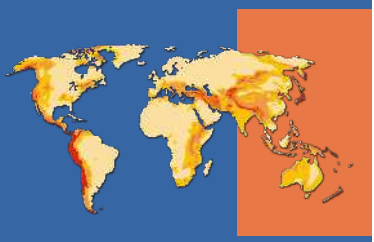
International Strategy
ISDR
for Disaster Reduction

Living with Risk

A global review of disaster reduction initiatives



2004 Version • Volume II Annexes

United Nations

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2004 Version - Volume II Annexes

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Annex 1

Terminology: Basic terms of disaster risk reduction

The ISDR Secretariat presents these basic definitions on disaster risk reduction in order to promote a common understanding on this subject, for use by the public, authorities and practitioners. The terms are based on a broad consideration of different international sources. This is a continuing effort to be reflected in future reviews, responding to a need expressed in several international venues, regional discussions and national commentary. Feedback from specialists and other practitioners to improve these definitions will be most welcome.

Acceptable risk

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.

Biological hazard

Processes of organic origin or those conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Examples of biological hazards: outbreaks of epidemic diseases, plant or animal contagion, insect plagues and extensive infestations.

Building codes

Ordinances and regulations controlling the design, construction, materials, alteration and occupancy of any structure to insure human safety and welfare. Building codes include both technical and functional standards.

Capacity

A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster.

Capacity may include physical, institutional, social or economic means as well as skilled personal or collective attributes such as leadership and management. Capacity may also be described as capability.

Capacity building

Efforts aimed to develop human skills or societal infrastructures within a community or organization needed to reduce the level of risk.

In extended understanding, capacity building also includes development of institutional, financial, political and other resources, such as technology at different levels and sectors of the society.

Climate change

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.

Coping capacity

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.

Counter measures

All measures taken to counter and reduce disaster risk. They most commonly refer to engineering (structural) measures but can also include non-structural measures and tools

designed and employed to avoid or limit the adverse impact of natural hazards and related environmental and technological disasters.

Disaster

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.

Disaster risk management

The systematic process of using administrative decisions, organization, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards.

Disaster risk reduction (disaster reduction)

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.*

Early warning

The provision of timely and effective information, through identified institutions, that allows individuals exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response.

Early warning systems include a chain of concerns, namely: understanding and mapping the hazard; monitoring and forecasting impending events; processing and disseminating understandable warnings to political authorities and the population, and undertaking appropriate and timely actions in response to the warnings.

Ecosystem

A complex set of relationships of living organisms functioning as a unit and interacting with their physical environment.

The boundaries of what could be called an ecosystem are somewhat arbitrary, depending on the focus of interest or study. Thus the extent of an ecosystem may range from very small spatial scales to, ultimately, the entire Earth (IPCC, 2001).

El Niño-Southern Oscillation (ENSO)

A complex interaction of the tropical Pacific Ocean and the global atmosphere that results in irregularly occurring episodes of changed ocean and weather patterns in many parts of the world, often with significant impacts, such as altered marine habitats, rainfall changes, floods, droughts, and changes in storm patterns.

The El Niño part of ENSO refers to the well-above-average ocean temperatures along the coasts of Ecuador, Peru and northern Chile and across the eastern equatorial Pacific Ocean, while the Southern Oscillation refers to the associated global patterns of changed atmospheric pressure and rainfall. La Niña is

approximately the opposite condition to El Niño. Each El Niño or La Niña episode usually lasts for several seasons.

Emergency management

The organization and management of resources and responsibilities for dealing with all aspects of emergencies, in particularly preparedness, response and rehabilitation.

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.

Environmental impact assessment (EIA)

Studies undertaken in order to assess the effect on a specified environment of the introduction of any new factor, which may upset the current ecological balance.

EIA is a policy making tool that serves to provide evidence and analysis of environmental impacts of activities from conception to decision-making. It is utilised extensively in national programming and for international development assistance projects. An EIA must include a detailed risk assessment and provide alternatives solutions or options.

Environmental degradation

The reduction of the capacity of the environment to meet social and ecological objectives, and needs.

Potential effects are varied and may contribute to an increase in vulnerability and the frequency and intensity of natural hazards.

Some examples: land degradation, deforestation, desertification, wildland fires, loss of biodiversity, land, water and air pollution, climate change, sea level rise and ozone depletion.

Forecast

Definite statement or statistical estimate of the occurrence of a future event (UNESCO, WMO).

This term is used with different meanings in different disciplines.

Geological hazard

Natural earth processes or phenomena that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Geological hazard includes internal earth processes or tectonic origin, such as earthquakes, geological fault activity, tsunamis, volcanic activity and emissions as well as external processes such as mass movements: landslides, rockslides, rock falls or avalanches, surfaces collapses, expansive soils and debris or mud flows.

Geological hazards can be single, sequential or combined in their origin and effects.

Geographic information systems (GIS)

Analysis that combine relational databases with spatial interpretation and outputs often in form of maps. A more elaborate definition is that of computer programmes for capturing, storing, checking, integrating, analysing and displaying data about the earth that is spatially referenced.

Geographical information systems are increasingly being utilised for hazard and vulnerability mapping and analysis, as well as for the application of disaster risk management measures.

Greenhouse gas (GHG)

A gas, such as water vapour, carbon dioxide, methane, chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), that absorbs and re-emits infrared radiation, warming the earth's surface and contributing to climate change (UNEP, 1998).

Hazard

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.

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.

Hazard analysis
Identification, studies and monitoring of any hazard to determine its potential, origin, characteristics and behaviour.

Hydrometeorological hazards
Natural processes or phenomena of atmospheric, hydrological or oceanographic nature, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Hydrometeorological hazards include: floods, debris and mud floods; tropical cyclones, storm surges, thunder/hailstorms, rain and wind storms, blizzards and other severe storms; drought, desertification, wildland fires, temperature extremes, sand or dust storms; permafrost and snow or ice avalanches. Hydrometeorological hazards can be single, sequential or combined in their origin and effects.

La Niña
(see El Niño-Southern Oscillation).

Land-use planning
Branch of physical and socio-economic planning that determines the means and assesses the values or limitations of various options in which land is to be utilized, with the corresponding effects on different segments of the population or interests of a community taken into account in resulting decisions.

Land-use planning involves studies and mapping, analysis of environmental and hazard data, formulation of alternative land-use decisions and design of a long-range plan for different geographical and administrative scales.

Land-use planning can help to mitigate disasters and reduce risks by discouraging high-density settlements and construction of key installations in hazard-prone areas, control of population density and expansion, and in the siting of service routes for transport, power, water, sewage and other critical facilities.

Mitigation
Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards.

Natural hazards
Natural processes or phenomena occurring in the biosphere that may constitute a damaging event.

Natural hazards can be classified by origin namely: geological, hydrometeorological or biological. Hazardous events can vary in magnitude or intensity, frequency, duration, area of extent, speed of onset, spatial dispersion and temporal spacing.

Preparedness
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.

Prevention
Activities to provide outright avoidance of the adverse impact of hazards and means to minimize related environmental, technological and biological disasters.

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".

Public awareness
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.

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.

Public information
Information, facts and knowledge provided or learned as a result of research or study, available to be disseminated to the public.

Recovery
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.

Recovery (rehabilitation and reconstruction) affords an opportunity to develop and apply disaster risk reduction measures.

Relief / response
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.

Resilience / resilient
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.

Retrofitting (or upgrading)
Reinforcement of structures to become more resistant and resilient to the forces of natural hazards.

Retrofitting involves consideration of changes in the mass, stiffness, damping, load path and ductility of materials, as well as radical changes such as the introduction of energy absorbing dampers and base isolation systems. Examples of retrofitting includes the consideration of wind loading to strengthen and minimize the wind force, or in earthquake prone areas, the strengthening of structures.

Risk
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 x 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.

Risk assessment/analysis
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 / non-structural measures
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.

Sustainable development

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of "needs", in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and the future needs. (Brundtland Commission, 1987).

Sustainable development is based on socio-cultural development, political stability and decorum, economic growth and ecosystem protection, which all relate to disaster risk reduction.

Technological hazards

Danger originating from technological or industrial accidents, dangerous procedures, infrastructure failures or certain human activities, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Some examples: industrial pollution, nuclear activities and radioactivity, toxic wastes, dam failures; transport, industrial or technological accidents (explosions, fires, spills).

Vulnerability

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.

Wildland fire

Any fire occurring in vegetation areas regardless of ignition sources, damages or benefits.

Annex 2

Directory of international, regional, national and specialized organizations

Directory of international, regional, national and specialized organizations including commissions, councils, committees, corporations involved in disaster reduction and related issues.

This list contains brief descriptive information and internet address, when available.
Additional information about the United Nations can be found in annex 3, with indication of pages where UN organizations are mentioned in the publication.

In order not to list again organizations in the index, the pages where they are mentioned in the publication are indicated in this directory.

A

African Center of Meteorological Applications for Development (ACMAD), Niger, Niamey, (Centre africain des applications de la météorologie pour le développement)

ACMAD is the focal point in fostering regional cooperation among the 53 African states with the rest of the world in climate and environmental concerns with regard to sustainable social and economic development. ACMAD coordinates the activities of the National Meteorological and Hydrological Services of these countries.
http://www.acmad.ne/homepage.htm
→ *Volume 1, p. 150, 157, 376*

African Centre for Disaster Studies (ACDS), Potchefstroom University, South Africa

The ACDS was established in January 2002 at the Potchefstroom University for Christian Higher Education within the School for Social and Government Studies. The explicit aim of the ACDS is to address the need for world-class training, education and research in disaster related activities within Southern Africa and the wider African context. The ACDS aims to achieve sustainable social development and sustainable livelihoods within the context of excellence in disaster training, education and research. http://acds.co.za/
→ *Volume 1, p. 240, 248*

African Development Bank (AfDB)

The AfDB is a multinational development bank supported by 77 countries from Africa, North and South America, Europe and Asia. Headquartered in Abidjan, Cote d'Ivoire, the Bank Group consists of three institutions: The African Development Bank (AfDB); The African Development Fund (ADF) and The Nigeria Trust Fund (NTF). Established in 1964, its mission is to promote economic and social development through loans, equity investments, and technical assistance. http://www.afdb.org
→ *Volume 1, p. 157, 349*

African Union (AU), (Union Africaine)

The African Union is the successor to the Organization of African Unity, launched in Durban, South Africa, in July, 2002. The AU is Africa's premier institution and principal organization for the promotion of accelerated socio-economic integration of the continent, which will lead to greater unity and solidarity between African countries and peoples.The AU is based on the common vision of a united and strong Africa and on the need to build a partnership between governments and all segments of civil society, in particular women, youth and the private sector, in order to strengthen solidarity and cohesion amongst the peoples of Africa. As a continental organization it focuses on the promotion of peace, security and stability on the continent as a prerequisite for the implementation of the development and integration agenda of the Union. http://www.africa-union.org

Agence Européenne pour le Développement et la Santé (AEDES), (European Agency for the Development and Health), Brussels, Belgium

It focuses on public health policies, food security and social programmes such as gender policy. http://www.aedes.be

→ *Volume 1, p. 228*

Agency for Monitoring and Forecasting of Emergency Situations, Moscow, Russia, Ministry of Emergency Situations

The Agency was created on March 27, 1997. Its purpose is to associate scientific, technical and information possibilities of organizations, Russian executive authority organs, Russian Academy of Sciences and other organizations for development and to create a state system of monitoring and forecasting of extreme situations, and catastrophes consequences. http://www.ampe.ru/english/index.shtml

Agricultural Research Council (ARC), South Africa

ARC's vision is: "To be an internationally recognized centre of excellence in agricultural science and innovation". It aims at promoting the agricultural and related sectors through research, technology development and transfer in order to enhance the natural resource base and environment, sustain a competitive agricultural economy, provide new economic opportunities, ensure high quality and safe food, support an informed society and encouraging the national growth and development of South Africa. http://www.arc.agric.za/

Alliance of Small Island States (AOSIS)

AOSIS is a coalition of small and low-lying coastal countries that share similar development challenges and concerns about the environment, especially their vulnerability to the adverse effects of global climate change. It functions primarily as an ad hoc lobby and negotiating voice for small island developing states (SIDS) within the United Nations system. AOSIS has a membership of 43 states and territories, drawn from all oceans and regions of the world. Thirty-seven are members of the United Nations. Together, SIDS communities constitute some 5 per cent of the global population. Member states of AOSIS work together primarily through their New York diplomatic missions to the United Nations. http://www.sidsnet.org/aosis

→ *Volume 1, p. (annex 4, 106)*

American Jewish World Services (AJWS)

AJWS is an independent not-for-profit organization founded in 1985 to help alleviate poverty, hunger and disease among the people of the world regardless of race, religion or nationality. http://www.ajws.org/

→ *Volume 1, p. 179*

American National Geographic Society

A group including geographers, explorers, teachers, lawyers, cartographers, military officers, and financiers - all learned, well - traveled men distinguished by a love of knowledge and a thirst for discovery and achievement - is at the origin of the creation of one of the largest non - profit scientific and educational institution in the world, namely the National Geographic Society, officially incorporated on January 27, 1888. http://www.nationalgeographic.com/

→ *Volume 1, p. 204*

Asian Development Bank (ADB), Manila, Philippines

ADB is a multilateral development finance institution dedicated to reducing poverty in Asia and the Pacific. http://www.adb.org

→ *Volume 1, p. 348, 349*

Asian Disaster Preparedness Center (ADPC), Bangkok, Thailand

ADPC is a regional resource center established in 1986 dedicated to disaster reduction for safer communities and sustainable development in Asia and the Pacific. It is recognized as an important focal point for promoting disaster awareness and developing capabilities to foster institutionalized disaster management and mitigation policies.
http://www.adpc.ait.ac.th
→ *Volume 1, p. 134, 158, 159, 160, 161, 176, 205, 214, 244, 256, 328, 349, 378, 380*

Asian Disaster Reduction Center (ADRC), Kobe, Japan

ADRC was established in July 1998 to promote multilateral cooperation for disaster reduction and to network the various players in the region. It has held annual meetings to network the focal points in governments of its member countries. Its activities focus on information sharing, capacity building and cooperation. It has developed several successful capacity building programmes with its member countries. http://www.adrc.or.jp
→ *Volume 1, p. 40, 159, 160, 176, 184, 196, 205, 241, 250, 290, 291, 370*

Asian Institute of Technology (AIT), Bangkok, Thailand

AIT is an international graduate institution of higher learning with a mission to develop highly qualified and committed professionals who will play a leading role in the sustainable development of the region and its integration into the global economy. http://www.ait.ac.th
→ *Volume 1, p. 372*

Asia-Pacific Economic Cooperation (APEC), Singapore

Its goal is to advance economic dynamism and sense of community within the Asia-Pacific region. APEC has established itself as the primary regional vehicle for promoting open trade and practical economic and technical cooperation. APEC was established in 1989 to further enhance economic growth and prosperity for the region and to strengthen the Asia-Pacific community. Since its inception, APEC has worked to reduce tariffs and other trade barriers across the Asia-Pacific region, creating efficient domestic economies and dramatically increasing exports. http://www.apecsec.org.sg

Association of Caribbean States (ACS), Port-of-Spain, Trinidad and Tobago

The convention establishing the ACS was signed on 24 July 1994 in Cartagena de Indias, Colombia, with the aim of promoting consultation, cooperation and concerted action among all the countries of the Caribbean, comprising 25 member states and three associate members. Eight other non-independent Caribbean states are eligible for associate membership. Its current focus is on cooperation in trade, transport, sustainable tourism and natural disasters. http://www.acs-aec.org
→ *Volume 1, p. 203*

Association of South East Asian Nations (ASEAN), Bangkok, Thailand

ASEAN was established on 8 August 1967. The ASEAN Declaration states that the aims and purposes of the association are to accelerate the economic growth, social progress and cultural development in the region through joint endeavours in the spirit of equality and partnership in order to strengthen the foundation for a prosperous and peaceful community of South-East Asian nations. It further aims to promote regional peace and stability through abiding respect for justice and the rule of law in the relationship among countries in the region and adherence to the principles of the United Nations Charter.
http://www.aseansec.org
→ *Volume 1, p. 159, 160, 373*

ASEAN Experts Group on Disaster Management (AEGDM)

ASEAN cooperation on natural and man-made disasters is coordinated by AEGDM which was established in 1976 and meets regularly to discuss and share experiences of the region's disaster management and mitigation activities.
http://www.adpc.ait.ac.th/pdr-sea/newsletter/issue3/pdr-update.html

ASEAN Regional Forum (ARF)

ARF is a regional platform consisting of ASEAN countries and dialogue partners for confidence building and dialogue on regional security concerns. It was established in 1994. It draws together 23 countries which have an impact on or are involved in the security of the Asia Pacific region. It comprises the 10 ASEAN member states (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam); the 10 ASEAN dialogue partners (Australia, Canada, China, Eropean Union, India, Japan, New Zealand, Republic of Korea, Russia and the USA); the one ASEAN observer (Papua New Guinea); as well as the Democratic People's Republic of Korea and Mongolia.
http://www.dfat.gov.au/arf/
→ *Volume 1, p. 160*

Associación para la investigación del desarrollo sostenible de las Segovias (ADESO), Nicaragua

ADESO is a scientific non-profit association. Together with the local actors it identifies the problems of the development of the region "Las Segovias". http://www.adeso.org.ni/
→ *Volume 1, p. 278*

Atelier Parisien d'Urbanisme (APUR)

APUR was created by the Council of Paris in 1967. Its mission is to follow urban evolutions, participate at the elaboration of definitions of urban and land use planning policies and at the preparation of projects for Paris and the region of Ile de France. It observes and analyses demographic, economic and social data of the French Capital and other big cities in order to elaborate action plan proposals, and prepare urban studies.
http://www.apur.org/
→ *Volume 1, p. 120*

Auckland Local Authority Hazard Liaison Group, New Zealand

It was established by the Auckland Regional Council (ARC) (http://arc.govt.nz) to enhance communication between local authorities in hazard management issues and to facilitate intra-council communication. The group was set up to recognize the link between hazard mitigation and land use planning, and the need to develop tools in areas to successfully manage risk, and to improve communication between those working in the area of sustainable development and environment management.
→ *Volume 1, p. 129*

Australian Geological Survey Organization (AGSO)

Geoscience Australia is the national agency for geoscience research and information. It contributes to enhance economic, social and environmental benefits to the community by providing input for decisions that impact upon resource use, management of the environment, and the safety and well-being of Australians. Its major planned outcomes are: enhanced global attractiveness of Australia's offshore and onshore exploration, improved resource management and environmental protection, safer communities and transportation.
http://www.agso.gov.au
→ *Volume 1, p. 68, 210*

B

Bandung Institute of Technology (BIT), Indonesia

In 1959, the present Institut Teknologi Bandung was founded by the Indonesian Government as an institution of higher learning of science, technology, and fine arts, with a mission of education, research, and service to the community. http://www.itb.ac.id/

→ *Volume 1, p. 184, 243*

Bangladesh Centre for Advanced Studies (BCAS)

BCAS is an independent, non-profit, non-government, policy, research, and implementation institute working on sustainable development at local, national, regional and global levels. BCAS addresses sustainable development through four interactive themes: (a) environment-development integration, (b) good governance and people's participation, (c) poverty alleviation and sustainable livelihoods, and (d) economic growth and public-private partnership. It was established in 1986, and over the years has grown to become a leading institute in the non-government sector in Bangladesh and South Asia. http://www.bcas.net/

→ *Volume 1, p. 19*

Benfield Hazard Research Centre (BenfieldHRC), London, United Kingdom

It is an academic research centre based at London's University College which comprises three groups: Geological Hazards, Meteorological and Space Hazards, and Disaster Management. It provides a conduit for the transfer of cutting-edge natural hazard and risk research, practice, and innovation from the academic environment to the business world and government and international agencies. http://www.benfieldhrc.org

→ *Volume 1, p. 232, 257, 258*

Building and Housing Research Centre (BHRC), Iran

BHRC is affiliated to the Ministry of Housing and Urban Development. It is a national centre for research and assessment of products and systems in the building and housing fields in Iran. Its principal objectives are study, coordination, centralization, and performance of research projects on building and housing systems, materials and constructional technologies, and the effects of climatic and environmental conditions. http://www.bhrc.gov.ir/

→ *Volume 1, p. 117*

Bureau de la Protection des Infrastructures Essentielles et de la Protection Civile (BPIEPC)/Office of Critical Infrastructure Protection and Emergency Preparedness (OCIPEP), Canada

Its mission is to enhance the safety and security of Canadians in their physical and cyber environment. It has two key mandates: to provide national leadership in a new, modern and comprehensive approach to protecting Canada's critical infrastructure the key physical and cyber components of the energy and utilities, communications, services, transportation, safety and government sectors, to be the government's primary agent for ensuring national civil emergency preparedness for all types of emergencies. http://www.ocipep-bpiepc.gc.ca/index.html

→ *Volume 1, p. 93, 204, 266, 334*

Bureau de Recherches Géologiques et Minières (BRGM), France

Established in 1959, its activities on risks cover seismic risk, landslides, drought, volcanic risk. It also deals with pollution. http://www.brgm.fr

→ *Volume 1, p. 275*

Business and Industry Council for Emergency Planning and Preparedness (BICEPP)

In 1983, the Mayor of Los Angeles and a group of business leaders met to discuss disaster preparedness. This group subsequently became a steering committee and formed the Business and Industry Council for Emergency Planning and Preparedness (BICEPP). It was

established as a private sector, self-help association funded by annual sponsorship donations. BICEPP later evolved into a non-profit corporation, lead by an Executive Committee and a Board of Directors. Its goal is to provide a forum for information exchange, to enhance emergency preparedness and contingency planning within the business community. http://www.bicepp.org
→ *Volume 1, p. 232*

C

Canadian International Development Agency (CIDA)
CIDA supports sustainable development activities in order to reduce poverty and to contribute to a more secure, equitable and prosperous world.
http://www.acdi-cida.gc.ca/index.htm
→ *Volume 1, p. 229*

CARE International
CARE is an independent humanitarian organisation working to end world poverty. Its mission is to serve individuals and families in the poorest communities in the world.
http://www.careinternational.org.uk/
→ *Volume 1, p. 229, 231*

Caribbean Community (CARICOM)
Its mission is to provide dynamic leadership and service, in partnership with Community institutions and Groups, toward the attainment of a viable, internationally competitive and sustainable Community, with improved quality of life for all. http://www.caricom.org
→ *Volume 1, p. 147*

Caribbean Development Bank (CDB), St. Michael, Barbados
CDB intends to be the leading Caribbean development finance institution, working in an efficient, responsive and collaborative manner with its borrowing members, leading towards the systematic reduction of poverty in member countries, through social and economic development. http://www.caribank.org/
→ *Volume 1, p. 145, 309, 347, 348*

Caribbean Disaster Emergency Response Agency (CDERA), St. Michael, Barbados
CDERA is an intergovernmental, regional disaster management organization with 16 participating states, headquartered in Barbados. CDERA's main function is to launch an immediate and coordinated response to any disastrous event affecting any participating state, once the state requests such assistance. http://www.cdera.org
→ *Volume 1, p. 147, 370*

CARITAS India
Caritas India is an official organization of the Catholic Bishops' Conference of India. (C.B.C.I.). It began work in 1962 with the headquarters in the C.B.C.I. Centre, New Delhi.The activities of the Caritas can be broadly divided into the following areas: emergency aid - relief and rehabilitation, animation and development, campaign against hunger and disease. http://www.cbcisite.com/caritas.html
→ *Volume 1, p. 228*

Catholic Relief Services (CRS)
CRS was founded in 1943 by the Catholic Bishops of the United States to assist the poor and disadvantaged outside the country. CRS provides direct aid to the poor, and involves people in their own development, helping them to realize their potential. http://www.catholicrelief.org/
→ *Volume 1, p. 228*

Center for Disease Control and Prevention (CDC), Atlanta, USA

CDC is recognized as the lead federal agency for protecting the health and safety of people – at home and abroad, providing credible information to enhance health decisions, and promoting health through strong partnerships. CDC serves as the national focus for developing and applying disease prevention and control, environmental health, and health promotion and educational activities. http://www.cdc.gov

Center for Ecology and Hydrology (CEH), United Kingdom

The Center is one of the Centres and Surveys of the Natural Environment Research Council. CEH's vision is to be the Center of excellence in terrestrial and freshwater sciences through directed long-term, strategic and integrated research relevant to governments and industry.
http://www.ceh.ac.uk
→ *Volume 1, p. 216*

Center for Environmental Planning and Technology (CEPT), Ahmedabad, India

The CEPT is sponsored by the Ahmedabad Education Society. It is a voluntary non-profit organisation established in 1935, devoted to the cause of education at all levels in several branches of learning. It is now a registered society and a public trust. CEPT offers full time undergraduate programmes of five year duration in architecture, construction technology and interior design supported by state government and post graduate programmes of one and a half year duration in urban and regional planning, housing, environmental planning, urban design and landscape architecture funded by All India Council of technical education and construction and project management and structural design which are self financing.
http://www.gisdevelopment.net/education/inst/cept.htm

Center for Hazards and Risk Research, Lamont-Dohert and Earth Obsevatory of Columbia University, New York, United States of America

The mission of the Center is to advance the predictive science of natural and environmental hazards and the integration of science with hazard risk assessment and risk management.
http://www.ldeo.columbia.edu/res/pi/CHRR/
→ *Volume 1, p. 275*

Center for Integration of Natural Disaster Information (CINDI), United States Geological Survey

CINDI is a research and operational facility that explores methods for collecting, integrating, and communicating information about the risks posed by natural hazards and the effects of natural disasters. http://mac.usgs.gov/isb/pubs/factsheets/fs00301.html
→ *Volume 1, p. 212*

Center for Research and Transfer of Appropriate Technology (CITTA), University of Buenos Aires, Argentina

The Center has taken a leading role in the development of architectural and urban planning techniques for the reduction of disaster risk. Recent work in conjunction with the World Bank has focused on the reduction of consequences of urban flooding in Argentina.
→ *Volume 1, p. 259*

Center for Security Studies, Zurich, Switzerland

See Swiss Federal Institute of Technology (ETH), Zurich

Center of Scientific Investigation and Higher Education (CICESE), Ensenada, Mexico

CICESE is dedicated to conducting scientific research in basic and applied science, as well as developing new technologies and highly skilled human resources in three major

disciplines: earth sciences, oceanography and applied physics.
http://www.cicese.mx/cicese/ingles.html
→ *Volume 1, p. 332*

Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP), Dhaka, Bangladesh

CIRDAP is a regional, intergovernmental and autonomous institution established in July 1979 by the countries of Asia and the Pacific region. The Food and Agriculture Organization (FAO) of the United Nations, which had the support of several other UN bodies and donor countries and agencies such as Japan, and the Swedish International Development Agency, took the initiative for its creation. The member countries of CIRDAP are Afghanistan, Bangladesh, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, and Viet Nam. http://www.cirdap.org.sg
→ *Volume 1, p. 240*

Central American Bank for Economic Integration (CABEI), Honduras

CABEI, as a development bank and the financial arm of integration, has as its mission to promote progress and integration in the Isthmus, to foment economic growth with equity and to respect the environment, by means of supporting public and private projects and programs that create productive employment and contribute to improve productivity and competitiveness, as well as to increase the human development indices of the region. Headquartered in Tegucigalpa, Honduras, CABEI was founded on December 13, 1960, by the Republics of Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica to promote regional integration and development. The bank's membership has since grown to include the extra-regional members of Mexico, the Republic of China (Taiwan), Argentina and, most recently, Colombia. http://www.bcie.org
→ *Volume 1, p. 347*

Central Building Research Institute (CBRI), India

The Institute has been vested with the responsibility of generating, cultivating and promoting building science and technology in the service of the country. Since it's inception in 1947, the Institute has been assisting the building construction and building material industries in finding timely, appropriate and economical solutions to the problems of materials, rural and urban housing, energy conservation, efficiency, fire hazards, structural and foundation problems and disaster mitigation. http://www.cbri.org/

Central Committee for Flood and Storm Control (CCFSC), Viet Nam

The CCFS Control is responsible for emergency responses to disastrous events in Viet Nam.
→ *Volume 1, p. 91*

Central European Disaster Prevention Forum (CEUDIP)

This Forum has been established in 1999 by decision of the Central European Committees for the International Decade for Natural Disaster Reduction of the United Nations (IDNDR). This was done in order to continue the efforts initiated during the Decade by the countries of Central Europe (Czech Republic, Germany, Hungary, Poland and Slovakia) in activities requiring collaboration of neighbouring countries in all types of disasters, in particular in floods on rivers which are shared by these countries. The main focus was on early warning, but other important issues are being mutually considered, including the media's role, disaster prevention and mitigation and legislation on states of emergency.
→ *Volume 1, p. 172, 173*

Centre Européen de Prévention des Risques (CEPR), France

The CEPR is a centre on applied sciences in the field of prevention. Its work is founded on the expertise of insurers, researchers, and manufacturers of products and services. http://www.cepr.tm.fr

→ *Volume 1, p. 368*

Centre d'Etude des Risques Géologiques (CERG-UNIGE), University of Geneva, Switzerland

