

A faint, light blue world map is visible in the background of the top half of the page. The map shows the outlines of continents and is centered on the Atlantic Ocean.

Chapter 7

Challenges for the future

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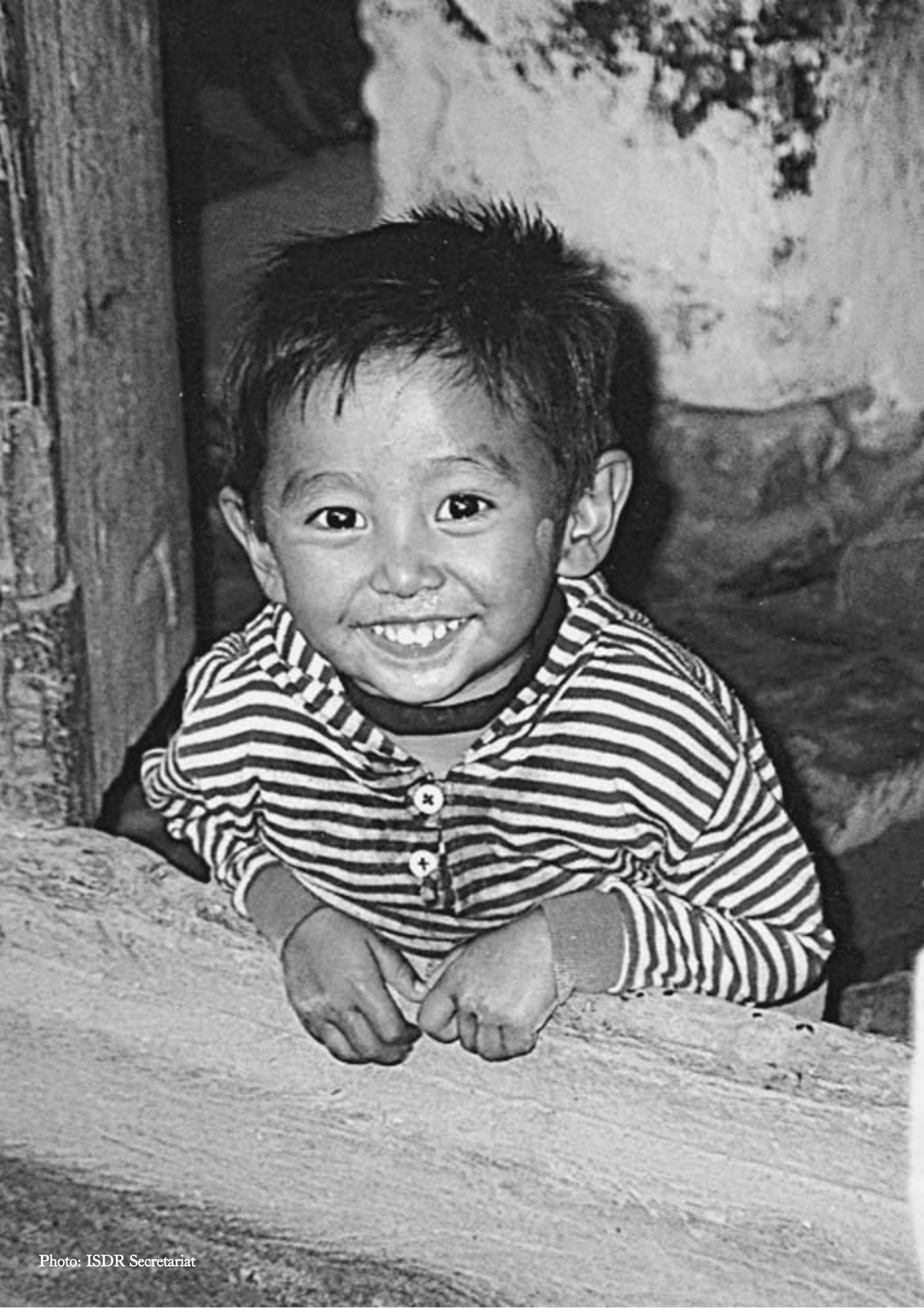


