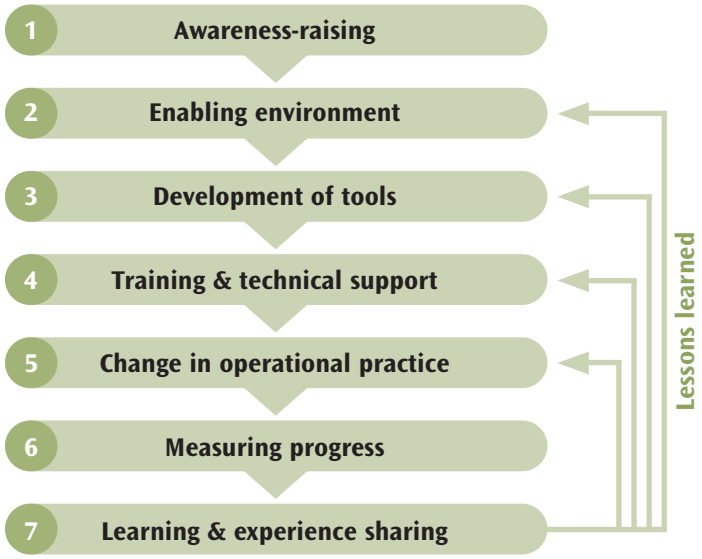
The sourcebook is located at http://www.proventionconsortium.org/M&E_sourcebook

Guidance Note 14: Budget support. The final guidance note addresses the topic of budget support. There is an ongoing shift away from project-based assistance towards general and sector budget support. This shift offers considerable potential for supporting governments in strengthening their counties' resilience to natural hazards. This note therefore provides guidance on how to ensure that disaster risk is adequately and systematically examined in developing programmes of budget support in hazard-prone countries and that governments are encouraged and supported in managing disaster risk appropriately and reducing vulnerability. It is intended for use by development organisation staff involved in the design, implementation and evaluation of budget support.

3. Critical factors for success

The development of practical guidelines on the integration of disaster risk concerns within development organisation country programming, project design and evaluation represents only one strand in a series of steps required to ensure successful mainstreaming in hazard-prone countries. As already indicated, certain other actions are already under way. These and further critical measures are elaborated upon below and summarised in Figure 2. They are presented as sequential steps in Figure 2 but, in practice, there may be considerable overlap between each stage.

Figure 2 Steps to successful mainstreaming



Step 1. Awareness-raising

- *Appreciation and understanding of the relevance of disaster risk reduction to sustainable development.* Increased awareness of the potential importance of examining and, if necessary, addressing disaster risk is critical, on the part of both governments and development organisations, in striving for sustainable development and poverty reduction.
- *Accountability*. Most fundamentally of all, development organisations and governments need to accept greater accountability for hazard-related human, physical and economic losses. Such losses pertain to countries and governments rather than development organisations. However, development organisations are accountable for ensuring that their resources are used effectively and responsibly. Governments, in turn, need to assume greater responsibility for their countries' and peoples' vulnerability and to actively seek to reduce risk.

Step 2. Enabling environment

- *Appropriate development organisation policies, strategies and institutional capacities.* Overarching development organisation policies and strategies need to pay due attention to disaster risk reduction, regarding it as a development issue rather than the responsibility of humanitarian departments. Revised policies and strategies need to be reflected in appropriate institutional arrangements.
- *Government prioritisation of disaster risk reduction*. As development organisation aims and objectives are increasingly aligned with national development and poverty reduction strategies, it is essential that governments themselves prioritise risk reduction as a critical development challenge in high-risk countries and develop related policies, capabilities and legislative and institutional arrangements. Development organisations need to explore incentives for encouraging governments in this process.

Step 3. Development of tools

- Programming, appraisal and evaluation tools are required to investigate countries, sectors and individual projects at risk from natural hazards, provide detailed information on the nature and level of risk and ensure that appropriate risk reduction measures are taken.

Step 4. Training and technical support

- Development organisations need to provide appropriate internal training and technical support to support the integration of disaster risk concerns into development.