The goal of the CERG is to form experts who can advise the public and private sectors to take preventive measures which can reduce the impact of natural disasters. It is usually taught at the University of Geneva in Switzerland, with field studies in Switzerland and in neighbouring countries such as France and Italy. http://www.unige.ch/hazards/

→ *Volume 1, p. 269*

Centre for Disaster Management (CENDIM), Bogazici University, Istanbul, Turkey

CENDIM was established in January 2001 as an interdisciplinary research centre for disaster management. The centre is in strategic partnership with many national and international organizations to develop disaster, engineering and risk management plans and to facilitate information sharing with governmental, non-governmental and community based organizations. CENDIM also aims to deploy the synergy of multi-disciplinary collaboration by national and international organizations. http://www.cendim.boun.edu.tr

→ *Volume 1, p. 275*

Centre for Disaster Studies, James Cook University, Queensland, Australia

The Centre is a multidisciplinary research unit presently housed in the School of Tropical Environment Studies and Geography of James Cook University. The Centre has acted as the university's face to the public and the professionals in the emergency management and meteorology fields, city councils and other researchers since its establishment in 1979. http://www.tesag.jcu.edu.au/cds/index.htm

→ *Volume 1, p. 243*

Centre for Environmental Science and Engineering (CESE), Indian Institute of Technology (IIT), Bombay, India

CESE has a dedicated group of ten faculty members with multi-disciplinary background and interests together with faculty co-opted from allied disciplines to lead the activities of the centre. The Centre offers M.Tech. and Ph.D. programmes, which are interdisciplinary in nature and consists of course work followed by a research project. The centre is offering wide professional expertise and is actively pursuing several sponsored research, consultancy and technical services and has established strong links with leading industries, institutions and national/international agencies. CESE has been very active in man-power development by organizing tailor-made workshops and training programmes. http://www.cese.iitb.ac.in/

→ *Volume 1, p. 243*

Centre for Hazard and Risk - Risk Frontiers (formely the Natural Hazards Research Centre-NHRC, Macquairie University, Sydney, Australia

Its mission is to create strategic risk management and training solutions for insurance companies and their clients through world leading research into natural perils and their consequences. http://www.es.mq.edu.au/NHRC/

→ *Volume 1, p. 243*

Centre for Research on the Epidemiology of Disasters (CRED), Catholic University of Louvain, Brussels, Belgium

Although the main focus of the Centre is on safeguards, public health and the sanitary

aspects of disasters, CRED also studies the socio-economic and long-term effects of these large-scale disasters. Increasingly, preparedness, principally at the level of human resource development as well as problems linked to the management of crises, have gained a higher profile within CRED's activities. It maintains the OFDA/CRED international disaster database EM-DAT. http://www.cred.be
→ *Volume 1, p. 3, 8, 40, 48, 72, 195, 196, 205, 240, 255*

Centres Internationaux de Formation des Acteurs locaux (CIFAL), France (International Training Centres for Local Actors)

The objectives of the centres are: to contribute to crisis management by UN agencies; to focus on the role of local community for emergency humanitarian response and aids for reconstruction and to establish partnership with UN agencies and other international actors. http://www.unitar.org/dcp

Centre of Competence on Natural Disaster Reduction (CENAT), Switzerland

CENAT was founded by the Swiss Federal Institute of Technology Council in 1995. Its main aim is to effect interdisciplinary research on the causes of natural hazards, the processes involved, their effects on people and objects, and on appropriate means of protection. It serves to identify the existing potential of specialists and know-how within the ETH group in the field of natural hazards, and constitutes a contact point for public and private institutions as well as national and international organisations. http://www.cenat.ch/
→ *Volume 1, p. 111, 243, 259, 268, 270*

Centre of Studies in Resources Engineering (CSRE), at the Indian Institute of Technology (IIT), Bombay

CSRE, since its inception in 1976, has been actively involved in developing remote sensing technology and its application to natural resources management and environmental monitoring. The Centre has also done pioneering work in the area of Low Cost Geographical Information System (GIS) development in the country.
http://www.csre.iitb.ac.in/
→ *Volume 1, p. 243*

Centre Régional AGRHYMET, Niamey, Niger

Created in 1974, AGRHYMET is a specialized hydrometeorological institute of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS).
http://www.agrhymet.ne/
→ *Volume 1, p. 150, 200*

Centro de Coordinación para la Prevención de Desastres Naturales en América Central (CEPREDENAC), Republic of Panama (Coordinating Centre for the Prevention of Natural Disasters in Central America)

CEPREDENAC was established in 1988 as a coordination centre for strengthening the capacity of the region as a whole to reduce the vulnerability of the population to the effects of natural disasters. In May 1995, CEPREDENAC became an official organization set up to foster the Central American Integration System (SICA) with the Governments of Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama as members.
http://www.cepredenac.org
→ *Volume 1, p. 145, 146, 176, 186, 202, 203, 293, 366*

Centro International de Investigación sobre el Fenómeno El Niño (CIIFEN)

CIIFEN has been established as a centre drawing together information on El Niño Southern Oscillation (ENSO) and its impacts, collaborating with regional and national

partners in climate data processing, applications and prediction. For more information contact: World Meteorological Organization, E-mail: ipaateway.wmo.ch, http://www.wmo.ch
→ *Volume 1, p. 215, 374*

Centro Nacional de Prevención de Desastres (CENAPRED), Mexico, (National Center for Disaster Prevention)

The Centre was created by an Agreement of Cooperation between the Governments of Mexico and Japan for the use and transfer of technology for the prevention of disasters. http://www.cenapred.unam.mx
→ *Volume 1, p.204, 259, 271*

Centro Regional de Información de Desastres (CRID), San José, Costa Rica, (Regional Disaster Information Centre)

CRID is an initiative sponsored by six organizations that decided to join efforts to ensure the compilation and dissemination of disaster-related information in Latin America and the Caribbean. Its mission is to promote the development of a culture of prevention in the Latin American and Caribbean countries, through the compilation and dissemination of disaster-related information, and the promotion of co-operative efforts to improve risk management in the region. http://www.crid.or.cr
→ *Volume 1, p. 202, 203*

China Association for Science and Technology

The China Association for Science and Technology served three major purposes. First, it brought individual scientists and administrators together with their professional peers from other work units at conferences, lectures, and joint projects, and it promoted communication across administrative boundaries. Second, it had a major role in the popularization of science and dissemination of scientific knowledge to the general public. Third, it played a major role in China's international scientific exchanges and hosted delegations of foreign scientists, sponsored international scientific conferences in China, participated in many joint research projects with foreign associations and scientific bodies, and represented China in many international science societies. http://www.1upinfo.com/country-guide-study/china/china269.html

Civil Protection Command, Romania

"The civil protection is a part of the national defence and contains the ensemble of measures and activities, aimed to protect the population, assets, cultural values and environment factors, in case of armed conflict or disaster". (Art.1-The Civil Protection Law no. 106 on 25/09/96) http://www.icdo.org/National%20structures/Romania.pdf
→ *Volume 1, p. 119*

Coastal Services Center (CSC), USA

See National Oceanic and Atmospheric Administration (NOAA)
→ *Volume 1, p. 72*

Comisión Centroamericana de Ambiente y Desarrollo (CCAD), El Salvador, (Central American Commission for Environment and Development)

It is called to protect and, at the same time, give value to the regional patrimony, which is characterized by its biological diversity and ecosystems. Accordingly, it is also called to be a bridge of collaboration between the countries of the region seeking the adoption of the themes of sustainable development by soliciting the collaboration of all the parties that work in the field of development. It is the regional institution in Central America responsible for

the coordination of Corridor activities and other regional environment and development initiatives in Central America. http://www.iucn.org/places/orma/pdfs/bioesp.pdf
→ *Volume 1, p. 145*

Comisión Nacional de Prevención de Riesgos y Atención de Emergencias (CNE), Costa Rica, (National Risk Prevention and Emergency Response Commission)

The National Commission for Risk Prevention and Emergency Management, formely the National Emergency Commission, is part of the President's Office. It is the entity responsible for the coordination of prevention work on risk and for the mitigation and response to emergency situations (Article 19 of the Legislature). The development of the National Law for Emergencies, on 14 August, 1969, was the foundation for the National Commission. http://www.cne.go.cr
→ *Volume 1, p. 202, 286*

Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (CILSS), Ouagadougou, Burkina Faso, (Permanent Interstate Committee for Drought Control in the Sahel)

Its mission is to be involved in the research of food security and to combat the effects of drought and desertification for better ecological stability. http://www.cilssnet.org
→ *Volume 1, p. 150, 157*

Commission for the Geological Map of the World (CGMW)

The CGMW's aims are to promote, coordinate and publish synthetic earth sciences maps, at small scale, of continental and/or oceanic areas of the world. It is a non-profit scientific and pedagogic body governed by French law. http://ccgm.free.fr

Committee on Earth Observation Satellites (CEOS)

CEOS is an international organization charged with coordinating international civil spaceborne missions designated to observe and study planet Earth. Comprising 41 space agencies and other national and international organizations, CEOS is recognized as the major international forum for the coordination of Earth observation satellite programs and for interaction of these programs with users of satellite data worldwide. http://www.ceos.org
→ *Volume 1, p. 222*

Community Action Group for Floodwater, Old Community of Rodenkirchen, Germany

The community action group for floodwater in the old community of Rodenkirchen is a non-profit association founded in a district of Cologne. This group advocates the interests of more than 4,000 residents in matters of local flood protection. In 2001, the group sailed the boat up the Rhine staging events and conducting discussions in 18 towns and cities together with other community action groups and representatives of local authorities. The overall promotional efforts of the campaign for greater awareness about flood issues are not limitted to Germany alone, as the group's trip also goes through parts of France, Switzerland and the Netherlands.
→ *Volume 1, p. 183, 290*

Concern Worldwide

Its mission is to enable poor people to achieve major improvements in their lifestyles. It works with the poor themselves and with local and international partners who share its vision to create just and peaceful societies where the poor can exercise their fundamental rights. http://www.concern.ie/news/dec_africa.htm
→ *Volume 1, p. 228*

Consejo Regional de Cooperación Agricola (CORECA) para America Central, Mexico y la Republica Dominicana (Regional Council for Agricultural Cooperation in Central America, Mexico and the Dominican Republic)

CORECA began in 1980 when a meeting of the International and Regional Committee on Agronomic Security, under the guidance of Panama and the Dominican Republic, put forward the idea of establishing a political forum at the ministerial level for the agricultural sector. The Council's principal objective was to serve as a permanent forum for consultation and cooperation between the various political parties of the regions' agricultural sectors. Particularly, it would focus on raising the quality of life for farmers, improving the environment, initiating technological development and offering wide-ranging cooperation. The member states of CORECA include Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, and the Dominican Republic.
http://coreca.org/what/coreca

Consortium of Universities for Research in Earthquake Engineering (CUREE), United States of America

CUREE is a non-profit organization established in 1988, devoted to the advancement of earthquake engineering research, education and implementation. http://www.curee.org/
→ *Volume 1, p. 276*

Consultative Group for International Agricultural Research (CGIAR)

The CGIAR was created in 1971. Its mission is to contribute, through its research, to promoting sustainable agriculture for food security in developing countries. Membership of the Group has increased from eighteen to fifty-eight, the number of CGIAR centers has grown to sixteen, and their research interests have been diversified. http://www.cgiar.org

Cooperative for Assistance and Relief Everywhere (CARE)

CARE is a non-governmental organization, that consists of 11 member organizations, working as a global force dedicated to achieving lasting victory over poverty.
http://www.care.org
→ *Volume 1, p. 182, 183, 228, 229, 231*

Coordinating Committee for Coastal and Offshore Geoscience Programmes in East and Southeast Asia (CCOP), Bangkok, Thailand

CCOP is an intergovernmental organization focused on regional geo-scientific aspects. It consists of 11 member countries i.e., Cambodia, China, Indonesia, Japan, Republic of Korea, Malaysia, Papua New Guinea, the Philippines, Singapore, Thailand, Viet Nam and is supported by 14 cooperating countries and several international organizations.
http://www.ccop.or.th

Coordinating Council for Disaster Management (CCGC), Mozambique

CCGC is the government body responsible for policy decisions relating to disasters.
→ *Volume 1, p. 104*

Corporación Andina de Fomento (CAF), Caracas, Venezuela, (Andean Development Corporation)

CAF is made up of Latin American and Caribbean shareholders (Bolivia, Colombia, Ecuador, Peru, Venezuela, Argentina, Brazil, Chile, Jamaica, Mexico, Panama, Paraguay, and Trinidad and Tobago and 22 private banks in the Andean region). It has the mission of backing the sustainable development of its shareholder countries and of integration by raising funds to provide a range of financial services. http://www.comunidadandina.org/
→ *Volume 1, p. 95, 96, 97, 145, 347*

Council for Scientific and Industrial Research (CSIR), South Africa

Constituted as a Science Council by an Act of Parliament, the CSIR operates as a market-oriented contract and consortium research partner to its clients and stakeholders. CSIR focuses on building Africa's capacity in Environmental Impact Assessment (EIA) project management. CSIR Water, Environment and Forestry Technology has been involved in the development and presentation of EIA capacity building courses for the past 10 years. http://www.csir.co.za

→ *Volume 1, p. 326*

Council of Europe – EUR-OPA Major Hazards Agreement

The Committee of Ministers of the Council of Europe has set up the Open Partial Agreement in 1987. This intergovernmental agreement is a platform for cooperation in the field of major natural and technological disasters between Eastern Europe, the Mediterranean area and Western Europe concerning knowledge about prevention, risk management, post-crisis analysis and rehabilitation. http://www.coe.int/T/E/Cultural_Co-operation/Disasters

→ *Volume 1, p. 166, 167*

Country Fire Authority (CFA), Australia

The devastation of the 1944 fires emphasised the urgency of better coordination of country fire services. CFA has evolved to become one of the world's largest volunteer based emergency services. The ties between CFA and state government, local government, industry and brigades are essential to the successful operation of CFA. As a community service organisation, CFA brigades are strongly supported by their local communities and CFA infrastructure in responding to meet Victoria's fire safety and emergency management needs. http://www.cfa.vic.gov.au/

→ *Volume 1, p. 368*

D

Darmouth Flood Observatory, Darmouth College, United States of America

The Observatory provides current information (updated daily) on flooding. It uses satellite technology to help detect such events as they occur. It also archives the obtained cartographic information about flooded lands into the first global atlas of flood hazard (www.darmouth.edu/floods/Atlas.html).This on-line and rapidly growing atlas records for posterity 15 years of flood history, world-wide. http://www.dartmouth.edu/~floods/

→ *Volume 1, p. 372*

David and Lucile Packard Foundation, United States of America

The Foundation was created in 1964 by David Packard, co-founder of the Hewlett-Packard Company, and Lucile Salter Packard. Together, universities, national institutions, community groups, youth agencies, family planning centers, and hospitals constitute a tradition that complements government efforts to focus on society's needs. http://www.packard.org/

→ *Volume 1, p. 244*

Department for Earthquake Engineering at the University of Roorkee, State of Uttar Pradesh, India

Established in 1960 as School of Research and Training in Earthquake Engineering, the department has been actively engaged in teaching, basic and applied research, and providing consultancy services in the seismic design of almost all major engineering projects in the country, with an aim of mitigating disasters caused by earthquakes. The department has been consulted by a large number of governmental and non-governmental-organizations with regard to earthquake resistant design of such structures. This has also helped the

industry in obtaining certification of the seismic withstand capability of equipment and other systems to be installed in seismic areas. A large portion of the software used for analysis and design has been developed in-house. In addition, the department has also undertaken programmes of seismic instrumentation in the country with a view to have better understanding of the ground motion characteristics and seismicity of various regions. The department has rendered technical services to UNESCO on Influence of Natural Disasters on Educational Facilities for the West and South East Asian countries and has prepared a manual on protective measures needed to save educational facilities from the disastrous effects of earthquakes. http://www.rurkiu.ernet.in/
→ *Volume 1, p. 329*

Department of Hydrology and Meteorology (DHM), Nepal

DHM is an organization under the Ministry of Science and Technology. The department with headquarters in Kathmandu has four basin offices: Karnali Basin Office in Surkhet, Narayani Basin Office in Pokhara, Bagmati Basin Office in Kathmandu, and Kosi Basin Office in Dharan. DHM has a mandate to monitor all the hydrological and meteorological activities in Nepal. The scope of work includes the monitoring of river hydrology, climate, agrometeorology, sediment, air quality, water quality, limnology, snow hydrology, glaciology, and wind and solar energy. General and aviation weather forecasts are the regular services provided by DHM. As a member of the WMO, DHM contributes to the global exchange of meteorological data on a regular basis. DHM actively participates in the programs of relevant international organizations, such as UNESCO's International Hydrological Program (IHP) and WMO's Operational Hydrology Program (OHP).
http://www.dhm.gov.np

Department of International Development (DFID), United Kingdom

DFID is a UK government department working to promote sustainable development and eliminate world poverty. http://www.dfid.gov.uk
→ *Volume 1, p. 186, 198, 208, 226, 232, 258*

Department of Transport and Regional Services (DOTRS), Australia

The Department provides policy advice to the ministers for the transport and regional services portfolio and delivers a variety of programs on behalf of the Commonwealth Government. It also conducts research, analysis and safety investigations; provide safety information and advice based upon these investigations; and perform regulatory functions.
http://www.dotrs.gov.au/
→ *Volume 1, p. 272*

Department of Water Affairs and Forestry (DWAF), South Africa

DWAF is the custodian of South Africa's water and forestry resources. It is primarily responsible for the formulation and implementation of policy governing these two sectors. It also has override responsibility for water services provided by local government. While striving to ensure that all South Africans gain access to clean water and safe sanitation, the water sector also promotes effective and efficient water resources management to ensure sustainable economic and social development.The forestry programme promotes the sustainable management of the country's natural forest resources and commercial forestry for the lasting benefit of the nation. http://www.dwaf.gov.za/
→ *Volume 1, p. 68*

Deutsches Forschungsnetz Naturkatastrophen (DFNK), Germany, (German Research Network for Natural Disasters)

DFNK is an initiative of German research programmes and institutions. The Network's goal is to collect, organize and disseminate information from research, knowledge and

methodology on the topic of natural disasters taken from technical, environmental and social research sources working in this field. http://dfnk.gfz-potsdam.de
→ *Volume 1, p. 267, 268*

Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Germany (German Agency for Technical Cooperation)

GTZ is a government-owned corporation for international cooperation with worldwide operations. In more than 120 partner countries, GTZ is supporting many development projects and programmes, chiefly under commissions from the German Federal Government. GTZ's aim is to improve the living conditions and perspectives of people in developing and transition countries. http://www.gtz.de
→ *Volume 1, p. 94, 95, 147, 181, 186, 366, 367*

Deutsches Komite für Katastrophenvorsorge e.V. (DKKV), (German Committee for Disaster Reduction)

The tasks of the DKKV for disaster reduction are numerous and to a degree very particular: from technical projects researching the effects of disasters on society to political programmes encouraging the growth of disaster reduction initiatives. http://www.dkkv.org
→ *Volume 1, p. 370*

Direcçao Nacional de Aguas, Mozambique (DNA), (National Directorate of Water)

DNA is responsible for water policy and its implementation, strategic and integrated planning on the management of water resources as well as water supply and sanitation services. The directorate is a government agency working under the Ministry of Public Works and Housing. http://www.dna.mz

Disaster Management and Mitigation Unit (DMMU), National College for Management Studies, Kabwe, Zambia

In 1998, the Government of Zambia established the DMMU as part of the vice president's office to coordinate disaster related activities. The DMMU is supported by a technical committee, which includes the Ministry of Agriculture's office of early warning, the Ministry of Agriculture, Food and Fisheries, the central statistical office, and key line ministries such as health, finance and economic development.
http://www.undmtp.org/inventory/pages/sa_inventory/zam_dmmu.html
→ *Volume 1, p. 240*

Disaster Management Bureau (DMB), Ministry of Disaster Management and Relief (MDMR), Bangladesh

MDMR is the principal government body, overseeing the disaster management activities in the country.The Disaster Management Bureau and Directorate of Relief and Rehabilitation works directly under the ministry. Bangladesh has established various disaster management committees at different levels from National Disaster Management Council (NDMC), headed by the Honorable Prime Minister, to the field level committee such as District Disaster Management Committee (DDMC), headed by Deputy Commissioner (DC). Under the supervision of MDMR, there are a number of disaster response units.
www.cred.be/centre/public/141e/ch09.htm

Disaster Management Center (DMC), University of Wisconsin, United States of America

The center's goal is to help improve the emergency management performance of non-governmental organizations, local and national governments, and international organizations, through a comprehensive professional development program in disaster management. Distance learning is the principal approach for this international program. http://dmc.engr.wisc.edu/
→ *Volume 1, p. 240*

Disaster Management Facility (DMF), World Bank, Washington D.C., United States of America, NOW Hazard Management Unit (HMU)

It aims to reduce human suffering and economic losses caused by natural and technological disasters. Making sure that disaster prevention and mitigation are integral parts of development requires action, it takes action by providing technical support to World Bank operations, promoting capacity-building, and establishing partnerships with the international and scientific community working on disaster issues.
http://www.worldbank.org
→ *Volume 1, p. 347*

Disaster Management Institute of Southern Africa (DMISA), South Africa

DMISA is an organization where everyone involved in disaster management can relate to others with similar interests, and creates opportunities for the improvement of disaster management in Southern Africa. http://www.cmc.gov.za/pht/DMISA.htm
→ *Volume 1, p. 370*

Disaster Management Technical Council (CTGC), Mozambique

The CTGC provides technical back-up to the National Disaster Management Institute (INGC), an autonomous institution under the Ministry of Foreign Affairs and Cooperation.
→ *Volume 1, p. 104*

Disaster Management Unit, (DMU), Standing Office of the Central Committee for Flood and Storm Control (CCFSC), Viet Nam

DMU is the mechanism chosen by the Government of Viet Nam and UNDP to join together over 1000 years of Vietnamese flood protection culture with twenty-first century western technology to better protect the entire population of Viet Nam against the annual natural disasters that ravage the country. http://www.undp.org.vn/dmu/index.html
→ *Volume 1, p. 82*

Disaster Mitigation Facility (DMF) for the Caribbean, CBD, USAID/OFDA

On February 20, 2002, the Caribbean Development Bank launched its Disaster Mitigation Facility for the Caribbean at the Sherbourne Conference Centre in Barbados.

The Facility was established based on a limited scope grant agreement between CDB and USAID, and has two objectives: to assist CDB's borrowing member countries with the adoption and institutionalization of successful disaster mitigation plans and policies; and to strengthen CDB's institutional capacity to effectively implement its revised disaster management strategy, focusing on mitigation, and to integrate the revised strategy into all CDB's policies, projects and programmes.
http://www.caribank.org/downloads/dmfcpage.pdf

Disaster Mitigation Institute (DMI), India

The institute is a community based action research, action planning and advocacy non-governmental organisation. It works towards bridging the gap between policy, practice, and research related to disaster mitigation, in an effort to link the community to the inter national level humanitarian scenario. http://www.southasiadisasters.net/
→ *Volume 1, p. 228, 249*

Disaster Prevention and Preparedness Commission (DPPC), Ethiopia

DPPC is a government organization that deals with disaster mitigation and rehabilitation efforts http://www.telecom.net.et/~dppc/body.htm
→ *Volume 1, p. 99, 100*

Disaster Recovery Business Alliance (DRBA)

DRBA is an organization, a process and a product designed to provide an improvement in a community's ability to deal with disaster recovery by the formation of an effective alliance between the private and public sectors of a community. It offers a tested model to assist local leaders in forming and facilitating a lifeline-based planning organization to serve a local community. It was established and funded by the Electric Power Research Institute and co-founded by the Department of Energy, and the Association of Contingency Planning. DRBA has formed partnerships with many public and private sector organizations such as the Central United States Earthquake Consortium (CUSEC), the National Emergency Management Association (NEMA), the Institute for Business and Home Safety (IBHS). http://www.swidrcc.org/drba.html

→ *Volume 1, p. 232*

Disaster Research Center, Ohio State University, Unites States of America

The Center was established at Ohio State University in 1963 and moved to the University of Delaware in 1985. The Center conducts field and survey research on group, organizational and community preparation for response to and recovery from natural and technological disasters and other community-wide crises. DRC researchers have carried out systematic studies on a broad range of disaster types, including hurricanes, floods, earthquakes, tornadoes, hazardous chemical incidents, and plane crashes. http://www.udel.edu/DRC/

→ *Volume 1, p. 240*

Discipleship Centre, Hind Swaraj Mandal, India

The Discipleship Centre is a non-govermental organization involved in Gujarat Earthquake Relief and Rehabilitation efforts.

→ *Volume 1, p. 228*

Drought Monitoring Centres (DMC), Harare, Zimbabwe and Nairobi, Kenya

The Drought Monitoring Centres for Eastern and Southern Africa are charged with the responsibility of monitoring of drought and other climatic conditions in a timely manner with respect to intensity, geographical extent, duration and impact upon agricultural production and to give early warning for the formulation of appropriate strategies to combat any anticipated adverse effects. http://www.meteo.go.ke/

→ *Volume 1, p. 152, 154, 200, 370*

E

Earthquake Disaster Mitigation Research Center (EDM), Miki, Japan

The main purpose of the EDM is to produce "frontier research on earthquake disaster mitigation for urban regions." The major research activities are performed by three research teams: the disaster process simulation team, the disaster information system team and the structural performance team. http://www.edm.bosai.go.jp/english.htm

→ *Volume 1, p.249*

Earthquake Engineering Research Institute (EERI), Oakland, United States of America

The objective of EERI is to reduce earthquake risk by advancing the science and practice of earthquake engineering, by improving understanding of the impact of earthquakes on the physical, social, economic, political and cultural environment, and by advocating comprehensive and realistic measures for reducing the harmful effects of earthquakes. http://www.eeri.org

→ *Volume 1, p. 217, 325*

Earthquake Hazard Centre (EHC), Victoria University, Wellington, New Zealand

The EHC is an information network and dissemination centre for earthquake-resistant construction in developing countries. The EHC seeks to share basic earthquake engineering knowledge, common place in many countries, with those working in construction-related fields in developing countries. The EHC aims to provide information which is relevant and appropriate to the limited resources available in the communities where this information is most needed. The EHC is a non-profit organisation supported by Robinson Seismic Ltd and the New Zealand Ministry of Civil Defence and Emergency Management.
http://www.ehc.arch.vuw.ac.nz/
→ *Volume 1, p. 243*

East West Center, Honolulu, Hawai

The East-West Center is an internationally recognized education and research organization established by the U.S. Congress in 1960 to strengthen understanding and relations between the United States and the countries of the Asia Pacific region. The Center carries out its mission through programs of cooperative study, training and research. Professionals and students from the United States, Asia and the Pacific study and work together at the East-West Center to better understand issues of common and critical concern and explore mutually beneficial ways of addressing them. http://www.eastwestcenter.org/
→ *Volume 1, p. 165, 205, 214*

Economic Community of West African States (ECOWAS)

ECOWAS was created in 1975 by the Heads of State and Government of the 16 countries of the region with the goal to achieve economic union. There are several agro-ecological zones within ECOWAS ranging from the north to the south. These are the Sahelian zone, Sudanese zone, Guinean zone and the forest areas.
http://www.fao.org/tc/tca/pdf/fact_ECOWAS_en.pdf
→ *Volume 1, p. 157, 158, 176*

Emergency Management Australia (EMA)

EMA provides national leadership in the development of measures to reduce risk to communities and manage the consequences of disasters. It is the Federal Agency responsible for reducing the impact of natural and man-made disasters on the Australian community.
http://www.ema.gov.au
→ *Volume 1, p. 72, 75, 160, 210, 240, 315*

Emergency Management Australia Institute (EMAI), Mount Macedon, Australia

Emergency Management Australia's research and training centre at Mount Macedon was renamed the Emergency Management Australia Institute (EMAI) in January, 2002. The change was made to better reflect the institute as an integral part of EMA's core business and to stress the holistic nature of the organization's operations across its sites in Canberra and Mount Macedon, Victoria. EMAI conducts a program of activities which includes the National Studies Program, education and training activities, resource development to support the curriculum and the provision of information through the Australian Emergency Management Information Centre. EMAI is the education and information arm of Emergency Management Australia (EMA). http://www.ema.gov.au/ema/emainternet.nsf
→ *Volume 1, p. 240*

Environment and Development Action in the Third World (ENDA), Senegal

Founded in 1972, ENDA is an association of autonomous entities co-ordinated by an Executive Secretariat. In general, ENDA works to enhance the visibility and value, in practice as well as theory, of the knowledge and tools that exist in local development efforts. This consists of identifying and supporting community development initiatives - especially in terms of local organisations. http://www.enda.sn/

Environment and Society Institute (ESI), State University of New York, Buffalo, United States of America
It offers courses on engineering and applied sciences and hosts the National Center for Geographic Information and Analysis (NCGIA), the Center for Urban Studies. The Multidisciplinary Center for Earthquake Engineering Research (MCEER) is an affiliated research center. http://www.buffalo.edu
→ *Volume 1, p. 326*