Photo: ISDR Secretariat

Challenges for the future

*IDNDR mid-review
in Yokohama*

*The mid-term review
of IDNDR, at the
World Conference on
Natural Disaster
Reduction in Yoko-
hama, May 1994,
revealed in its assess-
ment that “awareness
of the potential benefits
of disaster reduction is
still limited to spe-
cialised circles and has
yet not been successfully
communicated to all
sectors of society...” In
addition, it states that a
“number of positive
results have been
achieved...although
unevenly and not in the
concerted and systematic
way envisaged...”
These are challenges
still to be addressed.*

As recognized by the IDNDR Programme Forum in 1999, a great deal of learning and experience was gained by individuals, communities, governments and specialists from different fields during the Decade. Many national and local plans have benefited from progress made at all levels on employing new institutional and technical tools for improving disaster reduction practices. Particularly valuable advances occurred in the increasing use of risk assessments, specific methodologies and research initiatives, early warning systems, information, training, education and public awareness activities.

Nevertheless, no formal evaluation of achievements or systematic monitoring of progress was carried out. Therefore, the ISDR secretariat has embarked on developing a process for a continuous global review of disaster reduction initiatives. The aim is twofold: to gather and provide information on ongoing activities and the evolving “state of the art” of disaster risk reduction, and to initiate the development of a conceptual framework for monitoring progress made by governments, civil society and other relevant organizations.

This final chapter outlines some of the main conclusions and recommendations stemming from the research and consultation effort undertaken for this global review.

Only by showing evidence of the benefits of reducing the vulnerability to disasters can future investment and priorities in this area be sustained. The continuous work of local and grass roots organizations, governments, the scientific and technical community, international and regional organizations remains essential to unite efforts in a common process to ensure sustainable development. This is where the ISDR mechanisms should make a difference.

The process of reviewing disaster reduction initiatives is an essential function of the ISDR, which will be gradually enhanced. This initial work reflected in *Living with risk* will contribute to the process of the ten-year review of achievements and shortcomings in the implementation of the Yokohama Strategy and Plan of Action of 1994. This exercise, planned for 2003, is expected to be completed in 2004. It should also contribute to shaping the growing international agenda for disaster risk reduction.

This current issue of the global review is a preliminary version, intended for consultation and discussion. It is expected to spark an exchange of ideas and wider circulation of experiences among those interested in the subject – scholars, practitioners, policy-makers, leaders, managers and professionals concerned with the enormous losses in lives and assets caused by the lack of prevention and protection from disasters that slows development and renders it more difficult and expensive. The global review will be elaborated and refined further based on the comments received and additional experience disclosed by new developments.

Sum up – challenges ahead

Throughout this review it is often repeated that there is a need for disaster and risk reduction to be an essential part of broader sustainable development concerns. As discussed in chapter six, the international development targets set for the year 2015 in the Millennium Declaration cannot be reached unless the heavy toll of disasters in human and economic terms is reduced. That is because risk and vulnerability to natural, technological and ecological hazards are driven by social, economic and environmental activities. The subject has emerged as a new area of concern for governments in the preparatory process for the World Summit for Sustainable Development in August 2002.

It is important to remember that current development practices do not necessarily reduce communities' vulnerability to disasters. Ill-advised and misdirected development practices often increase the risk to disasters. The challenge of influencing and enhancing development plans, programmes and projects pursued by countries is still great.

The international community equally bears a responsibility to motivate, and indeed to support, policies and actions in developing countries that pursue structured and evident disaster risk reduction strategies. As long as the only message that national governments receive from the international development "community" in connection with disaster risks is the equivalent of, "please prepare a consolidated relief appeal when there is a crisis", and that the costs and associated responsibilities for poorly managed risks are transferred to the international community, there will remain slight incentive for the seriously disaster-prone developing countries to embrace significant, internal, commitments or responsibility for sustained disaster risk management practices.

In this respect there is a crucial role for international organizations and the collective interests of the United Nations system, in concert with the influential bilateral and multilateral development assistance agencies to support, rather than undermining national initiatives and local efforts to develop capacities for

Challenges for the Pacific islands – representative for many parts of the world

The following future challenges to incorporating a Comprehensive Hazard And Risk Management (known as CHARM in the Pacific) into national development planning were indicated in the regional ISDR review for the Pacific region, undertaken with SOPAC. These challenges are valid for most of the regions in the world and at a global scale and are therefore reproduced here.

