



SDC GUIDELINES ON DISASTER RISK REDUCTION



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Disaster risk reduction - an important dimension of sustainable development

Disaster risks emanating from natural hazards

Addressed to SDC staff

International priority: Hyogo Framework for Action

1. PURPOSE OF THIS PAPER

The purpose of this paper is to show how SDC contributes to global efforts to substantially reduce the disaster losses in lives and social, economic and environmental assets of communities and countries by:

- 1) reaffirming that disaster risk reduction is a fundamental dimension of safe life and livelihood and sustainable development,
- 2) taking into consideration that many SDC activities – albeit labelled differently – implicitly contribute to disaster risk reduction,
- 3) providing guidelines on how to cope systematically with disaster risks emanating from natural hazards, and
- 4) integrating disaster risk reduction in existing SDC planning and operational processes (mainstreaming).

The SDC Guidelines on Disaster Risk Reduction (DRR) deal with the management of disaster risks emanating from natural hazards. In particular, they focus on risks from (a) sudden onset disasters like earthquakes or hurricanes; (b) slow onset disasters like desertification, climate change or deforestation; and (c) naturally induced technical disasters like a fire in an oil refinery caused by an earthquake.

The Guidelines do neither cover risks from social and political conflicts or economic shocks; nor do they cover risks from epidemics and pandemics like HIV/AIDS or animal diseases like the Avian Influenza ("bird flu").

The Guidelines primarily address SDC staff in Swiss Cooperation Offices and at Headquarters who manage development as well as humanitarian programmes or partnerships with governments, civil society, communities or the private sector as well as international organisations and NGOs. Equally, they serve as guidelines for the staff of partner agencies operating with a SDC mandate.

The Guidelines are SDC's response to the commitments made by the international community at the World Conference on Disaster Reduction in 2005. The Hyogo Framework for Action (HFA) has defined disaster risk reduction as a priority for development cooperation. Progress towards the implementation of the HFA is regularly reported to the UN General Assembly and the ECOSOC. DRR has also gained significant attention within a broad range of international actors, including the International Financial Institutions (IFIs), the UN Funds and Programmes and the insurance industry. After all, in many countries DRR is of high economical importance.



2. BACKGROUND: DISASTERS ON THE INCREASE – DRAMATIC IMPACT ON POVERTY

The world is facing an unprecedented scale of disasters. The number of reported natural disasters - mainly drought, flood, windstorms and earthquakes - has tripled in the past 30 years. The number of affected persons rose even more over the same period. The reasons for this dramatic increase are multifaceted: most important is people's increasing vulnerability to natural hazards resulting from population growth and the use of marginal grounds, rapid urbanization and unplanned human settlements. Other important factors are related to climate change. Increasing temperatures can be linked to more frequent and more intense natural processes like droughts, storms or heavy rainfalls. Environmental degradation caused by over-exploitation of natural resources, like for example deforestation, also leads to an increase in disaster risks. In the future, the number of disasters will continue to increase as global warming generates more severe weather-related events. Therefore, at least the trend of increasing vulnerability needs to be reversed.

A disaster is a "shock" with negative long-term impact on all livelihood assets. A disaster affects economic activities such as transports and logistics, production or consumption as much as the social structures such as families and communities. Economic systems may break down and in many cases the public authorities do not have the necessary coping capacities, especially at the local level.

With people's livelihoods lost, disasters also increase the pressure on internal and international migration flows. Disasters result from increased vulnerability to hazardous events, from lack of political commitment, lack of resources as well as lack of awareness and preparedness by exposed communities, companies and responsible institutions.

Natural disasters are development killers which slow down progress towards the Millennium Development Goals (MDGs). The results of years of development can be wiped out by a single disaster. Poverty and vulnerability to disasters are closely linked. The poor often live on marginal grounds in high risk areas. They lack the resources to mitigate the adverse impact of natural hazards through insurance or savings. Low income countries, and within them poor and socially disadvantaged groups, are typically more vulnerable to and disproportionately affected by disasters as reflected in the damage to GDP ratio. While the damage caused by Hurricane Mitch in 1998 was estimated at US\$ 4 billion or 80% of Honduras' GDP, the damage caused by the Kobe Earthquake in 1995 was estimated at US\$ 130 billion, equivalent to "only" 4% of Japan's GDP.