Euro-Mediterranean Centre for Research on Arid Zones/Centre Euro-Mediterranéen sur les Zones Arides (CRSTRA), Biskra, Algeria.
The centre conducts scientific and technical research programmes on arid zones and zones threatened with desertification and drought.
http://www.coe.int/T/E/Cultural_Cooperation/Disasters/Activities/Network_of_Specialized_Euro-Mediterranean_Centres/
→ *Volume 1, p. 168*

Euro-Mediterranean Centre on Evaluation and Prevention of Seismic Risk/Centre Européen sur l'Evaluation et la Prévention du Risque Sismique (CEPRIS), Rabat, Morocco. It works to develop a unified strategy and common framework for coordinating regional seismo-tectonic zoning and assessment of seismic hazards and risks in the Mediterranean region.
http://www.coe.int/T/E/Cultural_Cooperation/Disasters/Activities/Network_of_Specialized_Euro-Mediterranean_Centres/
→ *Volume 1, p. 168*

Euro-Mediterranean Centre on Insular Coastal Dynamics/Centre Européen de la Dynamique Côtière Insulaire (IcoD), Valletta, Malta.
ICoD's main brief is to work in three main areas of education, applied research and information activities related to coastal dynamics. www.icod.org.mt
→ *Volume 1, p. 169, 206*

Euro-Mediterranean Seismological Centre/Centre Sismologique Euro-Méditerranéen (CSEM), Bruyères-le-Châtel, France. The activity of CSEM members is devoted to the promotion of seismological research. http://www.emsc-csem.org/
→ *Volume 1, p. 168, 374*

European Advisory Evaluation Committee for Earthquake Prediction (EAECEP). While not a Centre but a Committee of the Council of Europe, this institution of 13 specialists was established in 1993 by the Committee of Ministers and works closely with the EUR-OPA Specialized Centres. It is responsible for giving advice on earthquake prediction made by scientists.
http://www.coe.int/T/E/Cultural_Cooperation/Disasters/Activities/Network_of_Specialized_Euro-Mediterranean_Centres/
→ *Volume 1, p. 169*

European Centre for Disaster Medicine/ Centre Européen pour la Médecine des Catastrophes (CEMEC), San Marino
It promotes the prevention and mitigation of the effects of natural and technological disasters. www.diesis.com/cemec
→ *Volume 1, p. 168*

European Centre for Geodynamics and Seismology/Centre Européen de Géodynamique et de Sismologie (ECGS), Walferdange, Luxemburg

The Centre acts as a link between scientific research and its application to the prevention and interpretation of hazards. www.ecgs.lu

→ *Volume 1, p. 168, 206*

European Centre for Medium Range Weather Forecasts (ECMWF), Reading, United Kingdom

The Centre is an international organisation supported by 24 European states. Its principal objectives are: the development of numerical methods for medium-range weather forecasting; the preparation, on a regular basis, of medium-range weather forecasts for distribution to the meteorological services of the Member States; scientific and technical research directed to the improvement of these forecasts; collection and storage of appropriate meteorological data. In addition, the Centre makes available a proportion of its computing facilities to its member states for their research; assists in implementing the programmes of the World Meteorological Organisation; provides advanced training to the scientific staff of the member states in the field of numerical weather prediction; makes the data in its extensive archives available to outside bodies. http://www.ecmwf.int/

→ *Volume 1, p. 48*

European Centre for Prevention and Forecasting of Earthquakes/Centre Européen pour la Prévention et la Prévision des Tremblements de Terre (ECPFE), Athens, Greece

ECPFE is involved in all aspects of prevention as well as in the development of practical ways of managing earthquakes. European Centre for Research into Techniques for Informing Populations in Emergency Situations/Centre Européen de Recherche sur les Techniques d'Information de la Population dans les Situations d'Urgences/Centro Europeo de Investigacion de técnicas de información a la poblacion en Situaciones de Emergencia (CEISE), Madrid, Spain. Its work concerns methods of informing the public in emergency situations. www.proteccioncivil.org

→ *Volume 1, p. 168*

European Centre for School Training in Risk Prevention/Centre Européen sur la Formation Scolaire à la Prévention des Risques (CSLT), Sofia, Bulgaria

The Centre develops and promotes general and partial educational policies, training concepts and teaching methods in the field of risk prevention training in schools. www.bg400.bg/cslt

→ *Volume 1, p. 168*

European Centre for Vulnerability of Industrial and Lifeline Systems/Centre Européen sur la Vulnérabilité des Réseaux et Systèmes Industriels (ECILS), Skopje (former Yugoslavia Republic of Macedonia)

It promotes programmes for theoretical and applied research of urban vulnerability. www.iziis.ukim.edu.mk

→ *Volume 1, p. 168*

European Centre of New Technologies for the Management of Major Natural and Technological Hazards/Centre Européen des Nouvelles Technologies pour la Gestion des Risques Naturels et Technologiques Majeurs (ECNTRM), Moscow, Russian Federation

One of its primary objectives is the use of space technologies for the forecasting, prevention and relief in major natural and technological disasters.

European Centre on Floods/Centre Européen sur les Inondations (AECF), Kishinev, Moldova
It concentrates on proposals to prevent the risk of flooding.
→ *Volume 1, p. 168*

European Centre on Geomorphological Hazards/Centre Européen sur les Risques Geomorphologiques (CERG), Strasbourg, France.
CERG is concerned with studying the major hazards associated with earthquakes and landslides.
→ *Volume 1, p. 168*

European Centre on Training and Information of Local and Regional Authorities and Population in the Field of Natural and Technological Disasters /Centre Européen de Formation des Autorités Locales et Régionales dans le domaine des Catastrophes Naturelles et Technologiques (ECMHT), Baku, Azerbaïjan.
It provides training and information to local and regional authorities in the field of major hazards.
→ *Volume 1, p. 168*

European Centre on Urban Risks/Centre Européen sur les Risques Urbains (CERU), Lisbon, Portugal. Its principal functions are to provide a framework for coordinating relief and natural and technological hazard management and for devising a common strategy to combat urban hazards.
→ *Volume 1, p. 168*

European Commission
The European Commission embodies and upholds the general interest of the Union. The President and Members of the Commission are appointed by the Member States after they have been approved by the European Parliament.The Commission is the driving force in the Union's institutional system. It has the right to initiate draft legislation and therefore presents legislative proposals to Parliament and the Council. As the Union's executive body, it is responsible for implementing the European legislation (directives, regulations, decisions), budget and programmes adopted by Parliament and the Council.
It acts as guardian of the Treaties and, together with the Court of Justice, ensures that Community law is properly applied. It represents the Union on the international stage and negotiates international agreements, chiefly in the field of trade and cooperation
http://europa.eu.int/comm/index_en.htm
→ *Volume 1, p. 169, 170, 171, 172, 173, 207, 261, 262, 263, 310*

European Commission's Humanitarian Aid Office (ECHO)
The European Union's mandate to ECHO is to provide emergency assistance and relief to the victims of natural disasters or armed conflict outside the European Union. The aid is intended to go directly to those in distress, irrespective of race, religion or political convictions. http://europa.eu.int/comm/echo/en/
→ *Volume 1, p. 159, 160, 171, 172, 366, 374*

European Directorate General Joint Research Centre (JRC)
The Joint Research Centre (JRC) Directorate General is an integral part of the European Commission. It provides independent scientific and technical advice to the Commission, the European Parliament, the Council of Ministers and EU Member States in support of European Union (EU) policies. Its main aim is to help to create a safer, cleaner, healthier and more competitive Europe. Its seven scientific institutes carry out research of direct concern to EU citizens. It provides technical know-how both directly and through

coordinating and contributing to numerous broader networks linking industry, universities and national institutes. The JRC is playing an important role in helping establish the European Research Area (ERA). http://www.jrc.cec.eu.int
→ *Volume 1, p. 170, 213, 217, 222, 261, 262, 263, 264*

European Environment Agency (EEA), Copenhagen, Denmark

The EEA aims to support sustainable development and to help achieve significant and measurable improvement in Europe's environment through the provision of timely, targeted, relevant and reliable information to policy making agents and the public.
http://www.eea.eu.int
→ *Volume 1, p. 171, 256*

European Inter-regional Centre for Training Rescue Workers /Centre Européen de Formation Inter-Régionale pour les Sauveteurs (ECTR), Yerevan, Armenia.

It provides training of rescue workers and related instructors for humanitarian assistance.
http://www.coe.int/T/E/Cultural_Cooperation/Disasters/Activities/Network_of_Specialized_Euro-Mediterranean_Centres/
→ *Volume 1, p. 169*

European Laboratory for Structural Assessment – Earthquake Engineering (ELSA), Ispra, Italy

The construction of bridges, viaducts, buildings or tunnels, which can withstand earthquakes, involves using particularly sophisticated simulation laboratories. The most prestigious of these is ELSA, which is a technological flagship for the European Commission's Joint Research Centre. http://www.elsa.jrc.it
→ *Volume 1, p. 264*

European Natural Disasters Training Centre/Centre Européen de Formation sur les Risques Naturels (AFEM), Ankara, Turkey.

AFEM's main goal is to reduce the destructive effects of hazards through research, training and education at all levels, from policy makers to field workers associated with disaster preparedness and response.
http://www.coe.int/T/E/Cultural_Cooperation/Disasters/Activities/Network_of_Specialized_Euro-Mediterranean_Centres/
→ *Volume 1, p. 168, 206*

European Oceanological Observatory, Scientific Centre of Monaco/Centre scientifique de Monaco, Observatoire Océanologique Européen (OOE), Monaco.

It conducts research with the objective of evaluating major ecological risks and restoring degraded habitats.
http://www.coe.int/T/E/Cultural_Cooperation/Disasters/Activities/Network_of_Specialized_Euro-Mediterranean_Centres/
→ *Volume 1, p. 169*

European Research Area (ERA)

On 18, January 2000 the European Commission adopted the platform "Towards a European Research Area" which is meant to contribute to the creation of better overall framework conditions for research in Europe. ERA is regrouping all Community supports for the better coordination of research activities and the convergence of research and innovation policies, at national and EU levels.
http://europa.eu.int/comm/research/era/index_en.html
→ *Volume 1, p. 207, 262*

European Space Agency (ESA)

The European Space Agency is Europe's gateway to space. Its mission is to shape the development of Europe's space capability and ensure that investment in space continues to deliver benefits to the people of Europe. ESA has 15 Member States. By coordinating the financial and intellectual resources of its members, it can undertake programmes and activities far beyond the scope of any single European country. http://www.esa.int/

→ *Volume 1, p. 167, 207, 217*

European Union (EU)

The European Union was set through the process of European integration launched on 9 May 1950 when France officially proposed to create "the first concrete foundation of a European federation." Six countries (Belgium, Germany, France, Italy, Luxembourg and the Netherlands) joined from the very beginning. Today, after four waves of accessions (1973: Denmark, Ireland and the United Kingdom; 1981: Greece; 1986: Spain and Portugal; 1995: Austria, Finland and Sweden), the EU has 15 Member States and is preparing for the accession of other eastern and southern European countries. Its main agencies are: European Parliament, Council of the Union, European Commission, Court of Justice, Court of Auditors, European Central Bank, European Economic and Social Committee, Committee of the Regions, European Investment Bank, European Ombudsman. http://www.europa.eu.int

→ *Volume 1, p. 156, 160, 167, 169, 170, 171, 222, 229, 258, 351, 367*

European University Centre for Cultural Heritage/Centre Universitaire Européen pour les Biens Culturels (CUEBC), Ravello, Italy. CUEBC is an experimental laboratory that conducts scientific research and specialist matters. It is part of the European University for Cultural Heritage. http://www.cuebc.amalficoast.it/

→ *Volume 1, p. 168*

European Centre of Technogenic Safety/Centre Européen de Sécurité Technologique (TESEC), Kiev, Ukraine. TESEC is a scientific research and educational organization. http://www.coe.int/T/E/Cultural_Cooperation/Disasters/Activities/Network_of_Specialized_Euro-Mediterranean_Centres/

→ *Volume 1, p. 168*

Experimental Climate Prediction Center (ECPC), United States of America

ECPC is developing an integrated regional climate prediction capability by undertaking basic research to identify coupled land-atmosphere-ocean linkages. ECPC models are being used to make routine experimental forecasts, which are continually evaluated in order to demonstrate their utility to various sectors on temporal scales ranging from seasonal to biennial but also touching upon daily and decadal to centennial time scales. Once ECPC has demonstrated the usefulness of various forecast tools and methodologies, its goal is to transfer these experimental methodologies to various regional application centers. http://ecpc.ucsd.edu

→ *Volume 1, p. 373*

F

Facultad Latinoamericana de Ciencias Sociales (FLASCO) (Latin American Social Science Faculty)

The faculty's creation is based on the recommendation of UNESCO and the governments of Latin America and the Caribbean. Its objective is to promote education, research and technical cooperation in the field of social sciences for the entire region. http://www.flacso.cl

→ *Volume 1, p. 245*

Federal Highway Administration (FHWA), US Government

The FHWA is a part of the US Department of Transportation, headquartered in Washington, D.C., with field offices across the United States. Its mission is to provide leadership, expertise, resources and information in cooperation with partners to enhance the country's economic vitality, the quality of life, and the environment. The FHWA directly administers a number of highway transportation activities including standards development, research and technology, training, technical assistance, highway access to federally owned lands and Indian lands, and commercial vehicle safety enforcement. Further, FHWA has a significant role, working through partnerships, programs, policies, and allocating resources which facilitate the strategic development and maintenance of State and local transportation systems as effective and efficient elements of the national intermodal transportation system.
http://www.fhwa.dot.gov

Federal Insurance and Mitigation Administration, (FIMA), Federal Management Agency (FEMA), United States of America

The Mitigation Division manages the National Flood Insurance Program and oversees FEMA's mitigation programs. The overall mission is to protect lives and prevent the loss of property from natural hazards. http://www.fema.gov/fima/

Federation of Indian Chambers of Commerce and Industry (FICCI)

FICCI was established in 1927, on the advice of Mahatma Gandhi, to garner support for India's independence and to further the interests of the Indian business community. Today, after five decades of Indian independence, FICCI is in the vanguard of nation building and is moving ahead to integrate the Indian economy with the global mainstream.
http://www.ficci.com
→ *Volume 1, p.231*

Fondo para la Reconstrucción y el Desarrollo Social del Eje Cafetero (FOREC), Armenia, Colombia

The Fund for Reconstruction and Social Development in the Coffee Region is a specialized agency with its headquarters in Armenia administered by a legal staff under financial and political autonomy. Its objective is to promote the necessary work on economic, social and ecological reconstruction in the Andean region affected by the earthquake of 25 January, 1999. FOREC's mission is to manage the public commitment of national institutions and agencies in the reconstruction work with honesty, clarity, will and efficiency in the use of the public resources and technological assistance offered for this work. FOREC received the UN Sasakawa Award for Disaster Reduction in 2000.
→ *Volume 1, p. 94*

Foundation for International Community Assistance (FINCA)

FINCA has been helping families to create their own solution to poverty since 1984. It provides financial services to the world's poorest families so they can create their own employment, raise household incomes and improve their standard of living.
http://www.villagebanking.org

Foundation for the Support of Women's Work (FSWW)

The FSWW established in 1986 by a group of women from different backgrounds, is a non-profit non-governmental organisation. It aims to build social, economic and community assets for and by grassroots women, and support their leadership throughout Turkey in improving the quality of their lives and of the community.
http://www.un.org/womenwatch/daw
→ *Volume 1, p. 179*

Fundación de Edificaciones y Dotaciones Educatives (FEDE), Venezuela

FEDE is an institution of public administration, dedicated exclusively to solve the problems of the educational physical plant. It was created by means of the Presidential Ordinance N° 1555 dated May 11 of 1976, exercising the guides of the Ministry of Urban Development. http://www.fede.gov.ve/

→ *Volume 1, p. 341*

Fundación Nacional para el Desarrollo (FUNDE), El Salvador, (National Development Foundation)

FUNDE's mission is to offer critical thinking, analysis and proposals for sustainable development and to engage the different parties and leading institutions of the country with research and assistance in order to better the quality of life and opportunities of the marginalized. http://www.funde.org

Fundación para la Cooperación y el Desarrollo Communal (CORDES), El Salvador, (Development Corporation)

Founded in 1988, CORDES is a non-governmental organization dedicated to the management of socio-economic development of the rural communties in El Salvador, where the poverty and destruction from the war have affected human settlements by forcing the people out of their land.

→ *Volume 1, p. 229, 230*

Fundación Salvadoreña para la Asistencia Integral (FUSAI), El Salvador, (Salvadorian Foundation for Integral Assistance)

Its mission is to support the socio-economic integration of sectors, regions and parties marginalized in society with the benefits of development http://www.fusai.org

G

General Directorate of Civil Protection, Governorate of Grand Alger, Algeria

The General Directorate has carried out significant training activities on disaster prevention and the organization of international forums on disaster prevention.

→ *Volume 1, p. 120*

GeoHazards International (GHI), California, United States of America

GHI was established in 1993 as a non-profit organization to reduce death and injury caused by earthquakes in the world's most vulnerable communities. In particular, GHI makes a community safer by raising awareness of its risk, building local institutions to manage that risk, and strengthening schools to protect and train the community's future generations. http://www.geohaz.org

→ *Volume 1, p. 332*

Geological Survey of Iran (GSI)

As an affiliate organization of the Ministry of Industries and Mines of Iran, GSI is basically an applied research center with a high caliber scientists and technical staff, and state of the art laboratory technology. GSI's mandate includes geological survey throughout the country and overseeing mineral exploration. Outcomes of the GSI surveys are produced at the scale of 1:1'000'000, 1:250'000, and 1:100'000 or larger on thematic subjects (digital or paper print) and are made available to the public. http://www.gsi.org.ir/

→ *Volume 1, p. 117*

Geological Survey of Japan (GSJ)

GSJ is one of the 15 research institutes of the National Institute of Advanced Industrial Science and Technology (AIST). http://www.aist.go.jp/

→ *Volume 1, p. 66*

Geophysics Institute of Teheran University

The activities of this Institute are concentrated on research, education, and scientific services. The Institute has two research and educational departments. The first department, namely Earth Physics consists of the following research sections: Earthquake Seismology, Gravity, Geomagnetism, Geophysical Explorations, the Earth's Tide, Rock Physics.The second department, namely Space Physics, consists of the following research sections: Meteorology, Air Pollution, Ozone, Solar Physics, Ionosphere. http://www.ut.ac.ir/

→ *Volume 1, p. 117*

Global Fire Monitoring Center (GFMC), Freiburg, Germany

GFMC has been established in 1998 at the Fire Ecology and Biomass Burning Research Group, a subdivision of the Biogeochemistry Department of the Max Planck Institute for Chemistry (Mainz, Germany). Founded in the 1970s at Freiburg University, the Fire Ecology Research Group was incorporated into the Max Planck Institute for Chemistry in 1990. http://www.fire.uni-freiburg.de

→ *Volume 1, p. 264, 287, 367, 370, 372, 373*

Global Monitoring for the Environment and Security (GMES)

GMES is a joint initiative of the European Space Agency and the EC. Many programmes (EC, ESA, others) will eventually contribute to GMES. In November 2001 the ESA Ministerial Council approved a new 5-year ESA programme dedicated to GMES, called the Earthwatch GMES Services Element (GSE for short). This is the very first programme dedicated to GMES. GSE will deliver policy-relevant services to end-users, primarily (but not exclusively) from Earth Observation sources. GSE is a key element of GMES, because it will enable end-users to become key players in the move from present generation Earth Observation satellites to future European systems that will deliver vital information on global environment and security. http://earth.esa.int/gmes/

→ *Volume 1, p. 207, 264, 310*

Gujarat State Disaster Management Authority (GSDMA), India

The Government of Gujarat established the Gujarat State Disaster Management Authority in February, 2001 to co-ordinate the comprehensive earthquake recovery program. The GSDMA is registered as a society with a vision to go beyond reconstruction and make Gujarat economically vibrant, agriculturally and industrially competitive with improved standards of living and with a capacity to mitigate and manage future disasters. http://www.gsdma.org

→ *Volume 1, p. 332*

H

Hazard Reduction and Recovery Center (HRRC), Texas A & M University, Texas, United States of America

The HRRC was established at Texas A&M University in 1988. The center engages in research on hazard mitigation, disaster preparedness, response, and recovery. The staff of the HRRC is interdisciplinary in nature and includes the expertise of architects, engineers, geographers, psychologists, and sociologists. The HRRC is dedicated to providing access to hazards information for home owners, professionals, business investors, and the academic community. http://hrrc.tamu.edu

→ *Volume 1, p. 276*

Health Canada

Health Canada is the federal department responsible for helping the people of Canada maintain and improve their health. http://www.hc-sc.gc.ca/

→ *Volume 1, p. 266, 375*

High Powered Committee (HPC) on Disaster Management Plans, Government of India

HPC has been constituted to review existing arrangements for preparedness and mitigation of natural and man made disasters including industrial, nuclear, biological and chemical disasters; recommend measures for strengthening organizational structures, and recommend a comprehensive model plan for management of these disasters at national, state and district levels. http://www.ndmindia.nic.in/committee/hpcomm.html

→ *Volume 1, p. 85, 89, 209*

Higher Institute of Emergency Planning/Institut Supérieur de Planification d'Urgence (ISPU), Archennes, Belgium.

The Institute organizes specific courses concerning problems of emergency planning for officials in public office.
http://www.coe.int/T/E/Cultural_Cooperation/Disasters/Activities/Network_of_Specialized_Euro-Mediterranean_Centres/

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Hungarian National Directorate General for Disaster Management (HNDGDM), Budapest

From January, 2000 an integrated organization, the National Directorate for Disaster Management, Ministry of Interior, has been established in Hungary as the central organ of the integral national disaster management. It was established on the basis of the legal predecessors, that is, the Civil Protection and the Fire Service. The system of protection against disasters is divided into three levels: international, national, and municipality.

Ibero-American Association of Civil Defense and Civil Protection, Spain

The Ibero-American Association for Civil Defense and Protection emerged from a 1-5 July 1996 meeting organized in Santiago, Chile, by the Pro Tempore Secretariat of the Space Conference of the Americas and Chile's ONEMI. The subject of the meeting was the use of aerospace technology in disaster prevention and mitigation.

Incorporated Research Institutions for Seismology (IRIS), United States of America

IRIS is a university research consortium dedicated to exploring the Earth's interior through the collection and distribution of seismographic data. IRIS programs contribute to scholarly research, education, earthquake hazard mitigation, and the verification of a Comprehensive Test Ban Treaty. Support for IRIS comes from the National Science Foundation, other federal agencies, universities, and private foundations. http://www.iris.washington.edu

→ *Volume 1, p. 276*

India Musokotwane Environment Resource Centre for Southern Africa (IMERCSA), Zimbabwe

IMERCSA is a unit established in 1994 within the Southern African Research and Documentation Centre (SARDC). IMERCSA has bibliographic databases with more than 6,000 records on the environment and disaster management issues. Its contacts databases, which list individual experts and organizations involved in environment and disaster management issues in the SADC region, have a total of about 2,600 entries. The centre also has a public library with reading facilities for policy planners, researchers, diplomats, journalists, and others interested in issues with a regional perspective. IMERCSA provides in-house training for young journalists. In collaboration with regionally-based organizations, IMERCSA also carries out training workshops mainly for environmental journalists in Southern Africa. http://www.sardc.net/imercsa

→ *Volume 1, p. 201*

Indian Association of Social Science Institutions (IASSI)

The Association is a collective body of organisations which are involved in teaching, research and related activities in the area of social sciences. Most Indian universities and research institutions are members of this Association. It was formed primarily for bringing these organisations together in meaningful dialogue's exchange and cooperation so as to crystallize ideas useful for evolving solutions to problems of social concern. All its activities like organisation of seminars and conferences, production of a multi disciplinary journal and publications have been directed to this end. http://iassi.nic.in/

→ *Volume 1, p. 277*

Indian Famine Commission

The wide-spread suffering caused by successive famines in the closing decades of the 19th century led to the setting up of a series of famine commissions. The first commission was appointed in 1878. It made several suggestions on the basis of which the famine codes were promulgated from 1883 onwards.The Second Famine Commission was set up after the drought of 1896-97. It recommended that "among the measures that may be adopted for giving India direct protection from drought, the first place must unquestionably be assigned to works of irrigation". http://wrmin.nic.in/policy/

→ *Volume 1, p. 6*

Information Technology Centre for Africa (ITCA)

ITCA is an information and communication technology (ICT) focused exhibition and learning centre to demonstrate to African policy makers and planners the value of ICT for African development. ITCA is an initiative led by the Economic Commission for Africa (ECA). http://www.uneca.org/itca/

→ *Volume 1, p. 225*

Institute for Business Home Safety (IBHS), Boston, United States of America

The Institute is a non-profit association sponsored by the insurance industry that engages in communication, education, engineering and research. Its mission is to reduce deaths, injuries, property damage, economic losses and human suffering caused by natural disasters. http://www.ibhs.org

→ *Volume 1, p. 232*

Institute for Catastrophic Loss Reduction (ICLR), Canada

ICLR is a research institute established by Canada's property and casualty insurers to reduce disaster losses. The Institute is internationally recognized for its leadership in multi-disciplinary disaster prevention research. Quality research provides the foundation for better public policy and disaster management. http://www.uwo.ca/wnews/issues/2001/apr26/centre/

→ *Volume 1, p. 266*

Institute for Crisis, Disaster and Risk Management (ICDRM), George Washington University, USA

Established in 1994, ICDRM is an interdisciplinary academic center that provides a unique educational environment in the fields of crisis, disaster, and risk management. The Institute integrates the existing diverse expertise and research related to crisis, disaster, and risk management at the George Washington University and is unique in its interdisciplinary focus and structure. The synergy that results from this interdisciplinary approach produces innovative research, training, and education that enhances crisis and emergency management, risk management, contingency planning, emergency response, disaster recovery, business continuity, and organizational learning. http://www.gwu.edu/~icdrm/

→ *Volume 1, p. 259, 276*

Institute for Hazards Mitigation Planning and Research, College of Architecture and Urban Planning, University of Washington, United States of America

The objective of the Institute is to encourage the incorporation of hazards mitigation principles into disaster preparedness, response and recovery practices through planning programs, community involvement and research to support the creation of more disaster-resistant and sustainable communities in the Pacific Northwest.
http://depts.washington.edu/mitigate/
http://www.caup.washington.edu
→ *Volume 1, p. 276*

Institute for the Protection and Security of the Citizen, Technological and Economic Risk (IPSC)

IPSC is one of seven institutes that constitute the European Commission's Directorate-General Joint Research Centre (DG-JRC). Situated in Ispra, Northern Italy, IPSC came into being on 1st September 2001 as a result of a fusion between the Institute for Systems, Informatics and Safety (ISIS) and part of the Space Applications Institute (SAI). IPSC provides research-based, systems-oriented support to EU policies so as to protect the citizen against economic and technological risk. http://ipsc.jrc.it/
→ *Volume 1, p. 171*

Institute of Geography of the Romanian Academy

It is the main national institution in Romania that carries out fundamental and applied geographical research. The institute is engaged in research, documentation and professional training, supervising the work of Ph. D. candidates.The members of the Institute participate in a series of national and international interdisciplinary programmes, have membership in several commissions in the International Association of Hydrological Sciences and contribute to the activity of the National Committees for the International Geosphere-Biosphere Programme (IGBP), International Hydrological Programme (UNESCO), the UN International Decade for Natural Disaster Reduction (IDNDR), Man and the Biosphere Programme (MAB), and are involved in national environmental protection projects, in the complex study of the Danube Delta. http://www.geoinst.ro/
→ *Volume 1, p. 270*

Institute of Geotechnical Engineering, Zurich

See Swiss Federal Institute of Technology (ETH), Zurich
→ *Volume 1, p.269*

Institute of Physical and Chemical Research (RIKEN), Japan

RIKEN carries out high level experimental and research work in a wide range of fields, including physics, chemistry, medical science, biology, and engineering extending from basic research to practical application. http://www.wtec.org/loyola/biopoly/riken.htm

Institute of Seismology, Kazakhstan

The Institute of Seismology is the head organization in the sphere of basic and applied researches regarding the problems of providing seismic safety. It was formed by the Decree of the Government of the Kazakh SSR and Enactment of the Presidium of the Academy of Sciences of the Kazakh SSR dated from June 16, 1976. During the years of its existence it underwent structural changes to optimize and correspond more sufficiently to the scientific tasks being solved. At present, the organization chart of the Institute includes six scientific-research laboratories conducting basic and applied researches of the main seismological aspects; Seismological Experimental-Methodical Expedition carrying out continuous instrumental observation of seismic regime, geophysical fields, gas and chemical composition of the underground water in the territory of South-Eastern Kazakhstan, and

also the Center of Analysis and Prediction. Engineering and Seismometric Service consisting of 15 sites equipped with digital stations of strong motions has been created in the territory of the city of Almaty. The received information is intended to solve problems of seismic microzonation. http://www.seismology.kz/eng/index.html
→ *Volume 1, p. 119*

Instituto de Nutrición de Centro América y Panama (INCAP), (Central American and Panamanian Institute for Nutrition)