Accomplishing a paradigm shift from managing disasters to managing risks: A big educational drive is needed to instil the distinctive concepts of hazards, vulnerability, risks and the value of managing risks. High-level advocacy and influential public champions are needed to promote risk reduction in their societies.

Producing more adequate hazard and vulnerability assessments and improve presentation: More work is needed to produce detailed hazards and vulnerability maps. Assessments should integrate community-derived perceptions and priorities about vulnerability and risk analysis.

Ensuring uniform and consistent approaches to a common problem: There are often several agencies delivering risk management services to countries within a given region. This results in over-taxing capacities of recipient countries and a potential confusion of purpose. In the Pacific specifically, a requirement would be agreed negotiations with major development partners to adopt a uniform approach and common standards to disaster risk management and consolidated support for its continued implementation.

Ensuring national integration and co-ordination: Agencies often create spheres of authority and accountability that result potentially in resistance or inflexibility. Formulating policy at 'whole-of-government' incorporating risk reduction programmes into national planning arrangements for sustainable development, enhancing information sharing, upgrading communications systems and training capabilities and providing adequate levels of resources can minimise such constraints.

Land use systems and tenure: Social relationships, land rights and local prerogatives are particularly complicated and varied across the Pacific region. Convincing, consistent and sustained public awareness and advocacy programmes have to be institutionalised in order to gain acceptable levels of understanding and commitment.

improved disaster risk reduction. The persistent extravagance too often displayed in emergency assistance following an "international" disaster, in contrast to the much smaller ongoing commitments to support local endeavours of disaster risk reduction, is nothing less. There is accordingly a serious need for international policy-makers to proceed beyond rhetorical resolutions and to invest in considered, and sustained, measures of disaster risk reduction. This can, and indeed should, be reflected by the incorporation of risk factors - starting with systematic risk assessments - in both emergency assistance grants and the more fundamental development assistance programmes underwritten by the international community.

This approach, needs to be coupled with the demanding task of accommodating the short-term and immediate needs of developing countries while still maintaining an appreciation of the value of medium and long-term objectives demanded by both disaster reduction and sustainable development. Too often these linkages have been either obscured, or ignored, in practice. These issues become glaring in those countries where "development" is a fundamental element of simple, basic survival for the majority of the population. To be effective, disaster risk reduction can only be integrated into all relevant sectors of national social and economic interest: health, education, environment, agriculture, transportation, infrastructure, communications, public administration, planning - even security. Responsible governance, in fact.

The challenges and priorities noted in the conclusions of previous chapters are not repeated here, but the overarching concerns for further strengthening include:

- **Increasing the widespread understanding of disaster risk.** This is a cross-cutting need related to all sectors. It includes a shift in approach towards the development of risk management as an essential tool for planning and managing development.
- **Bringing the ecological sphere into disaster risk reduction.** Disaster reduction has primarily focused on physical protection to hazards and the economic and social spheres of sustainable development. A challenge is to bring the ecological concerns and the considered management of natural resources more emphatically into disaster risk reduction. Environmental degradation and global change call for this.
- **Recognizing disaster risk reduction primarily as national and local responsibilities.** Increased evidence of national and local commitment is required, including institutional structures being in place. Cross-sectoral and policy cooperation is needed to build a culture of prevention linked to environmental and socio-economic activities.
- **Continuing efforts to decentralize risk management in practice.** Community participation and local decision making is essential to promote increased national public commitment.
- **Enhancing policy development and integration** to ensure that all relevant sectors include risk management as a basic tool under the overall perspective and goals of sustainable development.
- **Increasing education, information networking and research** on risk management, and developing tools to reduce gender and culture-sensitive risks, adapted to different geographical and cultural contexts.
- **Expanding partnerships** at all levels, including those among the private sector, academic institutions and NGOs working along with government. This should be emphasized as a main objective of national platforms to address disaster risk reduction in each country. For greater coherence and impact, these efforts need to be focussed and supported by methodological tools to establish links among initiatives, systematize and unify processes.
- **Development of specific methodologies** to reduce risk and vulnerability to disasters in such key areas as environmental management, land use planning, protection of critical facilities, financial tools and early warning. Take stock of existing tools and technologies and lessons-learned.
- **Measurement of progress.** The fundamental challenge is to achieve a reduction in fatalities and property loss from disasters in a growing number of communities and countries. In order to do this it is essential to show evidence that disaster risk reduction is being understood, measures are progressively being put into practice and targets or benchmarks and indicators are developed.