As a consequence of an increasing frequency and severity of disasters in many parts of the world, achieving the MDGs and sustaining them further will require the integration of hazard risk management approaches in national policies and development interventions. Flawed development plans which do not incorporate hazard risk mitigation activities will further increase the vulnerability to hazards and may increase the gap to achieve the MDGs.

The number of natural disasters has tripled in the past 30 years

Natural disasters are development killers which slow down progress towards the MDGs

Natural disasters affect the poor disproportionately



3. CONCEPT OF DISASTER RISK REDUCTION (DRR)

Disaster risk reduction aims at

- a) reducing existing risks (vulnerability and hazards),
- b) adapting to changing risk factors,
- c) preventing the further growing of risks - do no harm

Disasters result when an extreme natural or technological event coincides with a vulnerable human activity. Even if natural hazards cannot be fully avoided, disasters, to a large extent can be reduced. Disaster risk reduction aims at

- a) reducing existing risks (vulnerability and hazards),
- b) adapting to changing risk factors (e.g. climate change),
- c) preventing the further increase of risks through risk-conscious development (do no harm principle).

The risk of disaster can be reduced by lessening either the hazard or the vulnerability – or both. Disaster losses can be mitigated, and in some instances even prevented, with ex-ante risk management like planting drought-resistant crops or designing seismic resistant buildings. Of particular importance are non-structural measures like capacity development in the field of disaster risk management or awareness creation through, for instance, initiating a risk dialogue with all stakeholders.

DRR is a governance issue

Poverty reduction, sustainable development and disaster risk reduction are closely interlinked. They are mutually supportive objectives. Their success depends highly on good governance at all levels. In order to meet the challenges ahead, awareness and capacities to manage and reduce risks need to be built at the community and national levels.

The early recovery phase is a “window of opportunity” for building resilience

Successful disaster risk reduction must happen well before a disaster strikes. It is necessary to move the focus away from merely responding to disasters to pre-disaster prevention and preparedness activities. Unfortunately, it frequently takes a major disaster to mobilize the necessary political commitment and adequate resources. In such a case, the early recovery phase immediately after a disaster can provide a crucial “window of opportunity” for building resilience to future hazards.

Disaster risk management is a cost-effective investment in sustainable development

Whereas big disasters and the subsequent emergency operations “enjoy” high visibility, disaster risk reduction, addressing risks before disasters occur, gains much less attention. This in spite of the fact that disaster risk management is a cost-effective investment in sustainable development. There is growing evidence of the economic benefits of specific programmes and policy choices aimed at reducing disaster risk. Today, it is acknowledged that every dollar spent on risk reduction pays back at least four dollars in non-occurring disaster losses.



4. SDC APPROACH TO DISASTER RISK REDUCTION

The Swiss Agency for Development and Cooperation (SDC) has been working in the field of disaster risk reduction for many years. DRR is one of the four priorities of the SDC Humanitarian Aid Department. It is explicitly outlined in the SDC Strategy 2010 as specific topic of cooperation and re-affirmed in the SDC 2005/2006 portfolio analysis. Many thematic priorities emphasised in the SDC portfolio analysis contribute significantly to DRR, for example:

- water and watershed management contribute to the prevention of floods and related hazards;
- rural development and natural resources management in arid areas contribute to the prevention of desertification;
- climate change adaptation is a key preparedness strategy.

SDC's approach to disaster risk reduction is based on three strategies:

- 1) DRR is selectively mainstreamed within SDC and considered a dimension of several thematic priorities. It has to be taken into account in all countries with a high or considerable risk for disasters to occur (country list see annex A) and/or in activities (projects) which have a spatial relevance (impact on land use).¹
- 2) SDC assists partner countries, civil society and communities with targeted activities to reduce disaster risks (hazards and/or vulnerability) of the poor.
- 3) SDC supports the international DRR system and institutions at the regional and global level aimed at reducing risk in disaster-prone developing countries.

DRR is nothing new to SDC

Mainstreaming DRR

Targeted DRR activities

Support to the international DRR system

¹ Contrary to gender and governance, disaster risk reduction is not defined as a crosscutting issue in SDC. Therefore it is not taken into account in all activities in a compulsory way.