INCAP is specialized in food security and nutrition. Located in the city of Guatemala it has also offices in each of its member states: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama. http://www.incap.org.gt/

Instituto Geofisico, Escuela Politécnica Nacional, Ecuador (IG-EPN)

The IG monitors and maps hazards of Ecuadorian volcanoes and tectonic faults. After nearly 20 years of quiescence, Tungurahua, Guagua Pichincha, Reventador, and Cayambe volcanoes have been unusually active since 1999. http:/www.igepn.edu.ec/
→ *Volume 1, p. 287*

Instituto Nacional de Gestao de Calamidades (INGC), Mozambique (National Disaster Management Institute)

Created in June 1999, INGC manages day-to-day matters relating to disasters. This is an autonomous institution under the Ministry of Foreign Affairs and Cooperation. http://www.teledata.mz/ingc/default_eng.htm
→ *Volume 1, p. 104, 234*

Instituto Nacional de Meteorologia (INAM), (National Institute for Meteorology), Mozambique

Its mission is to minimize the impacts of hydrometeorological hazards and contribute to sustainable development and the reduction of poverty. http://www.inam.gov.mz

Instituto Nicaraguense de Estudios Territoriales (INETER), Managua, Nicaragua, (Nicaraguan Institute for Territorial Studies)

INETER is the technical and scientific body of the state that provides its services to the entire population in such areas as basic information as well as projects and studies of the environment which contribute to socio-economic development and the lowering of vulnerability to natural disasters, continuously tracking dangerous natural phenomena.
→ *Volume 1, p. 92*

Insurance Council of Australia, (ICA)

The mission of ICA is to influence, ethically, and expertly, the political, social, business and economic environment in order to promote members' role in providing insurance protection and security to the community. http://www.ica.com.au/
→ *Volume 1, p. 272*

Integrated Global Observing Strategy (IGOS)

IGOS unites the major satellite and surface-based systems for global environmental observations of the atmosphere, oceans and land.
http://ioc.unesco.org/igospartners/igoshome.htm
→ *Volume 1, p. 375*

Inter-African Centre for studies on Rural Radio/Centre Interafricain d'Etudes en Radio Rurale (CIERRO), Ouagadougou, Burkina Faso

CIERRO's main mission is to make at the disposal of the personnel of african radios

training capacities initial and continued, in the following fields: programmes for technical kowledge, programmes for mastering national languages for radio animateurs. CIERRO abrites also the Rural and Local Radios Network, an initiative from the Agence intergouvernementale de la Francophonie. The creation of this network responds to the necessity to make available new information and communication technologies to the rurals through rural radios. It permits exchange of programmes, coproductions by themes, constitution of an african programmes bank, and training for its members. www.radios-rurales.net/Reseau/index.htm
→ *Volume 1, p. 157*

Inter-American Committee for Natural Disaster Reduction (IACNDR),OAS

See Organization of American States (OAS)
→ *Volume 1, p. 71*

Inter-American Development Bank (IADB), Washington DC, United States of America

The IADB is the oldest and largest regional multilateral development institution. It was established in December 1959 to help accelerate economic and social development in Latin America and the Caribbean. http://www.iadb.org
→ *Volume 1, p. 23, 255, 307, 347, 396*

Inter-Departmental Disaster Management Committee (IDMC), South Africa

In April 1999, the Interim Disaster Management Centre was replaced with the Inter-departmental Disaster Management Committee to deal with disasters and other phenomena and to give advice to the Committee. The National Disaster Management Centre came into operation on 1 April 2000. http://www.gov.za/structure/disaster.htm
→ *Volume 1, p. 102*

Inter-Departmental Mitigation Coordinating Committee (IMCC), Canada

The Government of Canada has taken the first steps towards national leadership on mitigation. In January 2001, a federal inter-departmental committee on mitigation, coordinated by OCIPEP, was established to compile information on roles, responsibilities, programs and activities related to mitigation in order to assess gaps and overlaps, and evaluate opportunities and priorities for federal government action on mitigation. In the future, this federal inter-departmental committee could serve as a standing committee for the review of internal priorities for the Government of Canada. http://www.ocipep-bpiepc.gc.ca/

Intergovernmental Authority on Development (IGAD), Djibouti (Autorité Intergouvernementale pour le développement)

IGAD's vision is based on determination of the governments of the sub-region to pool resources and coordinate development activities in order to tackle the present and future challenges more efficiently, and enable the sub-region to interact and compete in the global economy. www.igad.org
→ *Volume 1, p. 150, 151, 152, 176, 370*

Intergovernmental Oceanographic Commission (IOC), Paris, France

The Intergovernmental Oceanographic Commission of UNESCO was founded in 1960 on the basis of the recognition that "the oceans, covering some seventy percent of the earth's surface, exert a profound influence on mankind and even on all forms of life on earth. In order to properly interpret the full value of the oceans to mankind, they must be studied from many points of view." http://ioc.unesco.org
→ *Volume 1, p. 374*

Intergovernmental Panel on Climate Change (IPCC)

In 1988, UNEP and WMO jointly established the Intergovernmental Panel on Climate Change (IPCC) as concern over climate change became a political issue. The purpose of the IPCC was to assess the state of knowledge on the various aspects of climate change including science, environmental and socio-economic impacts and response strategies. The IPCC is recognized as the most authoritative scientific and technical voice on climate change, and its assessments had a profound influence on the negotiators of the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol. The IPCC continues to provide governments with scientific, technical and socio-economic information relevant to evaluating the risks and developing a response to global climate change. (http://www.grida.no/climate/vital/16.htm http://www.ipcc.ch)

Working Group II of the IPCC assesses the vulnerability of socio-economic and natural systems to climate change, negative and positive consequences of climate change, and options for adapting to it.
→ *Volume 1, p. 27, 47, 53*

Inter-Ministerial Committee for Disaster Management (IMC), South Africa

The IMC provides leadership for the development and implementation of national policy on disaster management. Under the leadership of the IMC, the Department of Constitutional Development published the Green Paper on Disaster Management for South Africa for comment in February 1998. After consultation with key role players and comments from both the private and public sectors around the Green Paper, the White Paper evolved.
→ *Volume 1, p. 102*

International Association of Earthquake Engineering (IAEE), Tokyo, Japan

The IAEE aims to promote international cooperation among scientists and engineers in the field of earthquake engineering through interchange of knowledge, ideas, and results of research and practical experience. http://www.iaee.or.jp
→ *Volume 1, p. 325*

International Association of Seismology and Physics of the Earth's Interior (IASPEI)

The purpose of IASPEI is to promote the study of problems relating to earthquakes, the propagation of seismic waves, and the internal structure, properties and processes of the earth; to initiate and coordinate the conduct of researches which depend on cooperation between different countries, and to provide for their scientific discussion; to facilitate particular researches on scientific and applied seismology, such as the comparison of instruments used in different countries, researches on blasting and generally all matters to which seismology is related. http://www.seismo.com/iaspei/
→ *Volume 1, p. 331*

International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI)

The Association represents the primary international focus for research in volcanology, efforts to mitigate volcanic disasters, and research into closely related disciplines, such as igneous geochemistry and petrology, geochronology, volcanogenic mineral deposits, and the physics of the generation and ascent of magmas in the upper mantle and crust.
http://www.iavcei.org
→ *Volume 1, p. 55, 218*

International Bank for Reconstruction and Development (IBRD), World Bank

Established in 1945, IBRD aims to reduce poverty in middle-income and creditworthy poorer countries by promoting sustainable development, through loans, guarantees, and other analytical and advisory services. www.worldbank.org

International Center for Integrated Mountain Development (ICIMOD), Nepal

ICIMOD is committed to developing an economically and environmentally sound ecosystem and improving living standards of mountain communities, mainly in the Hindu Kush-Himalayas area. http://www.icimod.org

→ *Volume 1, p. 159, 160, 372*

International Center for Theoretical Physics (ICTP), Trieste, Italy

Founded in 1964 by Abdus Salam (Nobel Laureate), ICTP operates under the aegis of two United Nations agencies: UNESCO and IAEA and is regularized by agreement with the government of Italy. One of the main aims of ICTP is to foster the growth of advanced studies in developing countries. http://www.ictp.trieste.it

International Committee of the Red Cross (ICRC)

ICRC is an impartial, neutral and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of war and internal violence and to provide them with assistance. It directs and coordinates the international relief activities conducted by the Red Cross and Red Crescent Movement in situations of conflict. It also endeavours to prevent suffering by promoting and strengthening humanitarian law and universal humanitarian principles. http://www.icrc.org

International Consortium on Landslides (ICL)

ICL was launched by the 2002 Kyoto Declaration. Its main objectives are: a) to promote landslide research for the benefit of society and the environment, and capacity building, including education, notably in developing countries; b) to integrate geosciences and technology within the appropriate cultural and social contexts in order to evaluate landslide risk in both urban, rural and developing areas and cultural and natural heritage sites, as well as to contribute to the protection of the natural environment and sites of high societal value; c) to combine and coordinate international expertise in landslide risk assessment and mitigation studies, thereby resulting in a renowned international organization which will act as a partner in various international and national projects; and d) to promote a global, multidisciplinary programme on landslides.
http://www.unesco.org/science/earthsciences/disaster/icl.htm

→ *Volume 1, p. 53*

International Council of Science (ICSU), Paris, France

ICSU is a non-governmental organization, founded in 1931 to bring together natural scientists in international scientific endeavour. It comprises 98 multidisciplinary national scientific members (scientific research councils or science academies) and 26 international, single discipline Scientific Unions to provide a wide spectrum of scientific expertise enabling members to address international, interdisciplinary issues which none could handle alone. http://www.icsu.org

→ *Volume 1, p. 375*

International Council of Voluntary Agencies (ICVA), Switzerland

ICVA, founded in 1962, is a global network of human rights, humanitarian, and development NGOs, which focuses its information exchange and advocacy efforts primarily on humanitarian affairs and refugee issues. http://www.icva.ch

International Council on Chemical Associations, (ICCA)

ICCA is the world-wide voice of the chemical industry, representing chemical manufacturers and producers all over the world. ICCA promotes and co-ordinates Responsible Care and other voluntary chemical industry initiatives. ICCA has a central role in the exchange of information within the international industry, and in the development of

position statements on matters of policy. It is also the main channel of communication between the industry and various international organizations that are concerned with health, environment and trade-related issues, including the United Nations Environment Programme (UNEP), the World Trade Organization (WTO) and the Organisation for Economic Co-operation & Development (OECD). http://www.icca-chem.org/
→ *Volume 1, p. 232*

International Decade for Natural Disaster Reduction (IDNDR), 1990-1999

An International Decade for Natural Disaster Reduction, beginning on 1 January 1990, was launched by the United Nations, following the adoption of Resolution 44/236 (22 December 1989). The Decade was intended to reduce, through concerted international action, especially in developing countries, loss of life, poverty damage and social and economic disruption caused by natural disasters. To support the activities of the Decade, a Secretariat was established at the United Nations Office in Geneva, in close association with UNDRO.
→ *Volume 1, p. 9, 10, 11, 55, 63, 65, 71, 80, 87, 102, 117, 135, 140, 163, 164, 171, 172, 177, 186, 202, 260, 266, 284, 285, 330, 358, 360, 370, 371, 381, 386*

International Development Association (IDA), World Bank

IDA provides long-term loans at zero interest to the poorest of the developing countries. It helps build the human capital, policies, institutions, and physical infrastructure that these countries urgently need to achieve faster, environmentally sustainable growth. Its goal is to reduce disparities across and within countries, especially in access to primary education, basic health, and water supply and sanitation and to bring more people into the mainstream by raising their productivity. http://www.worldbank.org/ida

International Development Research Centre (IDRC), Canada

IDRC is a public corporation created by the Parliament of Canada in 1970 to help developing countries use science and technology to find practical, long-term solutions to the social, economic, and environmental problems they face. http://www.idrc.ca/
→ *Volume 1, p. 266*

International Drought Information Center (IDIC), University of Nebraska, United States of America

The University of Nebraska at Lincoln established IDIC to better understand the problem of drought. IDIC strives to improve communication about prediction, monitoring, impact assessment, adjustment and adaptation, and planning and response to drought.
http://www.ngdc.noaa.gov/seg/hazard/resource/methaz/drtinfoa.html
http://drought.unl.edu
→ *Volume 1, p. 216*

International Federation of Red Cross and Red Crescent Societies (IFRC)

IFRC is the world's largest humanitarian organization, providing assistance without discrimination as to nationality, race, religious beliefs, class or political opinions.
http://www.ifrc.org
→ *Volume 1, p. 74, 83, 144, 160, 167, 174, 176, 187, 196, 197, 198, 202, 225, 228, 256*

International Institute for Applied Systems Analysis (IIASA), Laxemburg, Austria

IIASA is a non-governmental research organization located in Austria. The institute conducts inter-disciplinary scientific studies on environmental, economic, technological and social issues in the context of human dimensions of global change. IIASA researchers study environmental, economic, technological, and social developments. In doing so, they generate methods and tools useful to both decision makers and the scientific community. The work is

based on original state-of-the-art methodology and analytical approaches and links a variety of natural and social science disciplines. http://www.iiasa.ac.at/
→ *Volume 1, p. 244*

International Institute for Geo-information Science and Earth Observation (ITC), Enschede, the Netherlands

ITC is an autonomous organisation operating under the aegis of the Ministry of Education, Culture and Science and the Ministry for Development Cooperation and closely linked to Twente University. ITC is an internationally recognized centre of excellence aiming at capacity building and institutional development specifically in countries that are economically and/or technologically less developed. http://www.itc.nl/
→ *Volume 1, p. 65*

International Institute for Sustainable Development (IISD), Winnipeg, Canada

Its mission is to champion innovation, enabling societies to live in a sustainable way. It advances policy recommendations on international trade and investment, economic policy, climate change, measurement and indicators, and natural resource management to make development sustainable. By using the Internet it covers and reports on international negotiations and brokers knowledge gained through collaborative projects with global partners, resulting in more rigorous research, capacity building in developing countries and a better dialogue between North and South. IISDnet identifies issues, sets goals, and compiles information on sustainable growth. http://www.iisd.org
→ *Volume 1, p. 299*

International Institute of Disaster Risk Management (IDRM), Manila, Philippines

The IDRM promotes international standards and best practices in disaster and risk management. It works on principles of continuous learning, organizational and individual professional development. IDRM experts and partners are committed to applying appropriate, innovative and inexpensive solutions to development and disaster risk management. http://www.idrmhome.org
→ *Volume 1, p. 240*

International Institute of Earthquake Engineering and Seismology (IIEES), Tehran, Iran

The main goal of IIEES is seismic risk reduction and mitigation both in Iran and the region by promoting research and education in science and technology related to seismotectonic, seismology and earthquake engineering. IIEES activity in research covers all aspects of earthquakes from tectonic study to retrofitting complex structure; and in education from public education to PhD programmes in earthquake engineering. http://www.iiees.ac.ir
→ *Volume 1, p. 117*

International Organization for Standardization (ISO), Geneva, Switzerland

ISO is a worldwide federation of national standards bodies from some 140 countries, one from each country. ISO is a non-governmental organization established in 1947. The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity. ISO's work results in international agreements which are published as International Standards. http://www.iso.org
→ *Volume 1, p. 302, 312*

International Research Committee on Disasters (IRCD)

IRCD establishes international linkages among disaster researchers around the world. http://www.udel.edu/DRC/IRCD.html

→ *Volume 1, p. 260, 259*

International Research Institute for Climate Prediction (IRI), New York, United States of America

IRI was established as a cooperative agreement between US NOAA Office of Global Programs and Columbia University. IRI is a unit of the Columbia Earth Institute located at Lamont-Doherty Earth Observatory. Its vision is that of an innovative science institution working to accelerate the ability of societies worldwide to cope with climate fluctuations, especially those that cause devastating impacts on humans and the environment, thereby reaping the benefits of decades of research on the predictability of El Niño-Southern Oscillation phenomenon and other climate variations. By orchestrating a wide network of collaborations and comprehensive programs that couple physical science research and applications research with capacity building, the IRI is a unique institution in the international development of applications of climate prediction. http://iri.ldeo.columbia.edu

→ *Volume 1, p. 48, 214, 369, 374*

International Strategy for Disaster Reduction (ISDR)

The International Decade for Natural Disaster Reduction (IDNDR) came to an end in December 1999. The General Assembly endorsed in its resolution 54/219 the proposals put forward in the report of the Secretary-General to ensure the establishment of successor arrangements for disaster reduction for the effective implementation of the international strategy for disaster reduction. An inter-agency task force and inter-agency secretariat, under the authority of the Under-Secretary-General for Humanitarian Affairs have been established. http://www.unisdr.org

→ *Volume 1, p. 2, 11, 12, 49, 50, 58, 71, 72, 167, 358, 392, 397*

International Sociological Association (ISA)

ISA is a non-profit association for scientific purposes in the field of sociology and social sciences. It was founded in 1949 under the auspices of UNESCO. Its goal is to represent sociologists everywhere, regardless of their school of thought, scientific approaches or ideological opinion, and to advance sociological knowledge throughout the world. Its members come from 109 countries. ISA is a member of the International Social Science Council and enjoys a status of the non-governmental organization in formal associate relations with UNESCO and special consultative status with the Economic and Social Council of the United Nations. http://www.ucm.es/info/isa/

→ *Volume 1, p. 259*

International Tsunami Information Center (ITIC), Honolulu, Hawaii

ITIC was established on 12 November 1965 by the Intergovernmental Oceanographic Commission of UNESCO. In 1968, IOC formed an International Coordination Group for the Tsunami Warning System in the Pacific (ICG/ITSU). ITIC monitors the activities of the Tsunami Warning System in the Pacific. http://www.prh.noaa.gov/itic

→ *Volume 1, p. 374*

Internationale Kommission zum Schutz des Rheins/International Commission for the Protection of the Rhine (ICPR)

The Rhine pollution has always shown particularly negative effects in the Netherlands. That is why the Netherlands united the Rhine-bordering countries (Switzerland, France, Luxembourg, Germany) to discuss problems of water protection and to look for common solutions. The ICPR was founded in Basel in July, 1950. http://www.iksr.org/index.htm

J

Japan International Cooperation Agency (JICA)

JICA is responsible for the technical cooperation aspect of Japan's Official Development Assistance (ODA) programs. Technical cooperation and a variety of programs are aimed at the transfer of technology and knowledge that can serve the socio-economic development of the developing countries. http://www.jica.go.jp

→ *Volume 1, p. 97, 272*

Japan Meteorology Agency (JMA)

The major activities of JMA are to issue warnings, advisories and forecasts, to deal with the global environmental issues such as global warming and ozone depletion, and to provide information on earthquake and volcanic activities. http://www.jma.go.jp

→ *Volume 1, p. 48*

Joint Operations Technical Committee ZRA/Hidroélectrica de Cabora Bassa, Mozambique

The Zambesi River Authority (ZRA) was established by Zambia and Zimbabwe in 1998 to coordinate their decisions on water use, power generation, and upstream and downstream risk consequences of their water management policies. Following the 2000 floods, the ZRA formed the Joint Operations Technical Committee with Hydroelectrica de Cabora Bassa in Mozambique to share data and technical information about the operations of their respective Kariba and Cabora Bassa reservoirs.

→ *Volume 1, p. 156*

K

Kandilli Observatory and Earthquake Research Institute, Bogazici University, Turkey

The Institute offers graduate work leading to the degrees of Master of Science and Doctor of Philosophy in geodesy, geophysics and earthquake engineering.The primary objective of the graduate program is to train specialists and/or theoreticians (required for research and teaching) in geodesy, geophysics and earthquake engineering, capable of creative and original thinking and disseminating new ideas and concepts in related activities in Turkey. http://www.koeri.boun.edu.tr/defaulteng.htm

→ *Volume 1, p. 259*

L

Laboratory of Hydraulics and Glaciology, ETH Zurich

See Swiss Federal Institute of Technology (ETH), Zurich

→ *Volume 1, p. 269*

La Red de Estudios Sociales en Prevención de Desastres en América Latina (LA RED), (The Latin American Network for the Social Study of Disaster Prevention)

Initially conceived as a mechanism to facilitate comparative research of natural disasters from a social perspective, LA RED has developed into the focal point for hundreds of individuals and institutions working in the field of disaster and risk management in the different countries of Latin America and the Caribbean. http://www.desenredando.org

→ *Volume 1, p. 72, 144, 196, 203, 226, 245, 247, 255, 256*

M

Major Accident Hazards Bureau (MAHB)

MAHB is a special Unit within the Joint Research Centre's Institute for the Protection and Security of the Citizen, Technological and Economic Risk Management Unit, dedicated to scientific and technical support for the actions of the European Commission in the area of the control of Major Industrial Hazards.The overall mission of the Bureau is to assist other services of the Commission, and in particular Directorate General Environment in the

successful implementation of European Union policy on the control of major hazards and the prevention and mitigation of major accidents. To fulfil this mission, MAHB carries out scientific and technical activities related to the day to day implementation of relevant Community legislation. Since 1982, when the Original Seveso Directive (Council Directive 82/501/EEC) was approved by the Council of Ministers after the famous accident at Seveso, there has been Community provision for the control of major industrial hazards. http://mahbsrv.jrc.it/
→ *Volume 1, p. 171, 264*

Médecins sans Frontierès (MSF)

MSF is an international humanitarian aid organization that provides emergency medical assistance to populations in danger in more than 80 countries. In countries where health structures are insufficient or even non existent, MSF collaborates with authorities such as the ministries of health to provide assistance. MSF works in rehabilitation of hospitals and dispensaries, vaccination programmes and water and sanitation projects. MSF also works in remote health care centres, slum areas and provides training of local personnel. All this is done with the objective of rebuilding health structures to acceptable levels.
http://www.msf.org
→ *Volume 1, p. 202, 228*

Megacities 2000 Foundation, Netherlands

The Megacities Foundation in the Netherlands was started as a direct result of an initiative taken by UNESCO which asked the International Academy of Architecture (IAA) to focus attention on the problems of the explosively growing megalopolises. The Megacities Foundation was created in December 1994. http://www.megacities.nl
→ *Volume 1, p. 332*

Mekong River Commission (MRC), Cambodia

MRC promotes and co-ordinates sustainable management and development of water and related resources among countries bordering the Mekong River in Southeast Asia.
http://www.mrcmekong.org
→ *Volume 1, p. 366, 367*

Meteorological Service of Canada (MSC)

MSC is Canada's source for meteorological information. The Service monitors water quantities, provides information and conducts research on climate, atmospheric science, air quality, ice and other environmental issues, making it an important source of expertise in these areas. http://www.msc-smc.ec.gc.ca/
→ *Volume 1, p. 266*

Ministerio de ciencia y tecnología (MCT), (Ministry of Science and Technology), Venezuela

Its mission is to develop policies, strategies and plans which support the creation of a scientific and technical entity that carries out research and initiatives in pursuit of satisfying the needs of the population and promoting the national industry. It also aims to strengthen research and development initiatives for the improvement of innovations and national production, and support postgraduate programmes that foment scientific, technical and humanitarian development in the country. http://www.mct.gov.ve

Ministerio de Medio Ambiente y Recursos Naturales (MARN), El Salvador, (Ministry of Environment and Natural Resources)

Its mission is to direct an effective management of the environment through the clear

policies and all-encompassing initiatives which help sustain development of the Salvadorian society. http://www.marn.gob.sv

Ministry of Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters (EMERCOM), Moscow, Russia

EMERCOM was set up by decree of the President of the Russian Federation on January 10, 1994. In fact, the Ministry came into existence on December 27, 1990 when the Russian Rescue Corps was established. Its task was to ensure prompt and effective actions when emergencies arise. In 1995, two federal laws were enforced "On Protection of Population and Territories from Natural and Man-Made Emergencies" and "On Emergency and Rescue Services and Status of Rescuers". They laid down the foundation of the government policy and administrative and legal norms in the realm of population protection, on the one hand, and rescuers, on the other hand.
http://www.icdo.org/National%20structures/Russian%20Federation.pdf
→ *Volume 1, p. 112, 113, 114, 115, 116, 210, 211, 269, 270, 377*

Ministry of Environment and Forest (MOEF), Bangladesh

The Ministry of Environment and Forest takes care of the management aspect of biotechnology activities. It is responsible for management and development of forest resources. It conducts forest study along with the Forest Sector Master Plan.
http://www.jica.go.jp/english/global/env/profiles/e99ban.pdf

Ministry of Environment, Planning and Public Works, Greece

In order to activate the participation and further the cooperation of all responsible ministries and organisations, the Ministry for the Environment, Physical Planning and Public Works has developed a coordinating mechanism so that the concept of sustainable development is incorporated in their actions and their activities. http://www.minenv.gr/

Multi-disciplinary Center for Earthquake Engineering Research (MCEER), Buffalo, New York, United States of America

MCEER's overall goal is to enhance the seismic resilience of communities through improved engineering and management tools for critical infrastructure systems (water supply, electric power, hospitals, transportation systems). Seismic resilience (technical, organizational, social and economic) is by reduced probability of system failure, reduced consequences due to failure, and reduced time to system restoration. MCEER works toward this goal by conducting integrated research, outreach, and education activities in partnership with the users of the center products. http://mceer.buffalo.edu
→ *Volume 1, p. 326*

Munich Reinsurance, Germany

Munich Re is not only a world leader in reinsurance but it has also strategically strengthened its business with strong involvement in primary insurance and in asset management. It covers a range of special subjects such as: risk management and industrial insurance, alternative risk transfer. In *Topics*, a publication which appears twice a year, Munich Re experts look at the current situation of natural disasters throughout the world and current topics and trends in the insurance industry. *Topics* also presents new Munich Re products and services, as well as the world map on natural catastrophes.
http://www.munichre.com
→ *Volume 1, p. 25, 38, 46, 49, 196*

N

National Academy of Sciences (CAS), China
CAS is China's National Academy and was founded in Beijing in November 1949. It is China's largest and most prestigious academic institution and runs more than a hundred research institutes throughout the country.
→ *Volume 1, p. 209, 267*

National Aeronautics and Space Administration (NASA), United States of America
Since its inception in 1958, NASA has accomplished many great scientific and technological feats in air and space. NASA technology also has been adapted for many non-aerospace uses by the private sector. NASA remains a leading force in scientific research and in stimulating public interest in aerospace exploration, as well as science and technology in general. http://www.nasa.gov
→ *Volume 1, p. 211, 212, 217, 222, 372*

NASA Earth Observatory
The purpose of NASA's Earth Observatory is to provide a freely-accessible publication on the Internet where the public can obtain new satellite imagery and scientific information about our home planet. The focus is on Earth's climate and environmental change.
http://earthobservatory.nasa.gov/
→ *Volume 1, p. 212*

National Botanical Institute (NBI), South Africa
The mission of the NBI is to promote the sustainable use, conservation, appreciation and enjoyment of the exceptionally rich plant life of South Africa, for the benefit of all people.
http://www.nbi.ac.za/
→ *Volume 1, p. 68*

National Center for Atmospheric Research (NCAR), Boulder, United States of America
It is NCAR's mission to plan, organize, and conduct atmospheric and related research programs in collaboration with the universities and other institutions, to provide state-of-the-art research tools and facilities to the atmospheric sciences community, to support and enhance university atmospheric science education, and to facilitate the transfer of technology to both the public and private sectors. Created in 1960, the Center is operated by the University Corporation for Atmospheric Research (UCAR) under a cooperative agreement with the National Science Foundation. http://www.ncar.ucar.edu/ncar/

National Centre for Disaster Management (NCDM), New Delhi, India
The NDM (Natural Disaster Management) Division, Department of Agriculture and Cooperation, Government of India establised the National Centre for Disaster Management in March, 1995. NCDM (National Centre For Disaster Management) functions as a nodal centre in the country for human resource development in the area of disaster management, disaster mitigation and for tackling disasters. Since June 2002, the subject of disaster management except drought has been shifted to the Ministry of Home Affairs and hence NCDM is functioning under MHA. http://www.ncdm-india.org
→ *Volume 1, p. 228*

National Committee for Disaster Management (NCDM), Phnom Penh, Cambodia
In 1995, as a result of the country's experience with regularly occurring disasters, the Royal Government of Cambodia established NCDM. Its responsibilities are defined in terms of not only providing timely and effective emergency relief to the victims of disasters, but also developing preventive measures to reduce loss of lives and property. This is accomplished by applying scientific and technical knowledge to mitigate disasters.
http://www.cred.be/centre/research/Documents/ncdm.pdf
→ *Volume 1, p. 88*

National Disaster Coordinating Council (NDCC), the Philippines

NDCC is the highest policy-making, coordinating and supervising body for disaster management in the Philippines. It strives to reach out to as many people as possible to provide relevant and timely information that is beneficial to the public.
http://www.ndcc.gov.ph/
→ *Volume 1, p. 82*

National Disaster Management Centre (NDMC), Pretoria, South Africa

Its mission is to improve knowledge, awareness and understanding of disasters, and to coordinate and facilitate access to information and resources in order to promote and support comprehensive, integrated and effective disaster management in South Africa.
http://sandmc.pwv.gov.za
→ *Volume 1, p. 102*

National Disaster Prevention and Preparedness Commission (DPPC), Addis Ababa, Ethiopia