Step 5. Change in operational practice

- *Early assessment.* It is essential that hazard-related issues are considered during the very early stages of country programming and project design so that they can be fully and systematically taken into account and appropriately addressed where relevant. Country strategies and related country environmental analyses (**see Guidance Note 4**) should indicate in which countries mainstreaming is required.
- *Adequate supporting information.* Sufficient information is necessary to permit a full and accurate assessment of disaster risk and its appropriate treatment. Countries may require support in strengthening their information base – for instance, in improving hazard data collection and analysis (**see Guidance Note 2**).
- *Cost minimisation*. Disaster risk analysis should be integrated into country programming and project design at minimum cost. Pooling of relevant information and related analysis within the development community and with governments would help achieve this.
- *Treatment of low-probability, high-impact risks*. Climatological hazards are most likely to be identified as potential risks, reflecting their shorter return periods and thus higher probability that they will occur over the life of a project or country strategy. In contrast, risks emanating from earthquakes and volcanic hazards, with much longer return periods, may be discounted. However, even if ignored from an economic perspective, it is important to ensure that earthquake and volcanic risks are adequately considered from a safety perspective, taking rights to safety and protection into account.
- *Transparent, inclusive and accountable consultation.* The consultative process must give a voice to poor and marginalised groups, who are often among the most vulnerable to natural hazards, and ensure that their interests are adequately addressed and their rights protected.
- *Adequate upkeep and maintenance of development investments.* Mechanisms for ensuring that development investments are adequately maintained and remain in good condition are essential in ensuring that their designed level of hazard resilience is maintained.

Step 6. Measuring progress

- Internationally agreed targets for disaster reduction should be established or disaster risk reduction concerns explicitly incorporated within the Millennium Development Goals, providing a common focus for development organisations and governments against which progress in mainstreaming can be measured.

Step 7. Learning and experience sharing

- The development community, together with other stakeholders, should make a concerted effort to monitor, share and learn from its experience in mainstreaming disaster risk reduction into development.

Box 5 **Hazard and disaster terminology**

It is widely acknowledged within the disaster community that hazard and disaster terminology are used inconsistently across the sector, reflecting the involvement of practitioners and researchers from a wide range of disciplines. Key terms are used as follows for the purpose of this guidance note series:

A *natural hazard* is a geophysical, atmospheric or hydrological event (e.g., earthquake, landslide, tsunami, windstorm, wave or surge, flood or drought) that has the potential to cause harm or loss.

Vulnerability is the potential to suffer harm or loss, related to the capacity to anticipate a hazard, cope with it, resist it and recover from its impact. Both vulnerability and its antithesis, *resilience*, are determined by physical, environmental, social, economic, political, cultural and institutional factors.

A *disaster* is the occurrence of an extreme hazard event that impacts on vulnerable communities causing substantial damage, disruption and possible casualties, and leaving the affected communities unable to function normally without outside assistance.

Disaster risk is a function of the characteristics and frequency of hazards experienced in a specified location, the nature of the elements at risk, and their inherent degree of vulnerability or resilience.[26]

Mitigation is any structural (physical) or non-structural (e.g., land use planning, public education) measure undertaken to minimise the adverse impact of potential natural hazard events.

Preparedness is activities and measures taken before hazard events occur to forecast and warn against them, evacuate people and property when they threaten and ensure effective response (e.g., stockpiling food supplies).

Relief, rehabilitation and *reconstruction* are any measures undertaken in the aftermath of a disaster to, respectively, save lives and address immediate humanitarian needs, restore normal activities and restore physical infrastructure and services.

Climate change is a statistically significant change in measurements of either the mean state or variability of the climate for a place or region over an extended period of time, either directly or indirectly due to the impact of human activity on the composition of the global atmosphere or due to natural variability.

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26 The term 'disaster risk' is used in place of the more accurate term 'hazard risk' in this series of guidance notes because 'disaster risk' is the term favoured by the disaster reduction community.

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The full guidance note series, together with a background scoping study by Charlotte Benson and John Twigg on *Measuring Mitigation: Methodologies for assessing natural hazard risks and the net benefits of mitigation*, is available at http://www.proventionconsortium.org/mainstreaming_tools

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