SDC integrates disaster risk concerns into SDC processes in all countries with a high or considerable risk for disasters to occur

DRR - a dimension of SDC instruments like cooperation strategies and entry or credit proposals

5. THE WAY FORWARD: IMPLEMENTING THE GUIDELINES ON DRR

5.1. MAINSTREAMING DRR

a) Conceptual framework

SDC integrates disaster risk concerns into SDC planning and operational processes in all countries with a high or considerable risk for disasters to occur (see annex A: Disaster risk classification of SDC priority countries and regions) as well as in all activities (projects) which have a spatial relevance (impact on land use) and are situated in an area at risk (even within a country with moderate or low risk, according to annex A). The objective is to protect development gains and to prevent the building-up of new risks and vulnerabilities. Disaster risk reduction is an integral part of development or humanitarian intervention in a disaster-prone environment.

The reduction of disaster risks means to design programmes and projects in a way that they avoid or minimise the impact of hazards. For example, an irrigation project aimed at increasing agricultural production that takes into account possible flooding contributes to the reduction of risks in the area, thus adding to the overall sustainability of the project.

In order to integrate risk concerns, SDC assesses whether or not a strategy, a programme or a project is exposed to a risk and/or has a disaster risk reduction potential (DRR potential). SDC makes informed decisions whether or not in a specific context disaster risks are an issue and how these risks can be reduced (avoided, mitigated, or transferred).

b) Instruments and criteria

More specifically, DRR considerations must be part of the following SDC instruments:

- Cooperation strategies and annual planning processes in countries with a high or considerable risk for disaster to occur (annex A);
- Entry or credit proposals in countries with a high or considerable risk for disaster to occur and/or in activities (projects) which have a spatial relevance. At the project level, DRR is integrated into the project cycle management for which a tool is available (Disaster Risk Reduction in the PCM).
- Thematic and corporate strategies, relevant for countries with a high or considerable risk for disasters to occur.

The assessment of the DRR potential of a strategy, a programme or a project can be done by applying a set of key criteria.

- Is there a link between the activity (strategy, programme or project) and a disaster-prone country or area?
- Has the activity a spatial relevance (impact on land use)?
Is the activity resilient to hazards?
- Does the activity contribute to reducing the risk to vulnerable communities and not aggravating risks for others? (do no harm)



c) Capacity building within SDC

SDC coordinates the orientation and the activities of Switzerland's international cooperation in general and in particular with regard to disaster risk reduction. As such, SDC is committed to ensuring that SDC programme staff has the right technical, social and process competences and tools to implement the SDC Guidelines on DRR.

To make development and humanitarian efforts disaster-resilient and to integrate risk reduction into the design of strategies, programmes and projects requires a) risk awareness, b) knowledge of existing natural hazards and vulnerabilities, c) thematic and technical competencies, and d) delegation of responsibilities to the local level (decentralisation).

In order to meet these requirements, SDC has established an in-house community of practitioners, the DRR-Network. The key elements of the DRR-Network are:

- DRR focal points in Cooperation Offices in countries or regions with a high or considerable risk (annex A);
- DRR focal points in the Bilateral Development Cooperation (E) and Thematic and Technical Resources Departments at Headquarters;
- a DRR-Network Coordinator temporarily² anchored in SDC's Humanitarian Aid Department.

In order to reduce unnecessary workload, the DRR-Network will mainly work directly with responsible desk officers in the different Departments at Headquarter.

The main tasks of the DRR-Network are to:

- 1) further build awareness for DRR within SDC;
- 2) exchange knowledge on DRR within SDC;
- 3) train SDC staff in DRR-related competencies;
- 4) provide policy advice and technical support in DRR;
- 5) facilitate referrals to DRR experts (internal and external³);
- 6) support the implementation and the monitoring of the SDC Guidelines on DRR;
- 7) refine or develop tools.