The Relief and Rehabilitation Commission was established in June 1974 following the outbreak of famine in the two northern provinces of Ethiopia. In August 1995, it was re-established as the DPPC. The objectives of the Commission cover prevention, preparedness and response aspects of disaster management.
→ *Volume 1, p. 98*

National Emergency Management Association (NEMA), United States of America

NEMA is the professional association of Pacific and Caribbean insular state emergency management directors committed to providing national leadership and expertise in comprehensive emergency management. It serves as a vital information and assistance resource for state and territorial directors and their governors, while forging strategic partnerships to advance continuous improvements in emergency management.
http://www.nemaweb.org

National Environment and Planning Agency (NEPA) (formerly the Natural Resources Conservation Authority, NRCA), Jamaica

NEPA is a new executive agency that became operational on April 1, 2001. It is an agency of the Ministry of Land and the Environment. NEPA represents a merger between the Natural Resources Conservation Authority, the Town Planning Department (TPD) and the Land Development and Utilization Commission. The Agency results from the work of the Government of Jamaica Public Sector Modernization Programme (PSMP). The aim of the merger is to integrate environmental, planning and sustainable development policies and programmes and to improve customer service. Its mission is to promote sustainable development by ensuring protection of the environment and orderly development in Jamaica through highly motivated staff performing at the highest standard. http://www.nrca.org/

National Institute for Disaster Prevention (NIDP), Republic of Korea

NIDP was established to reduce loss of life and property from natural and man-made disasters. Its research field is on disaster prevention as well as an evaluation field including an evaluation of the master plan for the creek improvement. www.nidp.go.kr

National Institute of Advanced Industrial Science and Technology (AIST), Japan

AIST is an independent administrative institution administered by the Ministry of Economy, Trade and Industry. On April 1, 2001, the new AIST began operations. It comprises 15 research institutes previously under the Agency of Industrial Science and Technology in the Ministry of International Trade and the Weights and Measures Training Institute. The new AIST is Japan's largest public research organization. AIST shall carry

out activities regarding: (1) research and development on industrial science and technology, (2) geological survey, (3) measurement standards, and (4) technological applications for the private sector. http://www.aist.go.jp/

National Institute of Building Sciences (NIBS), United States of America

NIBS was authorized by the US Congress in the Housing and Community Development Act of 1974, Public Law 93-383. Through NIBS, the Congress established a public/private partnership to enable findings on technical, building-related matters to be used effectively to improve government, commerce and industry. NIBS is a non-profit, non-governmental organization bringing together representatives of government, the professions, industry, labour and consumer interests to focus on the identification and resolution of problems that hamper the construction of safe, affordable structures for housing, commerce and industry. NIBS' councils and standing committees are : the Consultative Council, established as mandated in NIBS' authorizing legislation; the Building Seismic Safety Council (BSSC); the Building Environment and Thermal Envelope Council (BETEC); the Facility Information Council (FIC); the International Alliance for Interoperability (IAI); the Multihazard Mitigation Council (MMC); and the Facility Maintenance and Operations Committee (FMOC). http://www.nibs.org/

→ *Volume 1, p. 73*

National Institute of Rural Development (NIRD), Hyderabad, India

NIRD is India's apex body for undertaking training, research, action research and consultancy functions in the rural development sector. It works as an autonomous organization supported by the Ministry of Rural Areas and Employment of the Government of India. http://www.devinit.org/indianresearchorgs.htm

→ *Volume 1, p. 240*

National Institute of Water and Atmospheric Research (NIWA), New Zealand

The NIWA was established in 1992 as one of nine New Zealand Crown Research Institutes. NIWA's mission is to provide a scientific basis for the sustainable management of New Zealand's atmospheric, marine and freshwater systems and associated resources. NIWA maintains the New Zealand Freshwater Fish Database and the Water Resources Archive, the national repository for freshwater time-series data.
http://www.ngdc.noaa.gov/seg/hazard/resource/methaz/hydrniwa.html

→ *Volume 1, p. 48*

National Meteorological and Hydrological Services (NMHS)

The Technical Co-operation Programme was developed to ensure that national Meteorological and Hydrological Services have the required means to fulfil their mission. Projects in several WMO member countries and regions are currently being implemented with the aim of improving and strengthening the capacities of National Meteorological and Hydrological Services (NMHS's) to participate effectively in other WMO programmes. http://www.wmo.ch/

National Oceanic and Atmospheric Administration (NOAA), Washington DC, United States of America

NOAA's mission is to describe and predict changes in the earth's environment, and conserve and wisely manage the nation's coastal and marine resources. NOAA's strategy consists of interrelated strategic goals for environmental assessment, prediction and stewardship. http://www.noaa.gov

→ *Volume 1, p. 217, 237, 369, 376, 377*

NOAA Coastal Services Centre (CSC)

CSC is an office within the National Oceanic and Atmospheric Administration devoted to serving the nation's state and local coastal resource management programs. Its mission is to support the environmental, social, and economic well being of the coast by linking people, information, and technology. http://www.csc.noaa.gov/

→ *Volume 1, p. 72*

National Science Foundation (NSF), Washington DC, United States of America

NSF is an independent agency of the US Government, established by the National Science Foundation Act of 1950. Its mission is to promote the progress of science, to advance the national health, prosperity, and welfare, and to secure the national defence.
http://www.nsf.gov

National Society for Earthquake Technology (NSET), Kathmandu, Nepal

NSET strives to assist all communities in Nepal to become earthquake safer by developing and implementing organized approaches to managing and minimizing earthquake risks.
http://www.nset.org.np

→ *Volume 1, p. 245, 330*

Natural Hazards Centre, Christchurch, New Zealand

The Institute of Geological & Nuclear Sciences and the National Institute of Water and Atmospheric Research (NIWA) have created a natural hazards information centre. It aims to provide New Zealanders with a single point of contact for the latest research, resources, and scientific expertise. http://www.naturalhazards.net.nz

→ *Volume 1, p. 274*

Natural Hazards Research and Applications Information Center, University of Colorado, Boulder, United States of America

The centre is a national and international clearinghouse that provides information on natural hazards and human adjustments to these risks. The centre's prime goal is to increase communication among hazard and disaster researchers and individuals, agencies, and organizations actively working to reduce disaster damage and suffering. The Natural Hazards Center carries out its mission in four principal areas: information dissemination, an annual workshop, research, and library services. http://www.colorado.edu/hazards

→ *Volume 1, p. 28, 204*

The Netherlands Red Cross Centre on Climate Change and Disaster Preparedness

In response to the growing concerns regarding climate change, in June 2002, the Netherlands Red Cross officially launched the International Red Cross and Red Crescent Centre on Climate Change and Disaster Preparedness. The centre will address the threat millions of people face from climate change related disasters every year by seeking to bridge the gap between meteorological science and relief aid.
http://www.ifrc.org/what/disasters/dp/climate/centre.asp

→ *Volume 1, p. 304*

Niger Basin Authority (NBA)

The aim of the Niger Basin Authority is to promote cooperation among the member countries and to ensure integrated development in all fields through development of its resources, notably in the fields of energy, water resources, agriculture, forestry exploitation, transport and communications, and industry. http://www.abn.ne/webeng/index-eng.html

→ *Volume 1, p. 157, 306*

North Atlantic Treaty Organization (NATO)

NATO is an alliance of 19 countries from North America and Europe committed to fulfilling the goals of the North Atlantic Treaty signed on 4 April 1949. http://www.nato.int/

→ *Volume 1, p. 167, 174*

Norvegian Geotechnical Institute (NGI)

NGI is a private foundation doing research and consulting in the geo-sciences, including soil, rock and snow. http://www.ngi.no/english/

→ *Volume 1, p. 213*

Nuclear Regulatory Commission (NRC), United States of America

NRC is an independent agency established by the Energy Reorganization Act of 1974 to regulate civilian use of nuclear materials. http://www.nrc.gov

O

Office Fédéral de l'Environnement, des Forêts, et du Paysage (OFEFP), Switzerland (Swiss Agency for the Environment, Forests and Landscape (SAEFL))

SAEFL is the federal office responsible for environment. It is integrated in the Federal Department of Environment, Transportation, Energy and Communication. http://www.umwelt-schweiz.ch/buwal.de

Office for Foreign Disaster Assistance (OFDA)

OFDA/USAID has been the principal US agency to extend assistance to countries recovering from disaster, trying to escape poverty, and engaging in democratic reforms. http://www.usaid.gov

→ *Volume 1, p. 3, 8, 40, 47, 48, 134, 144, 159, 183, 196, 208, 214, 226, 228, 229, 286, 309, 348, 363*

Office of Disaster Preparedness and Emergency Management (ODPEM), Kingston, Jamaica

ODPEM is committed to taking pro-active and timely measures to prevent or reduce the impact of hazards in Jamaica, its people, natural resources and economy through its trained and professional staff, the use of appropriate technology and collaborative efforts with national, regional and international agencies. http://www.odpem.org.jm

→ *Volume 1, p. 286*

Organization for Economic Cooperation and Development (OECD), Paris, France

The OECD groups 30 member countries sharing a commitment to democratic government and the market economy. With active relationships with some 70 other countries, NGOs and civil society, it has a global reach. Best known for its publications and its statistics, its work covers economic and social issues from macroeconomics, to trade, education, development, science and innovation. http://www.oecd.org

→ *Volume 1, p. 256, 309, 340, 345*

Organization of American States (OAS), Washington, DC, United States of America, (Organización de Estados Americanos)

The nations of the Americas are working more closely together than ever before strengthening democracy, advancing human rights, promoting peace and security, expanding trade and tackling complex problems caused by poverty, drugs and corruption. Together they are building a better future for the next generation. At the outset of a new century and a new millennium, the challenge is how to turn citizens' high expectations into reality. OAS

is playing a central role in working toward many of the goals that are shared by the countries of North, Central and South America and the Caribbean. http://www.oas.org
→ *Volume 1, p. 71, 72, 144, 147, 176, 247, 329, 330, 340*

- Inter-American Committee for Natural Disaster Reduction (IACNDR)

The IACNDR is the main forum of the OAS and the Inter-American System for the analysis of policies and strategies aimed at natural disaster reduction in the context of the sustainable development of member states. The OAS General Assembly established the IACNDR based on the need to strengthen the role of the OAS in natural disaster reduction and emergency preparedness.

- OAS's Unit for Sustainable Development (USDE)

The Unit for Sustainable Development and Environment is the principal technical arm of the OAS General Secretariat for responding to the needs of member states on issues relating to sustainable development within an economic development context. Technical issues addressed by the USDE include transboundary management of water resources, reduction of vulnerability to natural hazards, public participation in decision-making, climate change, sea-level rise, coastal-zone management, renewable energy planning, and biodiversity. Formed in 1963, the Unit has evolved from an office dealing with natural resource inventories in different countries to one whose main task is to follow up on the mandates emanating from Agenda 21 and the Bolivia Summit of the Americas on Sustainable Development. http://www.oas.org/usde/

Organization of Eastern Caribbean States (OECS), Castries, St. Lucia

The OECS came into being on 18 June, 1981, when seven Eastern Caribbean countries signed a treaty agreeing to co-operate with each other and promote unity and solidarity among the members. It is composed of 9 member states: Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines and 2 Associated Member States: Anguilla, British Virgin Islands. http://oecs.org
→ *Volume 1, p. 350*

Organization of Rural Associations for Progress (ORAP), Zimbabwe

ORAP was founded in 1981 by a small group of people in Matabeleland Province to discuss development options following the independence war which ended in 1980. ORAP aims at creating employment and greater self reliance through promoting culturally relevant self-help activities. The organization also aims at encouraging grassroots programme development and promoting economic and financial autonomy.
http://www.iisd.org/50comm/commds/desc/d41.htm

Overseas Development Institute (ODI), United Kingdom

Its mission is to inspire and inform policy and practice which lead to the reduction of poverty, the alleviation of suffering and the achievement of sustainable livelihoods in developing countries. It does this by locking together high-quality applied research, practical policy advice, and policy-focused dissemination and debate. It works with partners in the public and private sectors, in both developing and developed countries.
http://www.odi.org.uk
→ *Volume 1, p. 25*

OXFAM, United Kingdom

Oxfam's work is dedicated to finding lasting solutions to poverty and suffering.
http://www.oxfam.org.uk/
→ *Volume 1, p. 89, 228, 278*

Oxford Center for Disaster Studies (OCDS), United Kingdom
OCDS is one of the leading organisations in consultancy, training and research in the field of disaster management and protection.
→ *Volume 1, p. 206*

P

Pacific Tsunami Warning Centre (PTWC), Hawaii
Established in 1949, the PTWC in Ewa Beach, Hawaii, provides warnings for tsunamis to most countries in the Pacific Basin as well as to Hawaii and all other US interests in the Pacific outside of Alaska and the US West Coast. Those areas are served by the West Coast/Alaska Tsunami Warning Center (WC/ATWC) in Palmer, Alaska. PTWC is also the warning center for Hawaïi's local and regional tsunamis. http://www.prh.noaa.gov/pr/ptwc
→ *Volume 1, p. 374*

Pan-American Engineering Association for the Public Health and Environment (Asociación Interamericana de Ingeniería Sanitaria y Ambiental (AIDIS)
The mission of AIDIS-Canada is to further the goals of AIDIS Interamericana through programs and services that promote sound environmental practices, policies, management, and education to improve the quality of life throughout the Americas.
http://www.aidis.org.br/
→ *Volume 1, p. 339*

Paul Scherrer Institute (PSI) of Natural Sciences and Technology, ETH Zurich
The Paul Scherrer Institute (PSI) conducts basic research, mostly financed by Swiss tax moneys. http://www.psi.ch/index_e.shtml
→ *Volume 1, p. 270*

Philippines Commission on Higher Education (CHED)
CHED is mandated to undertake the following tasks: promote quality education; take appropriate steps to ensure that education shall be accessible to all, and insure and protect academic freedom for the continuing intellectual growth, the advancement of learning and research, the development of responsible and effective leadership, the education of high level professionals, and the enrichment of historical and cultural heritage.
→ *Volume 1, p. 250*

Philippines Institute for Volcanology and Seismology (PHIVOLCS), Quezon City
The principal goal of PHIVOLCS is to formulate up-to-date and comprehensive disaster preparedness and loss reduction action plans for volcanic eruption, earthquake occurrences and related geotectonic processes/phenomena which imprint significant impacts on man and his environment. PHIVOLCS undertakes activities geared towards making people aware of volcanoes and volcanology, earthquakes and seismology, and to understand why, where and how natural disasters of volcanic and seismic origins occur in the Philippines.
http://www.phivolcs.dost.gov.ph
→ *Volume 1, p. 250*

Phnom Penh Regional Platform on Sustainable Development for Asia and the Pacific, Phnom Pehn, Cambodia
The High-level Regional Meeting for the World Summit on Sustainable Development (WSSD) reviewed the progress in the implementation of Agenda 21 in the region and identifies key policy issues, priorities, goals, constraints and actions in preparation for the WSSD.
→ *Volume 1, p. 30*

PLANAT (Swiss National Platform for Natural Hazards), Bern, Switzerland

The Federal Council aims to improve prevention in the field of natural hazards. To this end, it created the national PLANAT. This consultative body of the confederation is organized as an extra parliamentary commission. Whilst taking care to avoid a duplication of efforts, it also ensures a better use of the existing structures. http://www.planat.ch

→ *Volume 1, p. 111, 268*

Potsdam Institute for Climate Impact Research (PIK), Potsdam, Germany

The founding of the Potsdam Institute for Climate Impact Research in 1992 arose out of the growing need among political decision-makers to be informed about the consequences of Global Change. In this respect the question of increasing concentrations of CO2 in the atmosphere and the effect this would have on climate, the environment and society was of particular importance. Since then PIK has been involved in investigating the ecological, geophysical and socioeconomic aspects of worldwide climatic change, and climate-impact research has become part of a comprehensive earth system analysis. http://www.pik-potsdam.de

ProVention Consortium (Disaster Management Facility, World Bank)

Its mission is "to help developing countries build sustainable and successful economies and to reduce the human suffering that too often results from natural and technological catastrophes". The ProVention Consortium is a global coalition of governments, international organizations, academic institutions, the private sector, and civil society organizations aimed at reducing disaster impacts in developing countries. The Consortium functions as a network to share knowledge and to connect and leverage resources to reduce disaster risk. http://www.proventionconsortium.org

→ *Volume 1, p. 223, 224, 225, 254, 256, 259, 260, 261, 304, 357, 396*

Public Entity Risk Institute (PERI)

Its mission is to serve public, private, and non-profit organizations as a dynamic, forward thinking resource for the practical enhancement of risk management.
http://www.riskinstitute.org/about.asp

R

Regional Consultative Committee (RCC) in Disaster Management, Bangkok, Thailand

Within the framework of the Advisory Council, an ADPC Consultative Committee on Regional Cooperation in Disaster Management has been established. The Committee comprises members of the ADPC Board of Trustees/Advisory Council who are working in key Government positions in the National Disaster Management systems of countries of the Asian region. The role of RCC is to provide an informal consultative mechanism for development of action strategies for disaster reduction in the region and promotion of cooperative programs on a regional and sub-regional basis, so as to guide ADPC's work.
http://www.adpc.net

→ *Volume 1, p. 158*

Russian Academy of Sciences

The country's leading scientific institution is a self-governing organization entitled to manage its affairs and property. Its activities are regulated by the laws of Russian Federation and its own Charter. The Academy network comprises 440 research institutions and 12 major scientific centers located all over the country.
http://www.ihst.ru/jubilee/academy_jubilee-e.htm

→ *Volume 1, p. 114*

S

SAHEL Institute (INSAH), Bamako, Mali
INSAH, a specialized institution of CILSS, provides food security in a balanced ecological environment; coordinates, harmonizes and promotes scientific and technical research and training and disseminates scientific and technical information on issues related to drought control, desertification management and population. http://www.insah.org/index.html
→ *Volume 1, p. 157*

Save the Children Fund, United Kingdom (SCF-UK)
SCF-UK is the leading United Kingdom charity working to create a better world for children. http://www.oneworld.org/scf

Secretaría General de Planificación (SEGEPLAN), Guatemala (Planning Secretariat)
SEGEPLAN supports decision-making, within the presidency and other centres of public policy formulation in the executive branch, by providing specific social-economic information that facilitates informed decisions related to the country's development. http://www.segeplan.gob.gt

Seismic Safety Association (USSA), Uganda
USSA is a non-profit professional organization some of whose members are affiliated to the Uganda Institution of Professional Engineers, International Federation of Red Cross and Red Crescent Societies, Government Ministries, NGOs, insurance industry, community leaders, and members from the general public.
http://www.ehc.arch.vuw.ac.nz/newsletters/jan99/page8.htm
→ *Volume 1, p. 330*

Self Employed Women's Association (SEWA)
SEWA's main goals are to organise women workers for full employment. Full employment means employment whereby workers obtain work security, income security, food security and social security (at least health care, child care and shelter). SEWA organises women to ensure that every family obtains full employment. http://www.sewa.org/
→ *Volume 1, p. 228*

Simon Fraser University Telematics Research Lab (TRL), Canada
The convergence of computers and communications, and the accelerating growth of global information networking is beginning to have profound impact on the organization of disaster mitigation, planning and response at all levels of society. During the past decade, the Centre for Policy Research on Science and Technology and its associated Telematics Research Laboratory (TRL) have been participating in these developments through applied disaster communication research in Canada and abroad in collaboration with civil emergency organizations at all levels of government and with the United Nations and international disaster relief organizations. http://www.hazard.net/trl
→ *Volume 1, p. 376*

Sistema de Integración Centroamericana (SICA)
SICA, and its secretariat, is a regional organization created by the Central American Presidents in the Declaration of Tegucigalpa with the purpose of offering its technical services as well as political expertise to the initiatives of regional integration, and particularly to the development of the Central America Union. http://www.sicanet.org
→ *Volume 1, p. 146*

Sistema Nacional de Protección Civil (SINAPROC), Panama (National Civil Protection System)
SINAPROC is an infrastructure of programmes, institutional relationships, methodologies

and processes, which coordinates the common efforts of the institutions of the three governmental hierarchies, as well as the public and private social agencies, to protect society against the dangers of natural risks and disasters. http://www.sinaproc.gob.pa

Sistema Nacional para la Prevención, Mitigación y Atención de Desastres (SNPMAD), Nicaragua (National System for Disaster Prevention, Mitigation and Attention)

In March, 2000, legislation was approved for the establishment of the National System for the Prevention, Mitigation of, and Attention to Disasters. The National Committee is the administrative entity of the system, whose role is to define the policies and plans of the system, as well as to assist the President of the Republic with the declaration of a state of emergency and approve the annual budget directed to the national fund for disasters. The system has established commissions for sectorial initiatives for the execution of the plans adopted by the system. The legislation stipulates that the commissions shall be organized and coordinated at the ministerial level. http://www.sinapred.gob.ni

→ *Volume 1, p. 92*

South African Qualifications Authorities (SAQA)

The South African Qualifications Authority is a body of 29 members appointed by the Ministers of Education and Labour. The members are nominated by identified national stakeholders in education and training. Its National Qualifications Framework is the set of principles and guidelines by which records of learner achievement are registered to enable national recognition of acquired skills and knowledge, thereby ensuring an integrated system that encourages life-long learning. http://www.saqa.org.za

→ *Volume 1, p. 248*

South Asian Association for Regional Cooperation (SAARC), Kathmandu, Nepal

SAARC was established when its charter was formally adopted on 8 December, 1985 by the heads of state of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. SAARC provides a platform for the peoples of South Asia to work together in a spirit of friendship, trust and understanding. It aims to accelerate the process of economic and social development in member states. http://www.saarc-sec.org

→ *Volume 1, p. 159, 160, 161*

South Pacific Applied Geoscience Commission (SOPAC), Fiji

Its mission is to improve the well being of the peoples of Pacific Island developing states through the application of geoscience to the management and sustainable development of their non-living resources. SOPAC member countries include Australia, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia (Associate), Guam, Kiribati, Marshall Islands, New Caledonia (Associate), Nauru, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu. http://www.sopac.org.fj

→ *Volume 1, p. 108, 109, 159, 163, 164, 165, 176, 205, 256, 311, 370*

Southern Africa Development Community (SADC), Gaborone, Botswana

The primary role of SADC is to help define regional priorities, facilitate integration, assist in mobilizing resources and to maximize the regional impact of projects. The approach is to address national priorities through regional action. The SADC Programme of Action is made up of all the programmes and projects approved by the Council of Ministers. http://www.sadc.int

→ *Volume 1, p. 31, 58, 102, 150, 153, 154, 155, 156, 176, 200, 201, 246, 362, 370*

- Food, Agriculture and Natural Resources (FANR) – Development Unit, Harare, Zimbabwe

The Southern African Development Community (SADC) is promoting regional Cooperation in economic development. It has adopted a Programme of Action covering

cooperation in various sectors, including food security and natural resources management. In order to enhance food security for all in the region, SADC established a Food Security Programme. Its secretariat is formed by the Food, Agriculture and Natural Resources (FANR) Development Unit. http://www.sadc-fanr.org.zw
→ *Volume 1, p. 154*

- SADC Water Resources Coordination Unit
In view of the importance of the role that water plays in ensuring the well-being of the peoples of SADC, a distinct Water Sector was established by the community in 1996. The day-to-day coordination activities of the sector are undertaken by a dedicated unit known as the SADC Water Sector Coordinating Unit (SADC WSCU), located in the Ministry of Natural Resources, in Lesotho. The vision of the SADC Water Sector is, "to attain the sustainable, integrated planning, development, utilization and management of water resources that contribute to the attainment of SADC's overall objectives of an integrated regional economy on the basis of balance, equity and mutual benefit for all member States". http://www.sadcwscu.org.ls

- Regional Early Warning Unit (REWU), SADC, Harare, Zimbabwe
The SADC Regional Early Warning Unit is an institution of the Southern African Development Community financially supported through contributions from Member States. The SADC Regional Early Warning System operates as an integrated project, comprising a Regional Early Warning Unit (REWU), based in Harare, and autonomous National Early Warning Units in each of the ten original SADC member states. http://www.sadc-fanr.org.zw/rewu/rewu.htm

- Regional Remote Sensing Unit (RRSU), SADC, Harare, Zimbabwe
The main objective is to strengthen national and regional capabilities in the area of remote sensing and GIS for use of early warning for food security and natural resources management. http://www.sadc-fanr.org.zw/rrsu/rrsu.htm

Southern African Research and Documentation Center (SARDC), Harare, Zimbabwe
SARDC's objective is to improve the base of knowledge about economic, political, cultural and social developments, and their implications, by making information accessible to governments and policy makers, non-governmental organizations, the private sector, regional and international organizations, development agencies, parliaments, and the media. http://www.sardc.net
→ *Volume 1, p. 201*

Southern Alliance for Indigenous Resources (SAFIRE), Harare, Zimbabwe
SAFIRE was founded in October 1994 and since then it has steadily evolved to become one of the larger environmental NGOs in Southern Africa, and is associated particularly with natural products development, forestry-related issues on communal land, and with participatory approaches to community based natural resource management. http://www.safireweb.org
→ *Volume 1, p. 183*

State Agency for Civil Protection, Bulgaria
The State Agency for Civil Protection is a legal entity funded by the state budget with headquarters in Sofia. The Agency implements the state policy in the area of the protection in crisis situations caused by natural factors and by technical activities. It is a working body of the Standing Committee on the Protection of the Population in the Cases of Disasters and Accidents at the Council of Ministers. http://www.cp.government.bg/about-en.php
→ *Volume 1, p. 174*

Stockholm Environment Institute (SEI), Sweden

SEI's mission is to support decision-making and induce change towards sustainable development around the world by providing integrative knowledge that bridges science and policy in the field of environment and development. http://www.sei.se/

→ *Volume 1, p. 299*

StormCenter Communications, Maryland, United States of America

StormCenter Communications provides leading-edge monitoring and visuals to help the media, government agencies and emergency managers better understand environmental issues to enable the media and educators to increase public awareness.
http://www.stormcenter.com/

→ *Volume 1, p. 213*

Sustainable Environment and Ecological Development Society (SEEDS), New Delhi, India

SEEDS, a non-profit voluntary organization, is a collective endeavour of young professionals drawn from development related fields. It originated as an informal group of like-minded people, getting together for the purpose of creative research projects of academic interest. The group was later formalized in early 1994 and has been active in the field ever since. It is involved in research activities in community development, disaster management, environmental planning, transport planning, and urban and regional planning. Activities are carried out on behalf of government, semi-government and international development agencies. http://www.gdrc.org/uem/seeds.html

→ *Volume 1, p. 332*

Swayam Shikshan Prayog (SSP), India

SSP began in 1989 as a self-education network facilitated by the Society for Promotion of Area Resource Centres, in rural Maharashtra and neighbouring states. At this time, the collectives and NGOs in the learning network came together to evolve alternate strategies that sought to empower women's collectives around issues of livelihoods, credit, access to and management of resources in rural communities. SSP began working directly with women's groups and communities in the under-developed districts of Latur and Osmanabad in 1994. http://www.indiatogether.org/women/profiles/ssprayog.htm

→ *Volume 1, p. 178*

Swedish International Development Agency (SIDA)

SIDA is a government agency that reports to the Ministry for Foreign Affairs. SIDA is responsible for most of Sweden's contributions to international development cooperation. The goal of SIDA's work is to improve the standard of living of poor people and, in the long term, to eradicate poverty. SIDA is also responsible for cooperation with countries in Central and Eastern Europe.http://www.sida.org

SWISSAID

Motor and motivation of Swissaid's work is the vision of an equitable, peaceful and many-faceted world, of a worthy future for children and grandchildren on a planet free from hunger, poverty, violence and war. SWISSAID is a small, decentralised multinational organisation with offices in 10 countries. The Head Office is in Switzerland.
http://www.swissaid.ch/index_e.html

→ *Volume 1, p. 278*

Swiss Agency for Development and Cooperation (SDC)

SDC is part of the Swiss Federal Department of Foreign Affairs. Its mandate is based on the Federal Law on International Development Cooperation and Humanitarian Aid enacted

on 19 March 1976, and on a federal decree of 24 March 1995 on cooperation with the countries of Eastern Europe. In order to make the greatest contribution, SDC concentrates its long-term efforts on cooperating in development in specific sectors and with a limited number of countries in Africa, Asia, Latin America and Eastern Europe. In Latin America, the Swiss Cooperation has chosen to focus its efforts on Peru, Bolivia, Ecuador and Central America, particularly Nicaragua.
http://www.sdc.admin.ch
→ *Volume 1, p. 24, 319*

Swiss Federal Institute for Environmental Science and Technology (EAWAG)

EAWAG's task as the national research center for water pollution control is to ensure that concepts and technologies pertaining to the use of natural waters are continuously improved. Ecological, economical and social water interests are brought into line. Multidisciplinary teams of specialists in the fields of environmental engineering, natural and social sciences jointly develop solutions to environmental problems. The acquired knowledge and know-how are transmitted nationally and internationally by publications, lectures, teaching, and consulting to the private and public sector. http://www.eawag.ch/
→ *Volume 1, p. 270*

Swiss Federal Institute for Forest, Snow and Landscape Research (WSL)