Measurement of progress – the benefits of reporting

Reduced losses from disasters, as well as reduced level of exposure to hazards, should become a more explicit development target in its own right, both nationally and globally, as recognised in the Millennium Development goals and through the ISDR.

At the outset of the task to conduct a global review of disaster reduction initiatives, the advisory panel for this review recommended that it should embark on the development of criteria to measure effectiveness of disaster risk reduction. These should ultimately reflect how lives and assets have been saved, as well as where countries stand in accomplishing the objectives of the ISDR.

A number of experts, scholars and agencies has called for the determination and application of specific disaster risk reduction baselines, targets and indicators. These could include commitment for integrating risk reduction into national planning and educational systems. These must necessarily vary taking account of each national context, hazard frequency and annual losses. Global targets could however aim at reducing the number of victims and economic losses by an agreed percentage over a specified period of time. Targets could be more specific for governments and local communities, reflecting local criteria and conditions or otherwise based on performance.

“Each country bears the primary responsibility for protecting its own people, infrastructure, and other national assets from the impact of natural disasters.”

Principle nine of the Yokohama Strategy and Plan of Action for a Safer World

This task is obviously a difficult and complex one. Scientific and technical approaches in the past have focused on indicators to suggest a hierarchy of accomplishment (number of risk assessments carried out, existence of databases, number of decrees or legal acts, research programmes, educational reforms, etc.). The quantitative measurement of the impact of individual disaster risk reduction initiatives or projects that typically span a relatively shorter time period, is difficult to achieve. If no disaster has occurred after the measure has been put in place it could be difficult to test the relative effectiveness of measures undertaken. One approach to

dealing with this dilemma would be to try and identify situations where a “before and after” scenario would apply.

Measuring the qualitative advancement is even more demanding as changes in perceptions, values, attitudes and behaviour are difficult to assess. However, these are the essential changes needed to move to a higher phase in the pursuit of sustainable development. Benchmarks and indicators for reducing disaster risk can also become valuable instruments to monitor other sustainable development requirements in fields such as education, community participation, local management and self reliance, sustainable livelihoods, environmental management, urban and rural or land-use planning, and gender balance.

Measuring the progress of disaster risk reduction in a country or region requires different frameworks at different time-scales. In the long term, disaster induced changes in the indicators of sustainable development, such as the Human Development Index, GDP, poverty reduction, improved environmental management practices can reflect, to a degree, the extent to which a community has become more resilient to disasters.

The ISDR secretariat is working with its partners to address these needs. With UNDP, in particular, it has initiated collaboration for the development of common criteria to identify and assess the impacts of disaster risk reduction. UNDP chairs the working group on vulnerability, risk and impact assessments of the Inter-Agency Task Force on Disaster Reduction, and is currently producing a Global Risk Vulnerability Index as part of the forthcoming World Vulnerability Report. Collaboration is also taking place with UN/DESA on sustainable development indicators and with a number of others such as the IFRC.

ISDR aims to assess and monitor disaster risk reduction by focussing on measuring the multiple processes leading to a culture of prevention, including the participation of the national and local communities in the application of the most up-to-date knowledge for risk management. In order to assure credibility and acceptance, it is essential to engage in a transparent and participatory process for developing and evaluating the performance of an appropriate set of indicators. Examples for specific priority in the development of “performance targets” are suggested in various sections of this global review.

Building performance targets

In order to develop and assess effective disaster risk reduction strategies, governments need to focus on a series of performance targets or benchmarks.