SDC is also committed to raising the awareness of its partners – governments, civil society, communities or the private sector as well as international organisations and NGOs – and to develop their capacity to integrate disaster risk reduction.

d) Responsibility and monitoring

The Headquarters operational units (Divisions) and Swiss Cooperation Offices bear the primary responsibility for mainstreaming disaster risk reduction into SDC planning and operational processes where required. Consequently, the operational units are responsible for losses of SDC investments through natural hazards resulting from not complying with these Guidelines.

The monitoring of the integration of disaster risk reduction into SDC processes is included in the ordinary monitoring process of the Departments. If needed, it can be supported by or delegated to the DRR-Network.

Where SDC programmes or projects are affected by disasters, the DRR-Network Coordinator can initiate an assessment in order to identify lessons learned and good practices.

SDC DRR-Network

Operational units and cooperation offices are responsible for the integration of disaster risk concerns into SDC planning processes

² The institutional anchorage of the topic DRR will again be examined for the time of the unification of the SDC Headquarters sites in Berne and Koeniz.

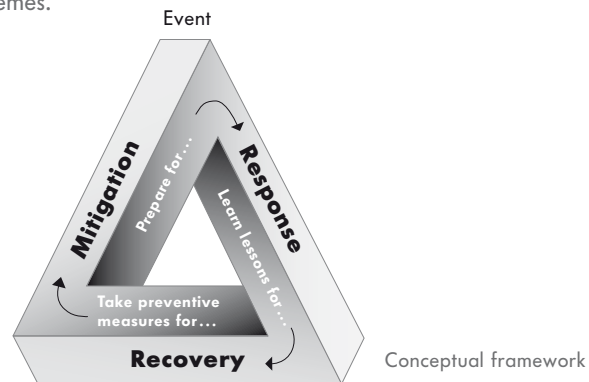
³ A list of major Swiss DRR Partners is given in Annex B

5.2. TARGETED DRR ACTIVITIES

a) Conceptual framework

SDC assists partners - governments, civil society, communities or the private sector as well as international organisations and NGOs - in disaster-prone countries in planning and implementing targeted activities for pro-actively reducing risks and vulnerability of the poor, mainly by developing national and local capacities to manage such risks.

SDC follows the conceptual framework of risk management set in the Hyogo Framework for Action. SDC seeks to eliminate or minimise the effects of natural disasters through three targeted mechanisms: mitigation, response and recovery as shown in the figure below. Mitigation aims at reducing existing and preventing the building-up of new risks. Response aims at reducing the impact of disasters through emergency relief (rescue and survival). Recovery aims at reducing possible future losses with an adapted recovery approach based on a “built-back better” approach and risk transfer schemes.



SDC contributions to mitigation, response and recovery can be implemented through multi-lateral cooperation; through partner organisations, through direct collaboration with partner governments or by direct intervention of SDC Humanitarian Aid Department in the response and recovery phase. SDC can rely on a number of highly competent institutions for technical support (see annex B).

Mitigation and recovery can be grouped according to structural and non-structural measures. Structural measures refer to any physical (re-) construction to reduce or avoid possible impacts of hazards, which include engineering measures and construction of hazard-resistant and protective structures and infrastructure. Non-structural measures refer to policies, awareness, capacity development, public commitment, and public-private partnerships (including insurance) that can reduce risk and related impacts.

b) Mitigation

Mitigation activities are long-term commitments and can have two components: prevention and/or preparedness. While preventive measures try to avoid or minimize disasters, preparedness is aimed at ensuring effective response to disasters.

Partners are supported through awareness raising and/or capacity development (institutional building, networking, system reforms, human resources) in the following areas:

1) Risk assessment: determine the nature and extent of risk by analysing potential hazards (multi-hazard approach) and evaluating existing conditions of vulnerability and available coping capacities resulting in a risk profile for the location, area or country considered.

2) Risk evaluation and definition of protective goals: the risk evaluation includes the perception of risks, the weighting of „natural“ risks vis-à-vis other risks like health or economic risks, and the

Three targeted mechanisms:
mitigation, response and
recovery

Mitigation: prevention and
preparedness



willingness to invest for more safety. The relevant process is a risk dialogue with all stakeholders concerned, including the local population and authorities (governance issue).