WSL is a federal research institute within the domain of the Federal Institutes of Technology. WSL conducts research into the environment and sustainability. Its key areas are the "use, management and protection of near-natural terrestrial habitats" and the "management of natural hazards". These provide a basis for the sustainable use of the landscape. http://www.wsl.ch/welcome-en.ehtml
→ *Volume 1, p. 269*

Swiss Federal Institute of Technology (ETH), Zurich, Switzerland

The Swiss Federal Institute of Technology Zurich is a science and technology university with an outstanding research record. Excellent research conditions, state-of-the-art infrastructure and an attractive urban environment add up to the ideal setting for creative personalities. ETH earned its excellent national and international reputation through major achievements in research as well as through first-rate teaching and services. http://www.ethz.ch/
→ *Volume 1, p. 269, 270*

- Center for Security Studies, Swiss Federal Institute of Technology

The Center for Security Studies specializes in the field of national and international security studies. Activities include research, teaching, and information services. The center has developed and maintains two electronic information services - the International Relations and Security Network (ISN) and the Information Management System for Mine Action (IMSMA). The Center also runs the Comprehensive Risk Analysis and Management Network (CRN), the Swiss Foreign and Security Policy Network (SSN), and the Parallel History Project on NATO and the Warsaw Pact (PHP).http://www.fsk.ethz.ch/about/
→ *Volume 1, p. 270*

- Institute of Geotechnical Engineering, Zurich

The Division of Geotechnics IGT collects some information, which may be of general interest to other researchers and geotechnical engineers.
http://www.igt.ethz.ch/
→ *Volume 1, p. 269*

- Laboratory of Hydraulics and Glaciology, ETH Zurich

It is one of Europe's leading institutes in hydraulics, hydrology and glaciology. The 70 collaborators are organized in three sections which deal with research, teaching and applied research work, an administrative group and the chair of hydraulic structures. http://www.vaw.ethz.ch/

→ *Volume 1, p. 269*

Swiss National Alarm Centre

On average, the National Alarm Office in Zurich gets around 400 calls a year for assessment by duty personnel. Certain calls need to be referred to partner organisations in Switzerland or even abroad. As a result of this, the National Emergency Operations Centre (NEOC) relies on efficient communication channels for example, with the local police deployment centres. Direct links are also set up with other important Swiss partners such as nuclear power stations and the regulatory authorities like the Department for Safety at Nuclear Installations. These communication links need to be maintained and accessed regularly as speed and trouble-free data input are essential. https://www.naz.ch/home.html

→ *Volume 1, p. 111*

Swiss National Centre of Competence in Research (NCCR) North-South, University of Bern, Switzerland

The NCCR North-South focuses on international research cooperation and promotes high-quality disciplinary, interdisciplinary and transdisciplinary research with the aim of contributing to an improved understanding of the status of different syndromes of global change, the pressures these syndromes and their causes exert on different resources (human, natural, economic), and the responses of different social groups and society as a whole. It enables Swiss research institutions to enhance partnerships with institutions in developing and transition countries, thereby building the competence and capacity of research on both sides to develop socially robust knowledge for mitigation action. It is co-funded by the Swiss Agency for Development and Cooperation (SDC). http://www.nccr-north-south.unibe.ch

→ *Volume 1, p. 111, 275*

Swiss Reinsurance Company (Swiss Re), Zurich, Switzerland

Swiss Re, the global reinsurer, has more than 70 offices in 30 countries. The Financial Services Business Group brings together world-class capital management expertise and risk-taking capabilities. Swiss Re's success in business is attributable to intelligent risk management and an in-depth analysis of the nature of risk. http://www.swissre.com

→ *Volume 1, p. 196*

T

Tearfund

As part of its strategy Tearfund has identified the following key areas: development and capacity building; public health, including HIV/AIDS, children at risk, disaster preparedness and mitigation. http://www.tearfund.org

→ *Volume 1, p. 347*

Technicon, University of Technology, Free State, South Africa

The research mission of the Technikon Free State, a South African university of technology is in line with the higher education mission of teaching, research and community service: to advance, transfer and sustain knowledge and understanding, through the conduct of career teaching, research and scholarship, as well as community capacity building and services, at the highest international standards, for the benefit of national and international communities and that of the Free State Province in particular. http://www.tfs.ac.za/

Third World Academy of Sciences (TWAS), Italy

TWAS is an autonomous international organization, founded in Trieste, Italy, in 1983 by a distinguished group of scientists under the leadership of the late Nobel laureate Abdus Salam of Pakistan. It was officially launched by the then Secretary-General of the United Nations in 1985. Since 1986, TWAS has been supporting research work of scientific merit in 100 countries in the South through a variety of programmes. In addition, joint activities have been developed with UNESCO, the Abdus Salam International Centre for Theoretical Physics (ICTP), ICSU, International Foundation for Science (IFS) and the International Science Programme (ISP).

Tropical Cyclone Regional Specialized Meteorological Centres (RSMC), WMO

RSMC is a network of five centres designated by WMO and located in:
La Réunion, Miami, Nadi, New Delhi and Tokyo. There are a further six specialized tropical cyclone warning centres with regional responsibility to carry out activities coordinated at the global and regional levels by WMO through its World Weather Watch and Tropical Cyclone Programmes. They are located in Brisbane, Darwin, Perth, Wellington, Port Moresby and Honolulu.
→ *Volume 1, p. 215*

Tshwane Metropolitan Council, South Africa

Its mission is to enhance the quality of life of all the people in the City of Tshwane through a developmental system of local government and the rendering of efficient, effective and affordable services. http://www.tshwane.gov.za/
→ *Volume 1, p. 290*

Turkana Drought Contingency Planning Unit (TDCPU), Kenya

The Early Warning System of Turkana was set up in 1987. It operates at the sub-national level, for the district of Turkana in the northern part of Kenya. It is run by local government, by the TDCPU. It provides information on how early warning data can be translated and communicated to decision makers.

Tyndall Centre for Climate Change, University of East Anglia, Norwich, United Kingdom

The Tyndall Centre is a national United Kingdom centre for trans-disciplinary research on climate change. It is dedicated to advancing the science of integration, to seeking, evaluating and facilitating sustainable solutions to climate change and to motivate society through promoting informed and effective dialogue. The Centre was constituted in October 2000 and launched officially on 9 November 2000. Its purpose is to research, assess and communicate from a distinct trans-disciplinary perspective the options to mitigate, and the necessities to adapt to climate change, and to integrate these into the global, national and local contexts of sustainable development. http://www.tyndall.ac.uk/
→ *Volume 1, p. 241, 275*

U

Ukuvuka – Operation Firestop, South Africa

Operating within the scope of the authority of the local municipal authorities and the Cape Peninsula National Park, the Ukuvuka Campaign intends to accomplish the work identified by a public awareness campaign, through management support, funding, communication, monitoring and facilitation. http://www.ukuvuka.org.za
→ *Volume 1, p. 290*

Unidad regional de assistencia técnica (RUTA), Costa Rica, (Regional Unit for Technical Assistance)

RUTA is the collaboration between governments and international development agencies in

the sustainable development of rural areas in Central America. Its mission is to contribute to sustainable rural growth in order to reduce rural poverty in the Central American region by means of national and regional development agendas – a common effort between governments, civil societies and social agencies. http://www.ruta.org
→ *Volume 1, p. 146*

United States Agency for International Development (USAID), Washington DC, United States of America

USAID is an independent federal government agency that receives overall foreign policy guidance from the Secretary of State. The agency works to support long-term and equitable economic growth and advancing US foreign policy objectives by supporting economic growth, agriculture and trade, global health, democracy, conflict prevention and humanitarian assistance. http://www.usaid.gov
→ *Volume 1, p. 83, 121*

United States Federal Emergency Management Agency (FEMA), Washington DC, United States of America

FEMA is an independent agency of the federal government, reporting to the President. Its mission is to reduce loss of life and property and to protect the nation's critical infrastructure from all types of hazards through a comprehensive, risk-based, emergency management program of mitigation, preparedness, response and recovery. http://www.fema.gov
→ *Volume 1, p. 138, 217, 230, 284*

United States Geological Survey (USGS), United States of America

The USGS provides reliable scientific information to describe and understand the earth; minimize loss of life and property from natural disasters; manage water, biological, energy and mineral resources and enhance and protect the quality of life. http://www.usgs.gov
→ *Volume 1, p. 152, 156, 174, 212, 217, 232*

United States Trade and Development Agency (USTDA)

USTDA advances economic development and US commercial interests in developing and middle income countries. The agency funds various forms of technical assistance, feasibility studies, training, orientation visits and business workshops that support the development of a modern infrastructure and a fair and open trading environment. http://www.tda.gov/
→ *Volume 1, p. 173*

Urban Geoscience Division of Geoscience Australia

Geoscience Australia is the national agency for geoscience research and geospatial information. It is located within the Industry, Tourism and Resources portfolio. As part of its extensive work on urban centres, Geoscience Australia watches and assesses earth-surface processes that pose a risk to Australia. It gathers data and develops tools that governments and other authorities may use to make the nation as safe as possible from natural and human-induced hazards. http://www.ga.gov.au/
→ *Volume 1, p. 210*

V

Volcanic Ash Advisory Centre (VAAC)

The Alaska Aviation Weather Unit performs two roles as part of its mission to provide timely, accurate forecasts and warnings to the aviation community: Volcanic Ash Advisory Center (VAAC), Meteorological Watch Office (MWO). The goal of the international volcanic ash program is to provide worldwide warnings and advisories to aviation interests regarding volcanic ash hazards. Volcanic Ash Advisory Centers are responsible for

providing ash movement and dispersion guidance to Meteorological Watch Offices and neighbouring VAACs. There are nine VAACs worldwide. Each one is named for the city in which it is located. Warning responsability is passed from office to office as the ash cloud crosses the borders of the VAAC areas. http://aawu.arh.noaa.gov/vaac.php
→ *Volume 1, p. 218*

W

Warton School, Risk Management and Decision Processes Center, University of Pennsylvania, United States of America

The mission of the Wharton Risk Management and Decision Processes Center is to carry out a program of basic and applied research to promote effective policies and programs for low-probability events with potentially catastrophic consequences. The Center is especially concerned with natural and technological hazards and with the integration of industrial risk management policies with insurance. The Center is also concerned with promoting a dialogue among industry, government, interest groups and academics through its research and policy publications and through sponsored workshops, roundtables and forums. http://grace.wharton.upenn.edu/risk/
→ *Volume 1, p. 259*

West African Economic and Monetary Union (WAEMU)/Union Economique et Monétaire de l'ouest Africain (UEMOA)

Formerly known as the West African Monetary Union (WAMU/UMOA), the West African Economic and Monetary Union (UEMOA) was founded on 10 January 1994 in response to the devaluation of the common currency, the CFA Franc, on 11 January 1994. The Treaty establishing UEMOA (the Dakar Treaty of 10 January 1994) theoretically came into effect on 1 August 1994 after ratification by the seven member countries, thereby also replacing the since then dissolved West African Economic Union (WAEU/CEAO). http://www.dfa.gov.za/for-relations/multilateral/waemu.htm
→ *Volume 1, p. 306*

Wetlands International

Wetlands International is a leading global non-profit organization dedicated solely to the crucial work of wetland conservation and sustainable management. Well-established networks of experts and close partnerships with key organizations provide Wetlands International with the essential tools for conducting conservation activities worldwide. Activities are based on sound science and have been carried out in over 120 countries. Its mission is to sustain and restore wetlands, their resources and biodiversity for future generations through research, information exchange and conservation activities worldwide. http://www.wetlands.org
→ *Volume 1, p. (annex 4, 101)*

World Conservation Union (IUCN), Switzerland

IUCN's mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. http://www.iucn.org
→ *Volume 1, p. 83, 145, 299, 300, 303, 304, 309, (annex 4, 101, 102)*

World Organization of Volcano Observatories (WOVO)

WOVO was established as the result of a meeting of representatives from worldwide volcano observatories, held in Guadeloupe in 1981. WOVO became the International Association of Volcanology and Chemistry of the Earth's Interior Commission in the following year. http://www.wovo.org
→ *Volume 1, p. 218*

World Trade Organization (WTO)

WTO is the only global international organization dealing with the rules of trade between nations. At its heart are the WTO agreements, negotiated and signed by the bulk of the world's trading nations and ratified in their parliaments. The goal is to help producers of goods and services, exporters, and importers conduct their business. http://www.wto.org/

→ *Volume 1, p. 302*

World Vision (WV)

World Vision is an international Christian relief and development organisation working to promote the well being of all people - especially children. In 2002, World Vision offered material, emotional, social and spiritual support to 85 million people in 96 countries. http://www.wvi.org/home.shtml

→ *Volume 1, p. 183*

World Wide Fund for Nature (WWF)

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable promoting the reduction of pollution and wasteful consumption. Since it was founded in 1961, WWF has become one of the world's largest and most effective independent organizations dedicated to the conservation of nature. http://www.panda.org

→ *Volume 1, p. 173, (annex 4, 101)*

Z

Zambesi River Authority (ZRA)

ZRA was established through an agreement between Zambia and Zimbabwe. ZRA now has the responsibility for operation and maintenance of the Kariba Dam.

→ *Volume 1, p. 156*

Zentrum für Naturrisiken und Entwicklung (ZENEB), Germany (Center for Natural Risks and Development)

The objective of ZENEB is the creation of a culture of prevention for the advancement of sustainable development. Accordingly, initiatives in the reduction of vulnerability of natural hazards are being made in cooperation with issues of science and policy. http://www.giub.uni-bonn.de/zeneb

→ *Volume 1, p. 267*

Annex 3

United Nations system: An outline of activities dedicated to disaster risk reduction

United Nations system: An outline of activities dedicated to disaster risk reduction

The United Nations (UN) system is a mosaic that reflects the complexity of activities necessary to fulfil the objectives and principles of the UN Charter. It is composed of principal bodies and operational programmes as well as a number of specialized agencies and other autonomous entities carrying out specific mandates.

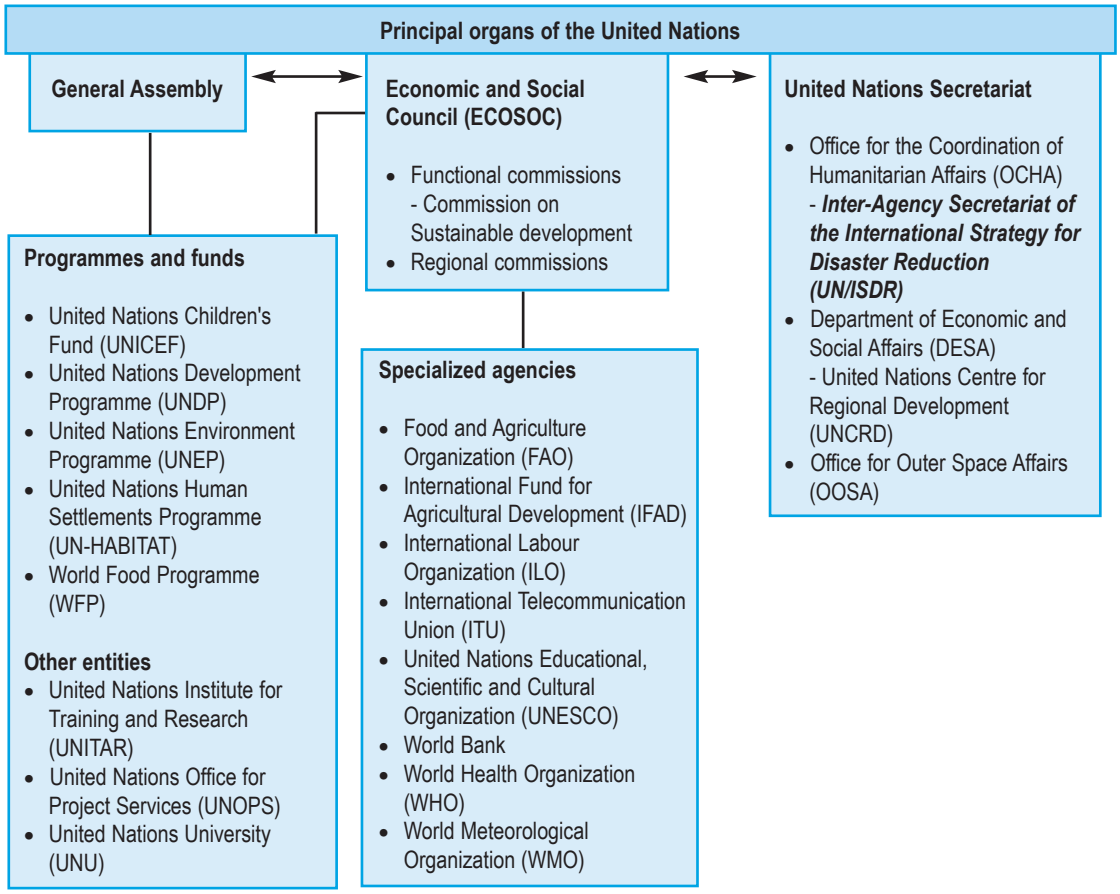
Reducing the impacts of natural disasters is work that cuts across numerous competencies of the UN so it has become relevant to a growing number of departments, programmes and agencies. Moreover, the recognition of disaster reduction as a building block of sustainable development has turned disaster reduction into a core function of the UN family.

This was a fundamental point when the international community decided to establish the International Strategy for Disaster Reduction under the auspices of the UN when the IDNDR ended in December 1999. The need for a coordinated approach to disaster risk reduction by the UN system has gained impetus as more countries recognize their increased vulnerability and experience more conspicuous damage each year.

A number of UN system entities carry out active programmes in support of disaster reduction and many of them have strengthened their disaster reduction capacity in their respective areas of competency during recent years. All work with regional, national or local authorities and in many cases with civil society organizations and groups.

This section outlines the various interests and activities within the UN system related to disaster risk reduction. It is a general overview, intentionally limited to programmes and initiatives pertaining to the prior identification and management of disaster risks. Therefore, it does not include emergency relief activities.

Box A.1
Graphic overview of the United Nations system in relation to disaster reduction



This overview is not intended to illustrate a comprehensive explanation of the complete United Nations system or hierarchy. Only United Nations entities relevant to disaster reduction are mentioned.

General Assembly

While the decisions taken by countries in the General Assembly and expressed in resolutions have no legally binding force for individual states, they carry the moral authority of the world community. They are, importantly, expressions of political will of the governments sitting in the Assembly.

The Assembly is also the sounding board of world opinion on issues such as human rights, peace and security and many global issues of universal relevance. In 1971, the General Assembly acted on the universal need to counter the impact of disasters when it adopted a resolution to create the Office of the UN Disaster Relief Coordinator (UNDRO) for the improved coordination of "assistance in cases of natural disaster and other disaster situations", including disaster mitigation.

In 1991, the Assembly endorsed the establishment of a Disaster Management Training Programme (DMTP) launched a year earlier by UNDP and UNDRO (resolution 46/182), aimed at upgrading professional skills in disaster management through inter-agency training programmes under the joint management of both entities. Following UN reform in the 1990s, the DMTP was fully divested to UNDP in March 1998 and now sits within the Bureau for Crisis Prevention and Recovery.

The Assembly recognized the further need to focus on disaster reduction as an activity in itself in 1987 and then launched the IDNDR in 1989.

The subject was explicitly recognized as an international strategy by the creation of the ISDR in 2000. Resolutions were also passed on the need for cooperation on early warning capacities of the UN system with regard to natural disasters from 1994, as well as to reduce the impact of the El Niño phenomenon from 1997.

Each year when disaster reduction is considered by the General Assembly under the Second Committee, the UN Secretary-General presents ISDR under the agenda item 'Environment and Sustainable Development'.
<http://www.un.org/ga>
→ *Volume 1, p. 11, 12, 20, 194, 215, 256, 358, 388*

Economic and Social Council (ECOSOC)

The Economic and Social Council has long recognized that the promotion of economic growth and sustainable development cannot be achieved without adequate measures to prevent and reduce the impact of natural disasters. It has also consistently encouraged a coordinated approach to disaster reduction within and outside the UN system. Decisions and resolutions of the Council include recommendations to the General Assembly supporting the good functioning of ISDR as well as on important related issues such as early warning and El Niño.

The work of the Council is carried out by nine functional commissions and five regional commissions. Two commissions are particularly relevant to disaster reduction, the Commission on Sustainable Development and the Commission on the Status of Women.
<http://www.un.org/esa/coordination/desc.htm>

United Nations Secretariat

The UN Secretariat, headed by the Secretary-General of the UN, services the General Assembly and the Economic and Social Council among other organs. It administers a number of departments, offices and programmes and oversees the policies established by them.

Within the UN Secretariat, OCHA, DESA and the regional economic and social commissions deal with certain aspects of disaster reduction that are relevant to their respective mandates. However, the ISDR Secretariat is the only entity of the UN Secretariat entirely dedicated to the subject, and is placed under the direct authority of the Under-Secretary-General for Humanitarian Affairs. Comprehensive information on the International Strategy for Disaster Reduction (ISDR) Secretariat can be found in Chapter 1.
<http://www.unisdr.org>

Office for the Coordination of Humanitarian Affairs (OCHA)

OCHA is led by the Under-Secretary-General for Humanitarian Affairs/Emergency Relief Coordinator and located in New York and Geneva. OCHA aims to alleviate human suffering by facilitating international coordination for the effective and efficient delivery of assistance to victims of disasters and complex emergencies (OCHA replaced the Department of Humanitarian Affairs in 1998, which evolved from the former UNDRO).

While concentrating on the coordination of emergency response, OCHA assists operational humanitarian agencies in developing common policies to improve planning, preparedness and response to natural disasters, particularly for protracted disasters such as drought. It also promotes preparedness and prevention efforts to reduce vulnerability to natural disasters.

In this respect, the Response Coordination Branch and the Emergency Services Branch of OCHA collaborate closely with UNDP and other relevant UN programmes and external agencies on activities such as improving links with national authorities, implementing lessons learned and organizing seminars to discuss coordination mechanisms.

Desk officers based in Geneva monitor weather conditions, earthquake bulletins and news services in every part of the world for potential natural disasters as well as environmental and technological emergencies. Working with the UN resident coordinators, the UN country teams and through its regional disaster response advisers, OCHA maintains close contacts with countries prone to natural disasters both before and during crises.

OCHA's Regional Disaster Response Advisers provide technical, strategic and training assistance to

governments, UN agencies and regional organizations in order to improve natural disaster planning, response and post-emergency reconstruction efforts.

At Headquarters level, OCHA, UNDP and the ISDR Secretariat share information and engage in common plans and activities related to disaster reduction. <http://www.reliefweb.int/ocha_ol/>
→ *Volume 1, p. 98, 152, 159, 160, 167, 174, 176, 196, 345, 346*

ReliefWeb

ReliefWeb is OCHA's online information portal on humanitarian emergencies, including tools and documentation useful for disaster prevention such as situation reports, maps and financial tracking, searchable archives of over 150,000 documents and 15,000 links to country-specific background information. <www.reliefweb.int>
→ *Volume 1, p. 49, 196, 205, 220, 221, 346*

Department of Economic and Social Affairs (DESA)

DESA is led by the Under-Secretary-General for Economic and Social Affairs and is located in New York.

DESA's multidimensional programme promotes broad-based sustainable development through an integrated approach to economic, social, environmental, demographic and gender-related aspects of development.

The functions of DESA include coordination and policy advisory services supplemented by research and training. DESA activities are guided by the programmes and platforms of action adopted by major UN conferences, as well as the Economic and Social Council.
<http://www.un.org/esa/sustdev>

Several divisions of DESA are concerned with disaster reduction, particularly the Division for Sustainable Development (DSD) with its Water, Natural Resources and Small Islands Branch and the Division for the Advancement of Women (DAW).

The mission of DSD is to facilitate the implementation of Agenda 21, the Rio Declaration on Environment and Development, the commonly referred Forest Principles, the Global Programme of Action for Sustainable Development of Small Island Developing States and the Johannesburg Plan of Implementation.

The division provides supporting technical services to the Economic and Social Council Commission on Sustainable Development and served as the Secretariat for the World Summit on Sustainable Development. The Commission was created in December 1992 and has 53 members who follow up on Earth Summit decisions. DESA carries out multi-year work programmes on sustainable development indicators, with a likely expansion to include disaster reduction indicators.
<http://www.un.org/esa/sustdev/dsd.htm>
→ *Volume 1, p. 256, (annex 4, 103, 106)*

The mission of DAW is to promote and support the inclusion of gender perspectives into the work of intergovernmental bodies, policies and programmes of the UN Secretariat and the UN system at all levels. The division also supports the Economic and Social Council functional commission, Commission on the Status of Women. The Commission is composed of 45 members elected by the Economic and Social Council for a period of four years.
<http://www.un.org/womenwatch/daw>

United Nations Centre for Regional Development (UNCRD)

UNCR was created in 1971. Through its head office in Nagoya, Japan it supports training and research in regional development as well as information dissemination. The Centre reports to DESA.

Regional offices in Nairobi, Kenya (for Africa) and Bogotá, Colombia (Latin America and the Caribbean) conduct a range of activities including training and research, advisory services and information exchange related to local and regional development. In particular, the UNCRD Disaster Management Planning Hyogo Office (Kobe) has developed community-based projects for disaster management planning and disaster management capacity-building introducing best practices case studies in developing countries.
<http://www.uncrd.or.jp>
→ *Volume 1, p. 159, 185, 186, 249, 332*

United Nations regional economic commissions

The regional economic commissions were founded by the Economic and Social Council for the purposes of promoting greater economic cooperation within and between regions and for generally contributing to the economic and social development of a region. They also work to coordinate actions directed towards these objectives and to reinforce productive economic relationships among countries.

There are five commissions: the Economic and Social Commission for Asia and the Pacific (ESCAP); the Economic Commission for Latin America and the Caribbean (ECLAC); the Economic Commission for Europe (ECE); the Economic Commission for Africa (ECA); and the Economic and Social Commission for Western Asia (ESCWA). The secretariats of these regional commissions are part of the UN Secretariat and perform similar functions including disaster reduction activities with particular attention given to the needs and priorities of the region.

Economic and Social Commission for Asia and the Pacific (ESCAP)

Headed by the Executive Secretary at the level of Under-Secretary-General of the UN, ESCAP is located in Bangkok, Thailand. Comprising 52 members and associate members, ESCAP promotes capacity-building in developing countries and contributes to the inclusion of disaster reduction into sustainable development with particular focus given to water-related disasters and especially floods.

Activities include the organization of seminars and training courses for flood management and control, and maintaining a regional overview of experiences in water-related disaster management in Asia. ESCAP also manages a regional project for strengthening capacities in participatory planning and management for flood mitigation and preparedness in large river basins.

ESCAP conducted a regional survey in cooperation with WMO, which has contributed to the strengthening of regional cooperation in flood forecasting, tropical cyclones and disaster reduction. Similarly, the Commission has provided advisory services to the Secretariat of the Mekong River Commission on the formulation of the regional strategy for flood management and mitigation.

In 2002, ESCAP prepared *Guidelines on Participatory Planning and Management for Flood Mitigation and Preparedness* to promote community participation in water-related disaster reduction. These Guidelines have since been disseminated to developing countries in the region.

ESCAP has commenced implementation of a project to build capacity in disaster management in Asia and the Pacific. With support from France, the project focuses on enabling countries to organize their own resources in a manner that will use space technology for natural disaster reduction, in particular for floods and drought. This includes their ability to receive efficient support from regional/international space-based initiatives. China, India, and the European Space Agency will provide additional support to ESCAP in this field.

The immediate objectives of the project are to promote the operational use of space technology applications for providing timely information and supporting informed decision-making to reduce damage from natural hazards and to establish regional cooperative mechanisms for strengthening national disaster management capabilities.
<http://www.unescap.org>
→ *Volume 1, p. 287*

Economic Commission for Latin America and the Caribbean (ECLAC)

ECLAC is based in Santiago, Chile with subregional headquarters in Mexico City, Mexico and Port-of-Spain, Trinidad and Tobago. It also maintains country offices in Bogotá, Colombia; Brasilia, Brazil; Buenos Aires, Argentina; and Montevideo, Uruguay as well as a liaison office in Washington, D.C, USA.

With 41 member states and seven associate members, the Commission plays an active role in disaster reduction, concentrating especially on the socio-economic impact of natural and other related hazards.

In this respect, ECLAC organized a series of inter-agency assessment studies on the macroeconomic impact of natural disasters in the region since the 1972 earthquake in Managua, Nicaragua. They include 1997-1998 El Niño events, 1998 hurricanes Georges and Mitch, 1999 floods in Venezuela and earthquake in Colombia, 2000 hurricane Keith, the 2001 earthquake in El Salvador and the severe drought that affected Central America.