They need to be, among other things "SMART": sustainable, measurable, achievable, relevant and timely:

- **Sustainable** over time.
- **Measurable**, with defined criteria for success and specific benchmarks.
- **Achievable** within the time frame that governments set. This may extend over months or years depending on available resources and national priorities.
- **Relevant**, to satisfy varied national situations related to national hazards, vulnerabilities and capacities and set within national governmental structures.
- **Timely**, related to carefully time-framed tasks, with clear short and long term goals.

They must also be:

- Clearly **defined**.
- **Flexible**, to enable on course corrections to be made.
- **Adaptable** to suit changing needs and perceptions.
- Well **integrated** among sectors, line ministries or departments and between fields or disciplines.
- **Accepted** by all contributing bodies both inside and outside governments.
- **Reflecting on international experience** from countries that have succeeded in creating effective mitigation and preparedness strategies.

Performance targets need to be adapted to each specific geographical and cultural context and tested accordingly.

A collaborative effort to measure accomplishment

While the motivation and the responsibility to evaluate progress towards more effective risk reduction rests within individual countries and local communities, there is a collective requirement that extends throughout the disaster risk reduction community to determine broadly agreed terms of reference and to increase knowledge about available methodologies. Specific performance targets and priorities clearly will vary from country to country, but crucial areas of emphasis can be tied to various functions and abilities associated

with the different aspects of disaster risk reduction that all comprehensive strategies share.

- Designated government authorities at both national and local levels of responsibility will ideally work closely with specialized institutions and community-based organizations to apply the formulas considered most appropriate for their respective requirements. By drawing on their own local experiences though, they also can contribute to the broader search and progressive refinement of both methodologies and appropriate criteria that may hold wider relevance and appeal.
- Equally, international agencies representing both bilateral and multilateral interests can contribute to this on-going assessment process as part of realizing their on-going development policies, programmes and projects.
- Individual "centers of excellence" devoted to disaster reduction at local, national, regional and international levels of activity can further augment the process of identifying, compiling and circulating different approaches to evaluate the various dimensions of disaster risk management in practice.

In this respect, ISDR's extended international framework, associated technical specialists and interested institutions can contribute various examples or broad parameters of possible criteria within designated areas of interest. Working in concert, they can also facilitate the wider distribution and progressive refinement or validation of different needs and experience. There are crucial roles to compare, circulate and progressively consolidate possible approaches to gauge global progress, with the overall aim of enhancing and utilizing multiple capacities for a shared global purpose.

An example of one such conceptual framework suited to a particular set of circumstances is presented on the following pages. It was developed through national and sub-regional collaboration in the PREANDINO programme involving Bolivia, Colombia, Ecuador, Peru and Venezuela, with the encouragement of the ISDR secretariat. While the expressed need for this framework evolved within the countries concerned, its initial development also serves the purpose of this global review by demonstrating one approach to a systematic and structured review process of accomplishments in disaster risk management practice. The framework will continue to be refined as appropriate criteria become fashioned through further development and the methodology is honed through practical testing, but it represents an important start to the process.

Elements for development of indicators or performance targets for an institutional framework for disaster risk reduction and instilling a culture of prevention

Focus area for performance targets	Variable	Criteria for indicators <i>(existence of..., number of..., level of...)</i>
Impact on institutional framework	Political will (incorporation of disaster prevention in the political value system)	<ul style="list-style-type: none"> • Official statements • Formal decisions on disaster prevention and risk management • High-level programmes for promoting disaster prevention and risk reduction
	Institutional development (for risk management)	<ul style="list-style-type: none"> • Organization - degree of organizational development • Legal and juridical support • Risk reduction law or legislative acts (in related areas) • Other regulations • Budget for institutional strengthening and other disaster reduction actions
Impact on the planning process	Risk reduction and/or disaster prevention plans	Existence and development of risk reduction/prevention plans (within different relevant sectors)
	Incorporation of risk assessments and disaster prevention measures in development plans and control mechanisms	<ul style="list-style-type: none"> • Incorporation of risk assessments and risk reduction measures in development plans • Incorporation of risk assessments and prevention in land-use management plans • Consideration of disaster risk assessments in projects (directly or in conjunction with environmental impact assessments) • Coordination mechanisms for plan design • Establishment of critical capabilities for protecting lives and assets and implementing alternatives in disaster situations (such as, projects for control of floods and other natural hazards and for protection against their impact, vulnerability reduction for health facilities, evacuation routes, alternative life-lines, communication centres, airports, information management)
	Support systems for decision-making	<ul style="list-style-type: none"> • Information systems on risks and disasters • Impact measuring systems (indicators and methodologies) • Management assessment systems (management indicators)
Impact on the creation of a culture of prevention at the level of the entire society	Education and capacity building	<ul style="list-style-type: none"> • Incorporation of hazard and risk management in the basic primary and secondary curriculum (related to natural and social sciences and environmental education) • Incorporation of specialized topics in higher education • Higher education courses in prevention and risk management (architecture, engineering, urban planning, medicine and public health, agriculture, sociology, economy, pedagogy, history, among others) • Risk management training programmes for public administration and other stakeholders • Community training programmes
	Information and communication	<ul style="list-style-type: none"> • Formal prevention information and dissemination programmes • Channels of access to information (electronic and documentation centres) • Communication programmes aimed at the general population • Role of the media (permanent presentation of this type of information in weather forecast broadcasts; links between the media and specialized information production centres)