3) Effective risk reduction addresses societies' vulnerability and their coping capacities. Most important are adaptation strategies (for instance towards climate change), natural resources management (including land-use and land management), or early warning and alert systems (including emergency management procedures). Information management, education and training are necessary components of such processes. Structural measures include physical construction to reduce or avoid possible impact of hazards and to reduce vulnerability. In high risk countries, recovery capacity and planning should be developed.

Within SDC, mitigation is a joint responsibility of the Bilateral Cooperation Departments (E and O) and the Humanitarian Aid Department. While the primary responsibility for prevention lies with the Bilateral Cooperation Departments (E and O), that of preparedness is with the Humanitarian Aid Department.

c) Response

SDC responds to natural disasters through emergency relief (rescue and survival) aiming at saving lives and covering the basic needs of victims. The SDC Humanitarian Aid Department has established specialised Rapid Response Teams (including Swiss Rescue) to be deployed for needs assessment and the provision of immediate assistance on the ground to cover the basic needs. Damages are repaired as quickly as possible and additional immediate steps are taken to support civil self-help mechanisms and prepare the ground for recovery. Response actions include the deployment of specialists for the rescue of victims, the delivery of food and aid supplies (e.g. clothes, blankets, and tents), the provision of medical care, and financial contributions to international and local humanitarian aid organisations.

The response to natural disasters is not only of immediate relevance but it can have a long term impact. Disasters generally provide a window of opportunity for long lasting change. At such times, the need for risk management is clear and attention at all levels of society is focused on the disaster. It offers an opportunity to improve the capacity of a society to better cope with risks and disasters by opening development opportunities which go beyond the management of risks. It may lead to changes in environmental management, access to resources (land, water, credit) or in power structure including gender.

In the relief phase, SDC pays great attention to supporting efficient coordination among response units in order to assure rapid and effective response to natural disasters. SDC strongly supports international components such as the International Search and Rescue Advisory Group (INSARAG), the Office for the Coordination of Humanitarian Affairs (OCHA), and the International Federation of Red Cross and Red Crescent Societies (IFRC).

Environmental aspects following a (natural) disaster are very important issues and often neglected during response and recovery operations. SDC actively supports the Joint UNEP/OCHA Environment Unit with specialists (ABC-Unit of the SHA) in the field of waste management, chemical or oil spills, water or other type of environmental degradation.

The primary responsibility at SDC for responding to natural disasters is with its Humanitarian Aid Department.

Response: rescue, relief and rehabilitation

Window of opportunity for long lasting change

Environmental issues following a disaster

Return to normal:
physical, economic and
social recovery

No blue print for the
division of labour between
humanitarian aid and
bilateral development

Disaster risk reduction is
a multi-stakeholder issue

d) Recovery

As early as possible and ideally already during the relief phase, efforts to support the government and the affected communities in restoring livelihoods, infrastructure and governance should be initiated. Recovery has three main dimensions: a) the reconstruction or replacement of severely damaged physical structures, including the natural environment, b) the restoration and re-vitalization of the economy, and c) the restoration of the institutional and social structures. Local knowledge and capacities are very valuable and have to be taken into consideration.

SDC supports the introduction of disaster risk reduction measures during the recovery phase to reduce possible future losses. Recovery efforts must avoid creating new risks and exacerbating existing ones. They also need to take into account lessons learnt from past events. Infrastructure like schools, hospitals or telecommunication facilities must be specially protected from future damage.

Within SDC, recovery is a responsibility of both the Humanitarian Aid Department and the Bilateral Cooperation Departments (E and O). The division of labour depends on the country context. In countries where SDC has no cooperation strategy, recovery activities are the responsibility of the Humanitarian Aid Department. In countries where SDC has a bilateral development programme, the division of labour must be established based on complementarities. In general, the Humanitarian Aid Department is responsible for the early recovery whereas the long-term recovery and reconstruction phase is a shared responsibility, which is progressively transferred to the Bilateral Cooperation Departments. There can be no "blue print" for the division of labour because each country context and disaster is unique and requires different recovery measures. However, all recovery efforts must be integrated into development cooperation activities. The transfer of responsibility from the Humanitarian Aid Department to the Bilateral Cooperation Departments must be defined and mutually agreed on a case-by-case basis.

e) Monitoring

The monitoring of the targeted DRR activities is included in the ordinary monitoring process of SDC Departments. If needed, it can be supported by or delegated to the DRR-Network. Wherever SDC programmes or projects are affected by disasters, the DRR-Network Coordinator can initiate an assessment in order to identify lessons learned.