Over the years, ECLAC has developed a useful methodology to assess the impact of disasters on development. It includes an environmental impact analysis, a gender perspective and a comprehensive analysis of the macroeconomic impact of disasters and takes account of their effect on reconstruction plans. This methodology is being disseminated and training is provided in its use with the support of organizations such as the Inter-American Development Bank, PAHO and the World Bank

ECLAC promotes the development of vulnerability and risk indicators to measure the economic, social and environmental impacts of extreme natural phenomena. In addition to these activities, the Commission has implemented training programmes for small island developing states vulnerable to hurricanes through its regional office for the Caribbean.
<http://www.eclac.cl>
→ *Volume 1, p. 30, 72, 144, 145, 201, 347, 348*

Economic Commission for Europe (ECE)

ECE is based in Geneva from where it promotes and coordinates disaster reduction among its 55 member countries. It works mainly through environmental conventions, the development of guidelines and recommendations, and in capacity-building activities. Moreover, extensive environmental monitoring activities provide data that can be applied to risk assessment for global disasters that might affect the ECE region. It plays a crucial role in such environmental agreements as the Convention on Long-range Transboundary Air Pollution, the Convention on Environmental Impact Assessment in a Transboundary Context and the Convention of the Protection and Use of Transboundary Watercourses and International Lakes.

In the framework of water-related disasters prevention, ECE has prepared, together with the IDNDR, WMO and WHO's Regional Office for Europe strategic guidelines on sustainable flood prevention and good practices for flood prevention and protection. These have been an important to foster transboundary cooperation, coordination of sectoral policies, land use and structural measures, early warning and forecast systems, exchange of information, public awareness, education and training. These guidelines resulted from a seminar on flood prevention and protection held in 1999 and their use will be evaluated at a meeting in Germany in 2004.

Furthermore, ECE makes a significant contribution to the ISDR through its team of specialists on forest fires, which works with the Global Fire Monitoring Centre (GFMC) based in Freiburg, Germany. In partnership with many other national and multilateral agencies, the team and the GFMC collect and disseminate information, share experiences, and provide technical assistance and advice on request. The GFMC website provides real time information on major wildland fires. The International Forest Fire News, published twice a year by ECE, is the leading forum for exchange of information among the community of wildland fire experts.
<http://www.unece.org>
→ *Volume 1, p. 214*

Office for Outer Space Affairs (OOSA)

The Office for Outer Space Affairs was created in 1992 within the Department for Political Affairs but its activities as a unit of the Department of Security Council Affairs go back to 1962. In 1993, the Office was relocated to the UN Office at Vienna when it was already in charge of acting as the secretariat of the UN Committee for the Peaceful Use of Outer Space (COPUOS).

The Office implements the decisions of the General Assembly and of COPUOS, with the dual objectives of supporting the intergovernmental discussions in the Committee as well as the Scientific and Technical Subcommittee and Legal Subcommittee. It further assists developing countries in using space technology for development. It follows legal, scientific and technical developments relating to space activities, technology and applications in order to provide technical information and advice to countries, international organizations and other UN offices.

Space technologies can play important roles in the reduction of disasters. Their use can be particularly useful in risk assessment, mitigation and preparedness aspects of disaster risk management. Space technologies are also vital to the early warning of hazards and the management of crisis situations. In order to incorporate the routine use of space technology in developing countries there is a need to increase awareness, build national capacity and also develop solutions that are appropriate to their needs.

Within the framework of its Programme on Space Applications, OOSA is focusing on the definition and successful transfer of such solutions. It has conducted a series of regional workshops on the use of space technology for disaster management, in collaboration with the ISDR Secretariat. These workshops defined regional action plans and the implementation of pilot projects that incorporate and refine the use of space technology for disaster risk management.

In 2001, OOSA convened an action team for disaster management. Composed under the leadership of Canada, China and France, the team's directive is to implement an integrated, global system to manage natural disaster mitigation, relief and prevention efforts through Earth observation, communications and other space-related services, making maximum use of existing capabilities and filling gaps in world-wide satellite coverage. Its membership currently consists of 40 states and 15 international organizations and entities, including the ISDR Secretariat.

OOSA's action team conducted five regional workshops on disaster management and prevention, paving the way to the implementation of the recommendations of the Third UN Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE-III). The first workshop was held in 2001 in La Serena, Chile for the benefit of countries in Latin America and the Caribbean. The second workshop was held in Addis Ababa, Ethiopia in July 2001 for African countries. Another was held in Bangkok, Thailand in November 2002 to address the interests of Asia and the Pacific. In May 2003 a workshop was conducted near Brasov, Romania for Europe. The final workshop targeted at Middle Eastern countries will be held in Iran in May 2004.
<http://www.oosa.unvienna.org>
→ *Volume 1, p. 222*

Inter-agency mechanisms and common initiatives within the United Nations system

The inter-agency UN platforms and tools mentioned below, while each having their own mandates, complement add to the promotion and efficient implementation of disaster reduction activities by virtue of their coordination functions.

Inter-Agency Task Force on Disaster Reduction (IATF/DR)

The Inter-Agency Task Force on Disaster Reduction is the only platform within the UN system entirely dedicated to the disaster reduction coordination and policy setting of disaster reduction. Comprehensive information on the Inter-Agency Secretariat of the International Strategy for Disaster Reduction and the Inter-Agency Task Force on Disaster Reduction can be found in the section on ISDR in chapter one.

Current members include:

African Union secretariat (AU)
Asian Disaster Preparedness Center (ADPC)
Asian Disaster Reduction Center (ADRC)
Centre for Research on the Epidemiology of Disasters - Catholic University of Louvain, Belgium (CRED)
Council of Europe (CoE)
Drought Monitoring Centre - Nairobi (DMCN)
European Commission: Directorate-General Joint Research Centre (EC/JRC)
Food and Agriculture Organization (FAO)
Global Fire Monitoring Centre
Iberoamerican Association of Civil Defence and Civil Protection
Interstate CIS Council
International Federation of Red Cross and Red Crescent Societies (IFRC)
International Telecommunication Union (ITU)
Munich Reinsurance
New Partnership for Africa's Development (NEPAD) secretariat,
Organization of American States: Inter-American Committee for Natural Disaster Reduction (OAS-IACNDR)
South Pacific Applied Geosciences Commission (SOPAC)
UN Programme for Human Settlements (UN-HABITAT)

UN Centre for Regional Development (UNCRD) - Hyogo office
UN Development Programme (UNDP)
UN Educational, Scientific and Cultural Organization (UNESCO)
UN Environment Programme (UNEP)
UN Institute for Training and Research (UNITAR)
UN University (UNU)
World Bank (WB)
World Food Programme (WFP)
World Health Organization (WHO)
World Meteorological Organization (WMO)
<http://www.unisdr.org>
→ *Volume 1, p. 11, 49, 167, (annex 4, 95)*

Disaster Management Training Programme (DMTP)

Under the joint administration of UNDP and OCHA, DMTP is an inter-agency programme which supports capacity-building activities in the field of crisis and disaster management. It maintains a primary focus of clarifying the role and functions of UN Disaster Management Teams (DMT) and of strengthening their performance capacities.

DMT are established in countries where the UN system works to promote coherence, coordination and information exchange among agencies in disaster-related matters and between the UN system and the host government. All UN agencies with field presence are encouraged to participate in DMT. UNDP, WFP, UNICEF, WHO, PAHO, FAO and UNESCO are the most commonly represented agencies in the teams.

While the spirit of DMT is to promote medium and long-term disaster reduction concerns in development planning, the teams are more active in the aftermath of disasters and serve as coordinators to provide assistance for relief and recovery.

Membership:
UN organizations
FAO, IBRD, ILO, IOM, OCHA, ISDR, OHCHR, UNCHS, UNCTAD, UNDP, UNEP, UNESCO, UNFPA, UNHCR, UNICEF, UNITAR, UNOPS, UNSC, UNV, WFP, WHO, WMO.

Non-UN organizations
International Committee of the Red Cross, International Council of Voluntary Agencies, International Federation of Red Cross and Red Crescent Societies, National Refugee Commission, Steering Committee for Humanitarian Response.
<http://www.undmtp.org>
→ *Volume 1, p. 146, 246*

Inter-Agency Standing Committee (IASC)

Hosted by OCHA and chaired by the Under-Secretary General for Humanitarian Affairs/Emergency Relief Coordinator, IASC brings together a wide range of UN and non-UN humanitarian partners to facilitate inter-agency decision-making on the response to complex emergencies and natural disasters. This includes agencies, NGOs, and international organizations such the International Red Cross and Red Crescent movement. The IASC working group comprises a series of task forces, including one on natural disasters.

UN System Chief Executive Board for Coordination (CEB)

Formerly known as the Administrative Committee on Coordination (ACC), CEB, is chaired by the Secretary-General of the UN. It is the forum that brings together the executive heads of all UN organizations to further coordination and cooperation on the whole range of substantive and management issues facing the UN system.

The previous ACC and the current CEB subsequently have included disaster reduction in their agendas and have issued statements on the importance of inter-agency coordination in this field. CEB is regularly updated on the activities of ISDR through summary reports of the meetings of the Inter-Agency Task Force on Disaster Reduction. Several members of CEB are permanent members of the Inter-Agency Task Force on Disaster Reduction. This provides a unique opportunity for ensuring coordination among agencies and organizations active in disaster reduction, humanitarian assistance and related development and environmental issues.

Membership:
UN Secretariat, ILO, FAO, UNESCO, ICAO, WHO, World Bank, IMF, UPU, ITU, WMO, IMO, WIPO, IFAD, UNIDO, WTO (World Tourism Organization), IAEA, WTO (World Trade Organization), UNCTAD, UNDP, UNEP, UNHCR, UNRWA, UNICEF, UNFPA, WFP, UNDCP, UN-HABITAT.
<http://www.ceb.unsystem.org>

United Nations Development Assistance Framework (UNDAF)

UNDAF is a key component of the UN Secretary-General's reform proposals adopted in 1997. It aims to promote common objectives, time frames as well as improved collaboration between UN programmes and funds. UNDAF is a UN instrument to respond strategically to country development challenges and to the UN global agenda. UNDAF is intended to strengthen the capacity of governments to implement their development programmes and strengthen their relations with the UN system. UNDAF executes Common Country Assessments (CCA) which are carried out by the agencies and host country authorities. CCA are useful tools for the incorporation of disaster risk assessments and reduction measures into inter-agency assessment and action undertaken within countries.
<http://www.dgo.org>
→ *Volume 1, p. 256*

United Nations Development Group (UNDG)

Chaired by the UNDP Administrator, UNDG provides a framework for greater coherence and cooperation in UN development operations. This enables UNDG members to maximize their comparative advantages and build on and support the work of other group members at the country level. As most of the UNDG members carry out activities related to disaster reduction, this group represents an opportunity to integrate disaster reduction into other areas of concern, in particular sustainable development.

The DevLink web site, managed by UNDG, provides key documents, examples of good practice, training materials, sources of additional information and links to relevant UN and non-UN sites. This information reflects areas of UNDG activity and supports the implementation of the Millennium Declaration and the Secretary-General's reform programme.

Membership:
DESA, UNDCP, UN-HABITAT, UNOPS, UNIFEM, UNAIDS, UNCTAD, WHO, IFAD, UNESCO, FAO, OHCHR, the regional economic commissions, and the Special Representative of the Secretary-General for Children and Armed Conflict.

The Office of the Spokesman for the Secretary-General and the UN Fund for International Partnerships participate in UNDG as observers.
<http://www.undg.org>
→ *Volume 1, p. 256*

United Nations agencies and programmes

Food and Agriculture Organization (FAO)

The mandate of the Food and Agriculture Organization (FAO) is to improve agricultural productivity and raise the level of nutrition and standard of living of rural populations. In 2000, as part of its strategic framework, FAO pledged to help achieve food security for present and future generations in the next 15 years.

Based in Rome, Italy, FAO has five regional, five other subregional offices and 80 country offices. They work with member countries and other development partners to coordinate activities including those involved with disaster management. FAO is a member of the Inter-Agency Task Force on Disaster Reduction and participates in its working groups.

The World Food Summit of 1996 mandated FAO, among others, to assist member countries develop national food security and vulnerability information and the use of mapping systems with a view to halving malnutrition by 2015, and overall in reducing food insecurity and rural poverty.

A key component of FAO's strategy is to strengthen the capacity of communities and local institutions in preparing for natural hazards and addressing food emergencies or crisis situations.

In order to reduce disruption of agricultural and food systems, this strategic objective focuses on:

- strengthening disaster preparedness and mitigation against the impact of emergencies that affect food security and the productive capacities of rural populations;
- forecasting and providing early warning of adverse conditions in the food and agricultural sectors and of impending food emergencies;
- strengthening programmes for agricultural relief and rehabilitation and facilitating the transition from emergency relief to reconstruction and development in food and agriculture; and
- strengthening local capacities and coping mechanisms by guiding the choice of agricultural practices, technologies and support services to reduce vulnerability and enhance resilience.

The FAO Emergency Coordination Group is the organizational mechanism for the overall coordination of emergency and disaster reduction issues. Chaired by the Assistant Director-General of the Department of Technical Cooperation, an interdisciplinary process has been established within FAO to strengthen its capacity to address disaster preparedness, mitigation, relief and rehabilitation together with member countries and partners in a more integrated way. This includes:

- preparation of a disaster management database;
- development of a guide for emergency needs assessment and guidance on management of food and agricultural emergencies; and
- development of strategies and capacity-building for drought mitigation.

The FAO World Agricultural Information Centre maintains a website of disaster reduction information and has mobilized international support through its Global Information and Early Warning System. This system monitors food supplies and demand around the world, provides policy makers and analysts with current information on crop prospects and gives early warning on imminent food crises.

FAO has upgraded its capability to provide an operational service on environmental information through an advanced real-time environmental monitoring information system using satellite data. Moreover, the FAO environment and natural resources service of the sustainable development department integrates remote sensing and geographic information systems for sustainable development planning, including disaster impact assessments and mapping risk and conditions of vulnerability.

FAO assists countries in the adoption of sustainable agricultural practices and land-use systems. The FAO land and water development division plays an important role in reversing degradation and reducing vulnerability to hazards. It does this by promoting the development of resilient agro-ecosystems and the sound use of land and water resources.

A special programme for food security assists low-income food-deficient countries improve food security at national and household levels, through rapid increases in food production. It does this by reducing annual variability in production and by improving people's access to food.
<http://www.fao.org>
→ *Volume 1, p. 53, 58, 71, 150, 152, 154, 196, 228, 305, 370, 375*

International Labour Organization (ILO)

ILO is the UN agency specialized in matters related to labour and promotes social justice and internationally-recognized human and labour rights. ILO is based in Geneva, Switzerland.

In 1999, ILO established a special in-focus programme on crisis response and reconstruction to concentrate on various types of crises including natural disasters. The programme implements the ILO "decent work" approach which emphasizes employment as a method of crisis prevention. Activities of the programme related to disaster reduction include:

- developing ILO knowledge in crisis situations. Links are strengthened with ILO technical units and field offices, external research institutions and crisis practitioners worldwide;
- developing tools and guidelines to answer the needs of individual crisis situations;
- providing technical assistance and direct interventions in emergencies for rapid needs assessment, programme development and implementation;

- building capacity to respond effectively to crises including the wide dissemination of information, training programmes and advisory services;
- advocating activities to promote national, regional and international recognition of the importance of employment in crisis situations and the contribution of employment in effective crisis management planning; and
- mobilizing resources for timely interventions.

<http://www.ilo.org>
→ *Volume 1, p. 167, 233, 364, 365*

International Telecommunication Union (ITU)

ITU is the international organization for governments and the private sector to coordinate global telecommunication networks and services. Based in Geneva, Switzerland, ITU is a member of the Inter-Agency Task Force on Disaster Reduction.

Following the Yokohama Conference on Natural Disaster Reduction in 1994, the ITU Plenipotentiary Conference in Kyoto, emphasized the importance of telecommunications for disaster mitigation and disaster relief operations.

Later, in 1998, the Intergovernmental Conference on Emergency Telecommunications adopted the Tampere Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations. It raised concerns about the impact of disasters on communication facilities and information flows. In response, ITU is working on the development of global standards to support an emergency telecommunications service.

Many dimensions need to be addressed in achieving an effective solution for emergency telecommunications including technical specifications, user requirements, and operational, policy, legal and regulatory concerns. Cooperation and liaison among the many interest groups are essential to ensure consistency and completeness in providing an effective emergency telecommunications capability. ITU is therefore engaging in the following activities:

- study of the impact of disaster events on telecommunications;
- identification of requirements and applications of emergency telecommunication users; and
- identification of types and modes of telecommunications for emergencies.

ITU member countries recognize the importance of telecommunication resources for early warning services, disaster mitigation and relief operations. Significant work in these areas is carried out in each of the three ITU sectors: development, radiocommunication, and telecommunication standardization.

Resolutions at numerous ITU conferences over the past decade have mandated a variety of pertinent activities. These include telecommunication resources for disaster mitigation and relief operations (World Radiocommunication Conference, Istanbul, 2000), telecommunication resources in the service of humanitarian assistance and the consideration of disaster telecommunication needs in telecommunication development activities (World Telecommunication Development Conference, Istanbul, 2002). These activities culminated in a resolution of the ITU Plenipotentiary Conference (Marrakesh, 2002) on telecommunications in the service of humanitarian assistance.

Additional initiatives include ITU's efforts to provide practical means for disaster mitigation through the forging of partnerships with other entities to provide communication services for disaster and risk management. ITU recently entered into a co-financing arrangement in which a private sector company has provided financing for the procurement of satellite terminals and ITU provided financing for airtime. The equipment will be used for disaster mitigation and relief activities.

Ongoing work includes the drafting and subsequent publication of a revised version of the ITU Handbook on Disaster Communications. Disaster telecommunication training seminars are being conducted in several regions. Recommendations are being framed for international standards that describe telecommunication capabilities that will facilitate the use of public telecommunication services and systems by authorities for communications during emergency, disaster relief and mitigation operations. Other studies and recommendations relating to disaster relief are being considered in the framework of public protection and disaster relief and to encourage the

development of robust, flexible and independent amateur service and amateur-satellite service networks capable of providing communications during disasters and relief operations.
<http://www.itu.int>

United Nations Children's Fund (UNICEF)

The UNICEF mandate is to protect and improve the well-being of the most vulnerable groups, children and women, anywhere in the world. By definition, this includes aspects of disaster preparedness and prevention. By supporting the empowerment of communities at the local level and capacity-building at the national level, UNICEF programmes are designed to mitigate the negative effects of hazards and to enhance abilities to deal with disasters. Policy and procedural guidelines for UNICEF staff in emergencies include both emergency response and preparedness and prevention activities.

UNICEF is based in New York with regional and country offices in 158 countries around the world. The foundation of UNICEF action lies in its long-term country programme approach and its development orientation. Recognizing the central importance of building capacities and self-reliance for effective and sustainable assistance and reducing the vulnerability of children to future disasters, UNICEF aims to enhance rather than supply locally available resources and mechanisms. The maximum involvement of individuals, communities and local and national institutions is stressed at all levels of UNICEF development and emergency action.

Following the recommendation of the Yokohama Strategy and Plan of Action for a Safer World to include disaster reduction into national development plans, UNICEF programme and policy guidance incorporate disaster reduction elements into country programmes in disaster-prone countries. Vulnerability and capacity assessments in relation to natural hazards are being introduced as integral to the situation analysis process at the country level.

UNICEF cooperates with UNDP as part of UN country teams in support of disaster preparedness activities in national development plans. UNICEF is playing an important role in tackling both analysis and capacity-building nationally and in the empowerment of communities. Selected programmes in disaster-prone countries enhance abilities to mitigate the effects of hazards and to respond to the immediate needs associated with disasters. For example, a major thrust of UNICEF assistance in a number of countries is the development and institutionalization of local capacities for disaster preparedness and management.

In order to ensure adequate levels of preparedness for effective response in emergencies, UNICEF country and regional offices carry out national risk monitoring and preparedness planning as part of their programming. This includes annual risk assessments identifying all types of risks from natural hazards to economic distress and civil conflicts.

In addition to viewing support to sustainable development as the key element for disaster reduction, UNICEF country offices are involved in activities geared towards improving awareness of natural hazards and related disaster risks. These activities include development of education and awareness materials and campaigns for children and adults. UNICEF collaborates closely with the ISDR Secretariat office for Latin America and the Caribbean in Costa Rica. They have jointly developed educational and awareness materials available on the web sites of both organizations.
<http://www.unicef.org>
→ *Volume 1, p. 144, 228, 245, 292*

United Nations Development Programme (UNDP)

The overarching mission of UNDP is to help its programme countries build national capacity to achieve sustainable human development. UNDP is giving top priority to the elimination of poverty and building equity by providing development advice, advocacy and grant support. As the primary substantive UN programme promoting and supporting the implementation of risk and vulnerability reduction in developing countries, UNDP is involved in a range of activities which contribute to disaster and risk management.

With headquarters in New York and operational functions in Geneva, UNDP provides most of its services through its 132 country offices, supported

by regional bureaus, specialized programmes and trust funds. In each country where it works the UNDP resident representative generally also serves as the resident coordinator for the UN system as a whole.

In 1997, a General Assembly decision transferred the responsibilities of the UN Emergency Relief Coordinator for operational activities for natural disaster mitigation, prevention and preparedness from OCHA to UNDP. OCHA retained its coordination function for international relief operations.

UNDP's *Bureau for Crisis Prevention and Recovery (BCPR)* was formerly known as the Emergency Response Division. It is the in-house mechanism set up to provide a quicker and more effective response in countries in special development situations through the provision of services.

BCPR's *Disaster Reduction Unit (DRU)* works to achieve a sustainable reduction in disaster risk and sustainable recovery from disaster in programme countries, by strengthening national and regional capacities. This involves ensuring that disaster risk considerations are factored into new development, that disaster impact is mitigated and development gains protected and also that risk reduction is factored into rapid disaster recovery. Accordingly, UNDP has been a key player in the implementation of the International Strategy for Disaster Reduction. In the past year UNDP's activities in disaster reduction and recovery spanned over 50 programme countries.

DRU activities include:

- disaster reduction strategies and capacity building programmes;
- sustainable recovery frameworks and programming;
- sub-regional knowledge networks;
- human resource development through programmes such as DMTP and development of UNDP staff capacities; and
- policy and advocacy through participation in the Inter-Agency Task Force on Disaster Reduction and chair of the ISDR working group on risk, vulnerability and impact assessment; in addition to the production of the 2004 report *Reducing Disaster Risk: A challenge for development.*

The *UNDP Drylands Development Centre*, formerly the Office to Combat Desertification and Drought, moved to Nairobi in early 2002. The Centre is responsible for promoting sound dryland management and development as well as drought preparedness and mitigation as part of sustainable human development. It also has been an advocate of the UN Convention to Combat Desertification (UNCCD) and provides technical and catalytic financial support to affected countries for the implementation of the Convention.
< http://www.undp.org/drylands/>

Capacity 21 is a trust fund launched by UNDP after the Earth Summit of 1992. It works with countries to build skills and a knowledge base to implement the principles of sustainable development as outlined in Agenda 21. Capacity 21 promotes a partnership for increased coping capacity to deal with natural disasters in small island developing states in the framework of the World Summit on Sustainable Development and the Barbados Plan of Action.
<http://www.undp.org/capacity21>

In seeking to fill its mandated responsibilities within the ISDR, UNDP has put a number of key initiatives in place in order to improve coherence in UNDP global and regional mechanism in support to country offices and ensure complementarity and coordination at the national level, through the UN Resident Coordinator. UNDP has boosted its capacity to deliver assistance to countries worldwide in disaster reduction by out-posting four disaster reduction regional advisors supported by programme specialists based at the DRU headquarters in Geneva.

Following the General Assembly's request for UNDP to increase the capacity of regional organisations to respond to natural disasters, UNDP works closely with a number of organisations such as CEPREDENAC in Central America, CDERA in the Caribbean, CAPRADE in Andean countries, SADC in Southern Africa and the Stability Pact in South-Eastern Europe. UNDP and other partners have supported CDERA in the development and implementation of a comprehensive disaster management strategy, which has been endorsed and adopted by its 16 member countries. In 2002, an expert group

meeting on the roles of regional organisations and networks in strengthening capacities for disaster reduction was convened, with representatives from 11 organizations participating. Finally, UNDP is currently supporting the development of subregional knowledge networking initiatives in the Caribbean such as the Caribbean Risk Management Initiative which is focused on linking climate change adaptation and disaster reduction, other subregional networks have been developed in Central America and Central and South-West Asia.

UNDP has achieved results in disaster reduction in over 30 countries worldwide, including early warning systems, strengthening of national disaster offices, risk mapping, and supporting legislative systems among other activities. In some cases, risk reduction strategies and platforms have been created (e.g. Madagascar, Haiti, Albania). In others, national networks have facilitated a process to learn lessons from recent disasters, as for example, in India. The creation of large stakeholder platforms and a highly participatory process have been encouraged in most of these programmes.

Additionally, UNDP has proceeded to mainstream disaster reduction in its own and wider UN national cooperation frameworks, such as Country Cooperation Frameworks and the UN Development Assistance Framework (e.g. Algeria, Madagascar, India, El Salvador). A Crisis and Prevention Network –including more than 400 UNDP staff of which 70 per cent reside at UNDP country offices – is also building a culture of prevention and stimulating considerable exchange of knowledge within the organization. Some UNDP offices are currently mainstreaming disaster reduction into development policies. In order to mainstream disaster reduction into post-disaster recovery, UNDP has supported sustainable recovery frameworks and programming in 12 countries, following crises in Afghanistan, Bolivia, Cuba, India, and Southern Africa, among others. Joint recovery missions and other planning missions have been fielded together with OCHA to the Goma volcano in the Democratic Republic of the Congo, for the Golestan floods in Iran and to Mauritania.

In terms of improving participation at the local level, UNDP has been actively involved in developing local risk reduction planning. It continues to create platforms for integrating local level risk management into development planning and training within local committees. Five years after hurricanes Mitch and Georges, UNDP has supported the creation and training of 150 local risk reduction committees in the hurricane-affected countries of Central America such as Honduras and Nicaragua by improving their local planning in disaster prevention and preparedness. UNDP has engaged in similar local activities in other countries, such as Albania, Madagascar, Malawi and Viet Nam where more than 100 local committees have benefited from this support. These efforts represent a major contribution to the objectives of the ISDR in enabling communities to become more resilient to the effects of hazards.
<http://www.undp.org/erd/disred/index.htm>
→ *Volume 1, p. 12, 27, 28, 30, 32, 51, 60, 61, 71, 72, 77, 82, 83, 87, 88, 92, 94, 96, 98, 119, 144, 145, 146, 147, 150, 160, 163, 164, 176, 196, 197, 199, 213, 243, 246, 254, 256, 267, 293, 348, 362, 370, 387, 392, 396, (annex 4, 99)*

United Nations Educational, Scientific and Cultural Organization (UNESCO)

The main objective of UNESCO is to contribute to peace and security in the world by promoting collaboration among nations through education, science, culture and communication in order to further universal respect for justice, the rule of law and human rights and fundamental freedoms.

UNESCO is based in Paris, France, and has 73 field offices around the world. It is a member of the Inter-Agency Task Force on Disaster Reduction and has a sound record of active involvement in disaster reduction since the IDNDR programme. It promotes activities to develop a better scientific understanding of disasters and the mitigation of their effects in a variety of areas ranging from research to space applications.

UNESCO also produces educational material to develop awareness and provide information to the general public. It provides technical advice on the construction of hazard-resistant schools and for the protection of cultural heritage.

UNESCO programmes on natural and social sciences provide scientific and technical benefits for disaster reduction. These include among others, the following international programmes: the International Geological Correlation Programme, the International Hydrological Programme, the Man and Biosphere Programme, the Intergovernmental Oceanographic Commission, UN World Water Assessment Programme and the Management of Social Transformations Programme. UNESCO's strategy for 2002-2007 and current budget include provisions for programmes related to natural disaster reduction.

The GOOS hosted in the Intergovernmental Oceanographic Commission continued to coordinate the systematic observation of the world's oceans. This framework encompasses all ocean observing satellites which measure ocean surface temperatures, winds, waves and currents. One of the elements of GOOS is the El Niño Southern Oscillation forecasting system for the timing, extent and magnitude of El Niño and La Niña events in the tropical Pacific Ocean. This system provided several months advanced warning of the 2002-2003 El Niño. It also produced high resolution maps and forecasts relating to numerous ocean and associated weather and climate conditions, including alerts for hurricanes, typhoons, and storm surges.

UNESCO has enhanced many of its scientific and educational programmes that have proven experience in the study, understanding and mitigation of extreme natural phenomena such as earthquakes, volcanic eruptions, landslides, floods and storms. It has been worked to safeguard and when necessary rehabilitate educational and cultural institutions in disaster-prone countries. In reviewing the draft programme and budget for 2004-2005, the Executive Board of UNESCO endorsed a main line of action devoted to enhancing disaster prevention and preparedness as a follow-up to the World Summit on Sustainable Development.

The follow-up to WSSD is providing UNESCO with an opportunity to capitalize on its previous achievements in disaster mitigation. The enhancement of national and regional capacities in natural disaster reduction has been pursued through cooperative projects in the Middle East, South-East Asia and Latin America. UNESCO has provided assistance for enhancing disaster preparedness plans for urban areas in several countries of Latin America, the Caribbean and Asia, in collaboration with the ISDR Secretariat. It also proposed to associate this initiative with the ICLEI-led partnership on Resilient Communities to provide advice and help build the capacity of decision makers. Another project coordinated by UNESCO concentrated on reducing earthquake losses in the Eastern Mediterranean through seismic monitoring and the improved exchange of technical data.