Methodological approach developed in the context of the PREANDINO programme (Bolivia, Colombia, Ecuador, Peru and Venezuela) and in collaboration with the ISDR secretariat.

Focus area for performance targets	Variable	Criteria for indicators (<i>existence of..., number of..., level of...</i>)
Impact on knowledge production for risk reduction and management		<ul style="list-style-type: none"> • Public awareness programmes (institutionalised) • Specialized information networks for risk reduction (public and private)
	Production of knowledge	<ul style="list-style-type: none"> • Research and analysis of hazards (natural, technological, environmental) • Vulnerability analysis and assessments (social, economic, physical and environmental vulnerability) • Risk assessments (risk maps) • Socio-economic impact studies (methodologies, estimates, lessons learned) • Development of planning methodologies
	Support infrastructure	<ul style="list-style-type: none"> • Monitoring networks, remote sensing, GIS and other information technology capacity • Communications network
	Institutional development of the knowledge sector	<ul style="list-style-type: none"> • Channels of coordination between researchers and/or monitors (inter-disciplinary and multi sectoral) • Role of academic institutions in research • Links between knowledge institutions and information producers • Channels for the dissemination of scientific and applied information to communities • Type of information generated (degree to which it meets the demand; product supply and level of detail)
Impact of the participation by the national community in prevention and risk reduction efforts	Private sector participation	<ul style="list-style-type: none"> • The insurance sector • Finance (criteria for approval of project financing) • Business and interest groups • Partnerships (public-private)
	Community action and participation	<ul style="list-style-type: none"> • Specialized NGOs that can play a technical or awareness role in disaster prevention • Community based organizations • Mechanisms for community participation • Agreements between the governments (national and local) and civil society (NGOs, organized communities)
Impact of specific disaster risk reduction measures	Demonstrated application	<ul style="list-style-type: none"> • Use of technical knowledge in engineering and other applications for vulnerability reduction (protection of critical facilities) • Existence and application of technical construction standards • Control mechanisms of the application of technical standards • Development and application of urban planning standards • Control mechanisms for urban planning regulations • Control mechanisms for land-use management plans • Programmes for improving the application of prevention techniques • Early warning systems (application of technology, extension of the warning network)



A window of opportunity

The two Chinese characters, which together form the word crisis, separately mean threat and opportunity. An etymology like this is a reminder that as conditions change, so can attitudes. In a world in which things seem sure to get worse, there is increasing incentive to make sure they do not.

When old menaces seem to multiply, new thinking must provide the solutions. Communities must adopt the notion that disaster impacts can be reduced and therefore not only wait for disasters to be managed. In some cases, it might be possible to reduce hazards themselves. If not, then it would certainly be possible to reduce human vulnerability to those hazards.

The combination of science and history is instructive – it provides the assurance that disasters that happen once can happen again and again. Earthquakes, for instance, are a fact of life at tectonic plate boundaries and these have been well-mapped. Floods are a fact of life on flood plains, and their rich soils are down-to-earth proof of it.

To go from disaster management to disaster risk reduction is to exploit hindsight and develop foresight through insight.

危机

Crisis =
threat + opportunity