5.3. SDC SUPPORT TO THE INTERNATIONAL DRR SYSTEM

a) Conceptual framework

SDC promotes an improved normative and operational international DRR system that supports institutions at the local, national and regional (transnational) levels to increase the capacity of disaster-prone countries to take appropriate measures and decisions to reduce the risk of disasters.

Disaster risk reduction is a multi-stakeholder issue. Coordinated efforts at global and regional (transnational) levels are key for efficient risk reduction. Disaster management has traditionally been a concern of humanitarian institutions such as the Office for the Coordination of Humanitarian Affairs (OCHA) or the International Federation of Red Cross and Red Crescent Societies (IFRC). More recently, development agencies such as the United Nations Development Programme (UNDP) or the World Bank have made of DRR a priority area. In 1999, the United Nations General Assembly created the International Strategy for Disaster Reduction (ISDR) to foster and coordinate DRR activities at the global level. However, a more systematic integration of DRR into development planning remains a challenge at all levels.



b) Activities

SDC contributes to a strengthened international DRR system:

1) at the normative level: by promoting DRR in multilateral forums, for example in the Economic and Social Council (ECOSOC), the UN General Assembly, or in the Commission on Sustainable Development (CSD);

2) at the operational level: by cooperating with the major global development organisations like the International Finance Institutions (IFIs), the United Nations organisations and regional institutions, to promote DRR programmes and to make development activities and processes disaster-resilient, notably by integrating DRR in Poverty Reduction Strategy Papers, Common Country Assessments and UN Development Assistance Frameworks (UNDAFs) in disaster prone countries;

3) at the institutional level: by strengthening the international system by promoting DRR initiatives and coordination mechanisms and by supporting in particular the global DRR-hub in Geneva with the ISDR Secretariat (International Strategy for Disaster Reduction), the UNDP Bureau for Crisis Prevention and Recovery (UNDP/BCPR), and the International Federation of Red Cross and Red Crescent Societies (IFRC). Additional key multilateral partners are the Office for the Coordination of Humanitarian Affairs (OCHA), the World Bank and the ProVention Consortium;

4) at the level of international conventions: by linking and promoting DRR within the implementation of environmental conventions and other international frameworks and mechanisms, particularly the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention to Combat Desertification (UNCCD).

5) with bilateral aid donors agencies: by promoting the mainstreaming of DRR in their activities; and

6) at the internal level: by reviewing SDC institutional strategies for its multilateral partners and strengthening the DRR components where appropriate.

Within SDC, the responsibility for supporting the international DRR system is jointly held by the Development Policy and Multilateral Department and the Humanitarian Aid Department, the latter being primarily responsible for the strengthening of the ISDR system and the specific dialogue with organisations active in the field of DRR, whereas the former mainly ensures the integration of DRR in the broader development agenda, in the MDGs debate and in the work of multilateral development agencies at all appropriate levels ("mainstreaming" of DRR). At the operational level the Bilateral Cooperation Departments have a responsibility in particular with regard to multi-bi projects.

c) Monitoring

The monitoring of SDC support to the international DRR system is included in the ordinary monitoring process of SDC Departments, in particular H and PM. If needed, it can be supported by or delegated to the DRR-Network.

Normative level

Operational level

Institutional level

International conventions

Bilateral aid agencies

Internal

High risk
DRR and Focal point mandatory

Considerable risk
DRR mandatory; Focal point highly advisable

Moderate risk
DRR on demand; Focal point advisable

Low risk
DRR on demand; Focal point not necessary

High risk
DRR and Focal point mandatory

Considerable risk
DRR mandatory; Focal point highly advisable

Moderate risk
DRR on demand; Focal point advisable

Low risk
DRR on demand; Focal point not necessary

14



MAIN THEMATIC PARTNERS IN THE FIELD OF DRR

Federal Department of Foreign Affairs

Political divisions I – V

Swiss Partners (administration, scientific institutions, private sector)

Strategic planning

PLANAT, Platform Natural Hazards: strategic outline, www.naturgefahren.ch

FOEN, Federal Office for the Environment: overall hazard, risk and safety issues, www.bafu.admin.ch/naturgefahren

Hazard assessment, monitoring

ETH/EPFL, various institutes: particular hazards, specific issues, www.ethz.ch, www.epfl.ch

WSL (Birmensdorf/Davos): mountain hazards, avalanches, www.wsl.ch

University of Zurich, Geography: issues of the impact of climate change on high-alpine areas, www.geo.unizh.ch/phys

SED, Swiss Seismological Service: seismic monitoring, www.seismo.ethz.ch

Risk assessment, risk evaluation

ETH, Risk and Safety in Civil Engineering, www.ibk.ethz.ch/fa

Stiftung Risikodialog, www.risiko-dialog.ch

University of Lausanne, Institute of Geomatics and Risk Analysis, www.unil.ch/igar

University of Bern, Geography, AGNAT: conceptual procedures, www.naturgefahren.ch

Mitigation

FOEN, Federal Office for the Environment: forest, water, geology, earthquake, www.bafu.admin.ch/naturgefahren

SECO, State Secretariat for Economic Affairs: water, environment, climate, www.seco.admin.ch

Response

VBS, Soforthilfe der Armee, www.vtg.admin.ch/internet/groupgst/de/home/operationen.html

BABS, Bundesamt für Bevölkerungsschutz, www.babs.admin.ch

Recovery

IRV, Interkantonaler Rückversicherungsverband, www.kgvonline.ch

Swiss Re, www.swissre.com

Education and personnel resources

FAN, Fachleute Naturgefahren Schweiz, www.fan-info.ch

CERG, Centre d'Etude des Risques Géologiques, University of Geneva, www.unige.ch/sciences/terre/mineral/cerg

FURTHER READING

Analysis of SDC activities in disaster risk reduction, SDC, Bern 2006

IEG 2006: Hazards of Nature, Risks to Development.

An IEG Evaluation of World Bank Assistance for Natural Disasters

<http://www.worldbank.org/ieg/naturaldisasters/>

DFID 2006: Reducing the Risk of Disasters – Helping to Achieve Sustainable Poverty Reduction in a Vulnerable World: A DFID policy paper

<http://www.dfid.gov.uk/pubs/files/disaster-risk-reduction-policy.pdf>

IFRC 2005: World Disasters Report 2005: Focus on information in disasters.

<http://www.ifrc.org/publicat/wdr2005/index.asp>

UNISDR 2005: Hyogo Framework for Action (HFA)

<http://www.unisdr.org/eng/hfa/hfa.htm>

GTZ 2005: Linking Poverty Reduction and Disaster Risk Management

<http://www.zeneb.uni-bayreuth.de/downloads/en-linking-povred-drm.pdf>

Munich Re 2005: Topics Geo – Annual review: Natural catastrophes 2005

<http://www.munichre.com/>

UNDP 2004: Reducing Disaster Risk - A Challenge for Development. A global Report.

http://www.undp.org/bcpr/we_do/global_report_disaster.shtml

BHRC 2003: An Operational Framework for Mainstreaming Disaster Risk Reduction

http://www.benfieldhrc.org/disaster_studies/working_papers/workingpaper8.pdf

ECHO 2003: Disaster Preparedness and Prevention (DPP):

State of play and strategic orientations for EC policy. Working Paper

http://ec.europa.eu/echo/pdf_files/dipecho/dpp_paper.pdf

TERMINOLOGY: BASIC TERMS OF DISASTER RISK REDUCTION

Source: UN/ISDR, 2004

The level of loss a society or community considers acceptable given existing social, economic, political, cultural, technical and environmental conditions.

In engineering terms, acceptable risk is also used to assess structural and non-structural measures undertaken to reduce possible damage at a level which does not harm people and property, according to codes or „accepted practice“ based, among other issues, on a known probability of hazard.

The climate of a place or region is changed if over an extended period (typically decades or longer) there is a statistically significant change in measurements of either the mean state or variability of the climate for that place or region.

Changes in climate may be due to natural processes or to persistent anthropogenic changes in atmosphere or in land use. Note that the definition of climate change used in the United Nations Framework Convention on Climate Change is more restricted, as it includes only those changes which are attributable directly or indirectly to human activity.

The means by which people or organizations use available resources and abilities to face adverse consequences that could lead to a disaster.

In general, this involves managing resources, both in normal times as well as during crises or adverse conditions. The strengthening of coping capacities usually builds resilience to withstand the effects of natural and human-induced hazards.

A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources.

A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk.

The conceptual framework of elements considered with the possibilities to minimize vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

The disaster risk reduction framework is composed of the following fields of action, as described in ISDR's publication 2002 „Living with Risk: a global review of disaster reduction initiatives“, page 23:

- Risk awareness and assessment including hazard analysis and vulnerability/capacity analysis;
- Knowledge development including education, training, research and information;
- Public commitment and institutional frameworks, including organisational, policy, legislation and community action;
- Application of measures including environmental management, land-use and urban planning, protection of critical facilities, application of science and technology, partnership and networking, and financial instruments;
- Early warning systems including forecasting, dissemination of warnings, preparedness measures and reaction capacities.

Acceptable risk

Climate change

Coping capacity

Disaster

Disaster risk reduction
(disaster reduction)



Emergency management	<p>The organization and management of resources and responsibilities for dealing with all aspects of emergencies, in particularly preparedness, response and rehabilitation.</p> <p><i>Emergency management involves plans, structures and arrangements established to engage the normal endeavours of government, voluntary and private agencies in a comprehensive and coordinated way to respond to the whole spectrum of emergency needs. This is also known as disaster management.</i></p>
Hazard	<p>A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.</p> <p><i>Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is characterised by its location, intensity, frequency and probability.</i></p>
Mitigation	<p>Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards.</p>
Preparedness	<p>Activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations.</p>
Prevention	<p>Activities to provide outright avoidance of the adverse impact of hazards and means to minimize related environmental, technological and biological disasters.</p> <p><i>Depending on social and technical feasibility and cost/benefit considerations, investing in preventive measures is justified in areas frequently affected by disasters. In the context of public awareness and education, related to disaster risk reduction changing attitudes and behaviour contribute to promoting a „culture of prevention“.</i></p>
Public awareness	<p>The processes of informing the general population, increasing levels of consciousness about risks and how people can act to reduce their exposure to hazards. This is particularly important for public officials in fulfilling their responsibilities to save lives and property in the event of a disaster.</p> <p><i>Public awareness activities foster changes in behaviour leading towards a culture of risk reduction. This involves public information, dissemination, education, radio or television broadcasts, use of printed media, as well as, the establishment of information centres and networks and community and participation actions.</i></p>
Recovery	<p>Decisions and actions taken after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk.</p> <p><i>Recovery (rehabilitation and reconstruction) affords an opportunity to develop and apply disaster risk reduction measures.</i></p>
Relief / response	<p>The provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can be of an immediate, short-term, or protracted duration.</p>



The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organizing itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures.

The probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between natural or human-induced hazards and vulnerable conditions.

Conventionally risk is expressed by the notation $Risk = Hazards \times Vulnerability$. Some disciplines also include the concept of exposure to refer particularly to the physical aspects of vulnerability. Beyond expressing a possibility of physical harm, it is crucial to recognize that risks are inherent or can be created or exist within social systems. It is important to consider the social contexts in which risks occur and that people therefore do not necessarily share the same perceptions of risk and their underlying causes.

A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend.

The process of conducting a risk assessment is based on a review of both the technical features of hazards such as their location, intensity, frequency and probability; and also the analysis of the physical, social, economic and environmental dimensions of vulnerability and exposure, while taking particular account of the coping capabilities pertinent to the risk scenarios.

Structural measures refer to any physical construction to reduce or avoid possible impacts of hazards, which include engineering measures and construction of hazard-resistant and protective structures and infrastructure.

Non-structural measures refer to policies, awareness, knowledge development, public commitment, and methods and operating practices, including participatory mechanisms and the provision of information, which can reduce risk and related impacts.

The conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.

For positive factors, which increase the ability of people to cope with hazards, see definition of capacity.

Resilience / resilient

Risk

Risk assessment/ analysis

Structural / non-structural measures

Vulnerability