During the International Year of Mountains (2002) UNESCO advocated disaster reduction during the culminating event, the Global Mountains Summit in Bishkek, Kyrgyzstan, promoting partnerships with FAO and other partners to promote sciences and to enhance related abilities pertinent to the preservation of mountains. UNESCO also co-organized a seminar in Chambéry, France on reducing losses and preserving cultural and natural heritage in mountain cities

UNESCO has also invested efforts in compiling materials on information, education and public awareness on disasters, including the development and promotion of educational structures able to withstand disaster forces, offering practical advice on how to build disaster-resilient schools.
<http://www.unesco.org>
→ *Volume 1, p. 53, 65, 94, 95, 140, 146, 167, 174, 238, 250, 256, 271, 318, 332, 368, 370, 374, 396, (annex 4, 101)*

United Nations Environment Programme (UNEP)

UNEP is the leading global environmental authority and promotes the coherent implementation of the environmental dimension of sustainable development within the UN. UNEP is based in Nairobi, Kenya, and counts several regional and thematic offices and programmes around the world.

The UNEP Governing Council identified increasing environmental emergencies as one of the environmental threats that needed to be addressed. It emphasized the important role the

organization plays globally in the areas of emergency prevention, preparedness, assessment, mitigation and response.

UNEP has developed a strategic framework in Nairobi through its Disaster Management branch, in the Division for Environment Policy Implementation. This formulation serves as the basis for the development and implementation of programmes on disaster reduction at all levels.

UNEP has carried out a number of activities aimed at reducing the impact of disasters to further the objectives of ISDR. It is a member of the Inter-Agency Task Force on Disaster Reduction and chaired the ISDR working group on early warning. It also has a joint unit with OCHA in Geneva to assist countries in responding to a variety of environmental emergencies.

In line with its role in environmental monitoring, assessment and early warning, the UNEP Division for Early Warning and Assessment has launched a Global Environment Outlook (GEO) report. This series contains baseline information on emerging environmental issues and threats, as well as policies being implemented at the global and regional levels.

UNEP's Global Resource Information Database (GRID) is composed of a global network of environmental information centres. It aims to facilitate access and provide environmental data and information for decision-making and the determination of policies. It underpins the UNEP review of the state of the world's environment and provides early warning on environmental hazards.

The UNEP.net partnership, a global information network, offers remote access databases from different institutions enabling the development of comprehensive and local solutions. Often these rely on best practices from various regions and countries of the world.

The UNEP programme Awareness and Preparedness for Emergencies at a Local Level (APELL) is based at the Industry and Environment Office in Paris. It serves as a tool for disaster prevention and preparedness and raises public awareness of the need to reduce environmental emergencies and damage. It seeks to minimize the occurrence and harmful effects of technological accidents and emergencies, particularly in developing countries, resulting from human activity or as the consequence of natural disasters.
<http://www.unep.org>
<http://www.unep.org/dewa>
<http://www.uneptie.org/pc/apell/disasters/disasters.html>
→ *Volume 1, p. 30, 57, 66, 150, 152, 176, 197, 212, 216, 217, 232, 233, 243, 254, 256, 309, 310, 370, 372, 375, 396, (annex 4, 99, 100)*

United Nations Human Settlements Programme (UN-HABITAT)

UN-HABITAT has the unique mandate in the UN system of promoting the development of sustainable human settlements in an increasingly urbanized world. It contributes to disaster reduction at local, regional and national levels within this context. UN-HABITAT signed a memorandum of understanding with the ISDR Secretariat in May 2003 reaffirming UN-HABITAT's renewed commitment to deploy its expertise, networks and resources to achieve the objectives and goals of ISDR, especially in the sector of risk and human settlements.

UN-HABITAT promotes the development of socially and environmentally sustainable human settlements, good urban governance and the achievement of adequate shelter for all. It is based in Nairobi, Kenya, and has three regional offices located in Brazil, Japan and Kenya as well as several liaison and information offices worldwide. The Programme has been a member of the Inter-Agency Task Force on Disaster Reduction since 2002.

The establishment of ISDR coincided with the restructuring of UN-HABITAT. A key component of this process was the consolidation of the risk and disaster management programme in the newly established Disaster, Post-Conflict and Safety Section (DPCSS). DPCSS caters for the increasing demands from countries for technical support, policy tools and field operational capacity in disaster prevention, mitigation and rehabilitation of human settlements and issues related to urban safety.

The risk and disaster management programme was established to strengthen UN-HABITAT's

abilities to deliver technical cooperation and capacity-building services. The focus is on direct country support with the objective of helping human settlements reduce their vulnerability and manage the effects of disasters and conflict better.

It provides support to national governments, local authorities and communities in close cooperation with technical cooperation units and other specialized programmes. Specific programme activities deliver direct support to national and local partners through:

- technical advisory missions responding to requests by governments and external support agencies;
- execution of assessments in disaster-prone countries and post-conflict situations;
- identification, design, technical support and follow-up of operational projects in response to country requests;
- participation in donor consultations for the provision of external support to disaster-affected countries; and
- assessment of global and regional expressions of need related to hazardous conditions or disaster risks and human settlements management, including the design and implementation of global and regional projects.

UN-HABITAT disaster-related activities focus on the physical and management aspects of shelter, infrastructure and public service, with priority given to local activities. Emphasis is given to the development of training and technical support programmes to increase the capacities of local authorities and communities for improving disaster risk management and human settlements in the context of good local governance.

UN-HABITAT is an active partner of ISDR, especially in the areas of land and urban management, impact assessment and capacity-building. Organizational commitments such as the global campaigns on urban governance and for secure tenure constitute important opportunities to promote disaster reduction in urban areas and to strengthen collaboration with local authorities.

In September 2002 UN-HABITAT and the ISDR organized a productive regional meeting in Cuba on local management and disaster reduction in the wider Caribbean region, involving local authorities, organizations and agencies related to disaster reduction issues in eight Central American-Caribbean countries. The goal was to initiate the process of developing disaster mitigation and management capacity for local governments at municipal level. The objective is being achieved through a process of dialogue and the exchange of tools and experience in disaster reduction. Participants agreed on the need to take urgent action to strengthen the capacity of local and urban authorities in the subregion to reduce their vulnerability to disasters.
<http://www.unhabitat.org>
→ *Volume 1, p. 60, 72, 120, 136, 186, 226, 256, 316, (annex 4, 104)*

United Nations Institute for Training and Research (UNITAR)

UNITAR is an autonomous body within the UN with a mandate to enhance the effectiveness of the UN through training and research activities. Its headquarters are located in Geneva, Switzerland, where a majority of the UNITAR training and capacity-building programmes are organized. It also has a liaison office in New York.

UNITAR provides training and project services for policy and institutional development. These activities address risk issues in the areas of chemical and waste management, climate change, biodiversity, land degradation, environmental law, environmental negotiations, national reconstruction, the use of information systems and the involvement of local authorities.

UNITAR conducted a programme in disaster risk reduction collaboration with several UN organizations, local authorities, NGOs, universities and the private sector. This consisted of launching an international training centre for local actors (CIFEL) in Divonne-les-Bains, France. It provided a service structure, an international meeting location and an exchange of experiences open to all actors involved with sustainable development and international cooperation at the local level.

Recognizing the utility of geographic information systems and other modern information and communication technologies for advancing disaster reduction, UNITAR has been organizing training sessions in these fields since 1986. It has also conducted several training activities related to disaster reduction, including training sessions for African civil servants working in the field of land degradation, and workshops for local authorities in Crimea and Lebanon. Additional workshops have been organized for national decision makers in the Democratic Republic of the Congo and countries of the Southern Caucasus on the use of information systems for disaster reduction.
<http://www.unitar.org>

United Nations University (UNU)

The overall mission of the United Nations University (UNU) is to contribute to efforts to resolve the pressing global problems that are the concern of the UN member states through research and capacity-building. Based in Tokyo, Japan, UNU comprises 13 research and training centres and programmes around the world. Its partners include over 30 UN organizations and more than 100 research institutions globally. UNU is a member of the Inter-Agency Task Force on Disaster Reduction and participates in the work of the working group on climate and disasters.

With regard to disaster reduction, UNU has activities that support the goals of ISDR. A UNU initiative has been designed to highlight, produce and disseminate methodologies for the analysis of urban social vulnerability. Activities have been carried out in partnership with the University of Tokyo's International Center for Disaster Mitigation-Engineering to improve disaster-related technologies. The enhanced preparedness for climate-related disasters has always been a high priority area for the University.

Many initiatives developed over the years to address these important global issues have made significant contributions in linking the scientific community and the UN system. One particular example is the study of the El Niño phenomenon. A joint project was carried out by UNU, the ISDR Secretariat, UNEP, WMO and the US National Center for Atmospheric Research. This activity, which included the work of multidisciplinary teams in 16 countries, led to findings that have been crucial to improving preparedness for future occurrences of El Niño, and other climate-related hazards.

As a follow-up to the El Niño project, UNU has developed a new climate affairs programme which will encompass a broad spectrum of issues ranging from ethics and policy formulation to the impact of climatic phenomena. An important contribution of this initiative is the development of a multidisciplinary programme to build capacities in matters of climate and which will facilitate means to meet disaster reduction challenges.

Together with universities in Geneva and Lausanne, Switzerland, UNU provides postgraduate fellowships for students from developing countries to study geological risk management.
<http://www.unu.edu>
→ *Volume 1, p. 246, 250*

The World Bank Group

The World Bank Group is one of the world's largest sources of development assistance working in more than 100 developing countries. Based in Washington DC, the World Bank Group consists of five closely associated institutions, owned by 184 member countries that carry ultimate decision-making power: the International Bank for Reconstruction and Development, the International Development Association, International Finance Corporation, Multilateral Investment Guarantee Agency and International Centre for Settlement of Investment Disputes. Each institution plays a distinct role towards the Bank's overarching vision to fight poverty.

The International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA) provide low-interest loans, interest-free credit, and grants to developing countries. IBRD provides loans and development assistance to middle-income countries and creditworthy poorer countries. Although not a profit-maximizing organization, the World Bank has earned a net income every year since 1948, which is used to fund developmental activities. IDA

helps the world's poorest countries reduce poverty by providing "credits" which are loans at zero interest with a 10-year grace period and maturities of 35 to 40 years.

The World Bank considers disaster reduction as an element in the fight against poverty, linked to environmental management. In order to advance the goal of reducing the impact of disasters, the World Bank updated its strategies and procedures to promote ways to integrate disaster prevention and mitigation into its development work.

Through its Hazard Management Unit (HMU), the Bank is a member of the Inter-Agency Task Force on Disaster Reduction. The Unit was originally established in July 1998 as the Disaster Management Facility to promote disaster risk management as a priority issue for poverty reduction. HMU has worked to promote the integration of risk analysis into project design and to include effective prevention and mitigation measures into the Bank's country assistance strategies. Staff have been trained to design safer investments empowering communities to reduce their vulnerability to hazards. Furthermore, disaster risk management is being integrated into the Bank's development efforts.

Reconstruction projects, such as those carried out in the aftermath of the Izmit earthquake in Turkey, Hurricane Mitch in Central America and the January 2001 earthquake in Gujarat, India, have been designed to go beyond simply rebuilding and to focus on reconstruction measures that strengthen resilience to future disasters.

Along the same lines, pilot efforts promoted by the HMU are gradually being incorporated into Bank operations. A good example of this approach is in Mexico where, following a case study that evaluated the capacity of the country to manage disaster risk, the government requested the Bank to prepare a project to reduce future disaster losses.

ProVention Consortium

The Bank works closely with partners through the ProVention Consortium, which it initiated in 2000. This Consortium encourages productive institutional relationships that can combine efforts to generate evidence of the economic and financial impact of disasters on long-term development. It seeks to develop methodologies and standards for conducting damage and needs assessments following a disaster, to strengthen community resilience, and to identify innovations in risk transfer and financing. The Consortium is currently hosted by IFRC in Geneva, Switzerland.
<http://www.worldbank.org>
<http://www.proventionconsortium.org>
→ *Volume 1, p. 27, 30, 61, 84, 92, 95, 120, 145, 146, 147, 196, 197, 223, 224, 225, 243, 254, 256, 259, 260, 261, 305, 309, 312, 329, 346, 347, 348, 349, 350, 351, 352, 354, 357, 396*

World Food Programme (WFP)

WFP is mandated by the UN to combat global hunger. Based in Rome, Italy, the Programme has 85 country offices and eight regional offices to assist populations in need. As the food-aid arm of the UN, WFP meets emergency needs, provides the necessary logistics to deliver food and supports economic and social development by promoting policies, strategies and operations for the benefit of the poor and hungry. WFP has been a member of the Inter-Agency Task Force on Disaster Reduction since its inception in 2000.

In 1999, the WFP key strategy document, Enabling Development, identified disaster mitigation as one of five priority areas of action, expressing a focus on reduction of the impact of natural hazards on food security for vulnerable populations. A steering committee for disaster mitigation was established to assist country and regional offices to integrate disaster mitigation activities into their development programmes.

WFP's dual mandates for development and emergencies result in development activities designed to facilitate any necessary emergency responses related to food security. Guidelines on disaster mitigation have been prepared and tested in pilot projects in selected country offices.

The formalization of the WFP role in disaster mitigation is reflected in a new generation of programming documents. In 2000, nine of the 11 country strategy outlines and country programmes approved by the executive board included disaster mitigation activities. For example, WFP is supporting water harvesting in Sudan to decrease

the impact of drought on rural livelihoods. In Tanzania, WFP's country programme is using food-for-work activities to create assets such as grain stores and access roads in order to improve long-term food security and decrease the vulnerability of households to drought.

The WFP emphasis on early warning and contingency planning includes collaboration with a framework team based in New York and a vulnerability and analysis mapping unit. The Office of the Humanitarian Adviser is responsible for coordinating the overall contingency planning process, while an augmented logistics intervention team for emergencies collates specific logistics-based contingency planning information such as operational capacity assessments.
<http://www.wfp.org>
→ *Volume 1, p. 71, 103, 146, 152, 227, 290*

World Health Organization (WHO)

WHO is the UN specialized agency responsible for health. It is a decentralized organization with six regional offices in Africa, the Americas, the Eastern Mediterranean region, Europe, South-East Asia and the Western Pacific, and about 150 country offices worldwide. Its headquarters are in Geneva, Switzerland.

The purpose of a WHO presence within countries is to assist them to achieve sustainable national health policy goals. WHO works to draw on the experience of individual countries to build public health knowledge that benefits the rest of the world. WHO has been a member of the Inter-Agency Task Force on Disaster Reduction since 2002.

WHO works at country, regional and global levels for disaster mitigation, emergency preparedness and response, as well as advocating for health and humanitarian action. WHO aims to achieve a reduction of avoidable death and illness that result from any type of hazard or disaster risks and to ensure that member states and the international community are equipped to mitigate health consequences and to prevent disasters.

WHO provides preparedness and response training to government ministries of health. It also assists governments in the development of health emergency contingency plans. WHO distributes guidelines on applying best public health practices in preparing for and assessing the impact of disasters.

WHO's early health assessment and health intelligence web site provides situational information including baseline statistics, health situation reports and epidemiological surveillance data.

WHO collaborates with academic centres around the world, working in the field of disaster reduction. These include the Centre for Research on the Epidemiology of Disasters at the University of Louvain in Belgium; the School of Public Health at the University of Antioquia in Colombia; and the Faculty of Engineering of the University of Chile.

The WHO Regional Office for the Americas, the Pan-American Health Organization (PAHO), is the most active WHO office in the area of disaster reduction. PAHO has been active in reducing the impact of disasters in Latin America and the Caribbean since the mid-1970s and was an important contributor to IDNDR. The PAHO disaster preparedness programme has subregional offices in Barbados, Costa Rica and Ecuador.

PAHO helps to strengthen institutions by supporting the creation and enhancement of disaster programmes in the ministries of health in all countries of the region. Today, national disaster programmes are playing increasing leadership and advisory roles to the highest-level health authorities, often managing substantial resources to promote disaster mitigation and respond to real post-disaster needs.

PAHO also promotes coordination with other sectors involved in disaster reduction and organizes workshops for disaster reduction professionals. It encourages universities throughout the region to incorporate disaster management in their curricula.

The preparation and distribution of training materials has been central to PAHO programmes and for more than 20 years this effort has produced a considerable body of technical material. Materials are distributed free of charge to institutions dealing with disaster mitigation and are also available on the Internet for worldwide access. PAHO works at the highest political levels in member countries to ensure that disaster mitigation becomes an integral part of national disaster reduction programmes. Special programmes to develop technical guidelines and

political support for vulnerability assessments and disaster mitigation for water systems and health services have been developed over the past decade.

PAHO and the ISDR Secretariat have agreed on a number of measures to strengthen cooperation in priority areas for the region. These measures include publishing studies, conducting joint exercises and strengthening the Regional Disaster Information Centre (CRID). CRID is a regional consortium which includes PAHO, the ISDR Secretariat, the Coordinating Centre for the Prevention of Natural Disasters in Central America, Costa Rica's National Risk Prevention and Emergency Response Commission, the International Federation of Red Cross and Red Crescent Societies (IFRC) and Doctors without Borders.

PAHO/WHO has provided strong support to sub-regional organizations such as CDERA in the Caribbean, CEPREDENAC in Central America and CAPRADE in the Andean Region. WHO's regional offices and IFRC signed several agreements to collaborate in disaster preparedness. WHO, WFP, OCHA, UNICEF and UNHCR adopted the humanitarian supplies inventory and control system based on SUMA. The importance of this system is increasingly recognized by several countries over the world that have requested and translated it into their own languages.

PAHO is working with the ISDR Secretariat to increase access to disaster information and promote greater exchange among countries and organizations in the region with the support of CRID and other disaster information networks, including the Caribbean Disaster Information Network.

WHO has made considerable progress in mainstreaming disaster management in recent years. WHO's offices in disaster-prone countries in the Americas integrated disaster preparedness into their work, assigning specific budgets for activities and full time disaster risk management professionals. Disaster mitigation and preparedness are together designated as one of the 11 essential public health functions. Several activities are focused to reduce vulnerable health facilities and potable water systems. Several publications on mitigation have been updated and widely distributed. A guide on hospital mitigation was developed through a joint effort between PAHO/WHO, the World Bank and the WHO collaborating centre based in Chile.

PAHO/WHO represents the Inter-American system as a member of the Inter-Agency Task Force on Disaster Reduction. The ISDR and PAHO/WHO share a joint office in Costa Rica and work in a very close relationship for disaster mitigation in the Americas. PAHO/WHO leads a working group and participates in the elaboration of the Inter-American Strategic Plan for risk management and disaster response endorsed by the Organization of American States member countries.

The Economic Commission for Latin America and the Caribbean (ECLAC) finished the manual for socio-economic impact assessment, whose chapters on health and potable water were reviewed in depth by PAHO/WHO. The recent creation of the CIIFEN (International Research Centre on El Niño) in Ecuador has been a key step toward international joint observation and research on the effects of and successful measures for extreme water related events. PAHO/WHO is a stakeholder of this crucial initiative.
<http://www.who.int/disasters>
<http://www.paho.org/disasters>
→ *Volume 1, p. 55, 156, 167, 195, 213, 242, 245, 256, 272, 374, 375*

World Meteorological Organization (WMO)

Based in Geneva, Switzerland, WMO coordinates global scientific activity to allow increasingly prompt and accurate weather information and other services for public, private and commercial use. WMO activities contribute to the safety of life and property, the socio-economic development of nations and the protection of the environment.

WMO participated in the implementation of IDNDR and is now a member of the Inter-Agency Task Force on Disaster Reduction, working closely with the working groups on climate and disaster reduction (for which it has lead responsibility), on early warning and on vulnerability and risk assessment. The WMO constituent bodies, including its governing Congress and the Executive Council, provide guidance on the policy, scientific and technical aspects of the implementation of ISDR objectives at regional and global levels.

As nearly three-quarters of all natural disasters are related to weather and climate, WMO has a number of scientific and technical programmes related to the mitigation of natural hazards supported by the participation of national meteorological and hydrological services and a

number of regional specialized meteorological centres worldwide.

The WMO World Weather Watch programme coordinates the preparation and distribution of weather, climate and hydrological data, analyses and forecast products to all nations.

The WMO Tropical Cyclone Programme promotes the establishment of national and regionally coordinated systems to ensure effective preparedness so that the loss of life and damage caused by tropical cyclones and associated phenomena are reduced to a minimum.

The WMO Public Weather Services programme supports national meteorological and hydrological services in disaster reduction planning by providing routine forecasts and information to enhance the social and economic well-being of nations.

The World Climate Programme provides an authoritative international scientific voice on climate, climate variations and climate change. It has provided advanced climate database management systems to many countries, with applications in several areas of disaster mitigation, especially drought.

The WMO World Weather Research Programme aims to develop improved and cost-effective techniques for forecasting high-impact weather and promote their applications among countries.

The Hydrology and Water Resources Programme assists the national hydrological services of member countries to assess risk and forecast water-related hazards, in particular major floods and droughts.

WMO continues to assist its members in the development of techniques to assess and combat drought, desertification and other extreme events through its agricultural meteorology programme. Through its leadership of the ISDR working group on climate and disaster reduction, WMO contributes to the review of sectoral systems within and outside the UN that monitors climate sensitive emergencies. The monitoring and prediction of climate-related natural disasters associated with the El Niño and La Niña phenomena are of particular interest.

Regular El Niño monitoring and dissemination of related outlooks are tangible results of WMO activities. Other projects are being pursued to establish a climate alert system and linking climate and disaster databases on floods. A drought preparedness and mitigation programme to promote the use of climate information at individual farmer's level of decision-making is being implemented in collaboration with NOAA and other national and regional partners.

The establishment of the International Research Centre for El Niño (CIIFEN) in collaboration with the government of Ecuador and WMO is a response to the UN General Assembly resolution 52/200 on international co-operation to reduce the impacts of El Niño phenomenon.

A memorandum of understanding has been signed between WMO and the International Consortium on Landslides addressing issues of common interest. This joint expression gives particular regard to the promotion of sciences pertaining to the safety of human life and property, protection of the environment, sustainable economic and social development, and associated education and training.

Another WMO project addresses natural disaster reduction in coastal lowlands by responding to the requests of the Johannesburg Plan of Implementation. This commitment was subsequently approved by the Fourteenth World Meteorological Congress in May 2003.

In order to ensure integration and synergy of relevant activities being carried out under the various WMO programmes in the area of disaster prevention and mitigation, the Fourteenth World Meteorological Congress established a new crosscutting major programme on natural disaster prevention and mitigation, geared to ensure that WMO's progamme activities and results are fully reflected in WMO's participation and support to the International Strategy for Disaster Reduction. This overarching programme will also provide the basis for effective coordination of the pertinent WMO activities with related activities of international, regional and national organizations involved.

Several new initiatives from the different major WMO programmes have been planned and included in the Sixth WMO long-term plan (2004-2011), which likewise responds to the different recommendations and principles for disaster reduction related to sustainable development in the Johannesburg Plan of Implementation.
<http://www.wmo.ch>
→ *Volume 1, p. 2, 46, 49, 53, 65, 145, 150, 152, 154, 176, 196, 213, 214, 215, 369, 370, 371, 372, 374, 379, 383, (annex 4, 100)*

Annex 4

Selected international development agendas and commitments relevant to disaster risk reduction

Selected international development agendas and commitments

The international community has adopted several significant development declarations, agendas and conventions over the past three decades. These have covered, among other things, the environment, freshwater management, climate change, desertification, social development, habitat and food security. All contain commitments related to disaster reduction and are often referred to in this review.

The following section provides a short overview of some of the most relevant instruments for disaster risk reduction. In many cases the visions contained in many of them are yet to be fully realized.

This section outlines major agreements in the following areas:

- *Millennium Development Goals;*
- *sustainable development agenda;*
- *climate change;*
- *desertification and drought;*
- *wetlands;*
- *freshwater agenda;*
- *gender agenda;*
- *habitat agenda;*
- *health;*
- *Small Island Developing States; and*
- *Least Developed Countries.*

Millennium Development Goals

The UN Millennium Summit was held in New York in September 2000. A total of 189 world leaders met and adopted the UN Millennium Declaration.

Targets, known as the Millennium Development Goals were established, setting a new milestone and providing guiding principles for the international community, national governments and the UN.

Many of these targets reflect areas which are closely linked to vulnerability to natural hazards. These include eradicating extreme poverty and hunger, achieving universal primary education, promoting gender equality, ensuring environmental stability and using partnerships for development.

For example, the goal of improving the lives of thousands of slum dwellers around the world living in high-risk areas by 2020, involves poverty eradication, proper land use planning and the improved understanding of vulnerability to disasters in densely populated areas.

Regarding protection of the environment, the declaration resolves "to adopt in all our environmental action a new ethic of conservation and stewardship and, as first steps, resolves...to intensify cooperation to reduce the number and effects of natural and man-made disasters".

Within the context of the ISDR, strategies for achieving the millennium goals and described in the road map leading to the implementation of the United Nations Millennium Declaration (A/56/326) include:

- Developing early warning systems, vulnerability mapping, technological transfer and training.
- Supporting interdisciplinary and intersectoral partnerships, improved scientific research on the causes of natural disasters and better international cooperation to reduce the impact of climate variables, such as El Niño and La Niña.
- Encouraging governments to address the problems created by mega-cities, the location of settlements in high-risk areas and other human determinants of disasters.
- Encouraging governments to incorporate disaster risk reduction into national planning processes, including building codes.

Recognizing the need for regular assessment on the status of achievement of the Millennium Development Goals, the UN Secretary-General will issue a comprehensive progress report every five years, complemented by inputs from countries. The review of the Yokohama Strategy and Plan of Action will address progress in disaster risk reduction contributing towards the Millennium Development Goals, and will also be incorporated in the Secretary-General's reports.

Sustainable development agenda

The World Summit on Sustainable Development (WSSD) was held in Johannesburg, South Africa, in August-September 2002, 10 years after the UN Conference on Environment and Development, also known as the Rio Earth Summit.

The WSSD provided a timely reminder to the international community that faulty development and inappropriate use of resources contribute to natural disasters. The political statement adopted by Heads of States clearly states that natural disasters are a global challenge as they are "more frequent and more devastating and developing countries are more vulnerable". Natural disasters were also recognized as posing a severe threat to sustainable development and therefore needed priority attention.

The resulting Johannesburg Plan of Implementation (see annex 5) includes commitments related to disaster and vulnerability reduction, and improved early warning. Reference is made in the sections of protecting and managing the natural resource base of economic and social development, Africa, Small Island Developing States and under the subsequent means of implementation.

The follow-up to WSSD decisions was discussed at the 11th session of the Commission for Sustainable Development in April 2003. It was decided that work in support of the Programme for the Further Implementation of Agenda 21 and the Johannesburg Plan of Implementation would be organized in two-year implementation cycles. These would include a review session and a policy session, with the subject of disaster management and vulnerability to be reviewed in the course of the fifth cycle (2014-2015). In light of the cross-cutting nature of the issues, risk management and vulnerability will also be examined in the context of other thematic Commission on Sustainable Development (CSD) clusters. Water, sanitation and human settlements will be reviewed in 2004-2005, and drought and desertification in 2006-2007.

A decision on reporting was taken emphasizing the importance for reviewing, evaluating and monitoring progress in implementation. It was envisioned that this should include sharing lessons learned and good practices, identifying actions taken as well as opportunities and obstacles in relation to implementation. Further work was supported to identify indicators at the national level.

To further support this work, the Inter-Agency Task Force on Disaster Reduction identified development planning and the allocation of adequate resources to reduce vulnerability as main areas of concern in coming years. The ISDR Secretariat will continue to collaborate closely with the UN Department of Social and Economic Affairs to support the CSD's work in this field. Particular attention will be focused on reviewing accomplishments to reduce the negative impacts of natural hazards on communities and development processes faced by countries around the world.

Road for a sustainable development agenda

The journey toward achieving sustainable development is ongoing. In the last 30 years a series of summits, meetings and agreements have led to the wide ranging

"Can sustainable development, along with the international strategies and instruments aiming at poverty reduction and environmental protection, be successful without taking into account the risk of natural hazards and their impacts? Can the planet afford the increasing costs and losses due to so-called natural disasters? The short answer is, no.

Disaster reduction policies and measures need to be implemented to build disaster resilient societies and communities, with a two-fold aim: to reduce the level of risk in societies, while ensuring, on the other hand, that development efforts do not increase the vulnerability to hazards but instead consciously reduce such vulnerability. Disaster and risk reduction is therefore emerging as an important requisite for sustainable development."

UN/ISDR, 2002.

Table A.1
Milestones for the sustainable development agenda

UN sustainable development process	
1972	UN Conference on Human Environment (Stockholm), UNEP established
1983	World Commission on Environment and Development (Brundtland Commission) established
1989	Brundtland report, Our Common Future
1989	Launch of IDNDR (1990-1999)
1992	UN Conference on Environment and Development, Earth Summit (Rio de Janeiro)
UN Commission on Sustainable Development (CSD) established	
1997	Rio+5 Summit review (critical because of slow implementation)
1999	End of IDNDR
2000	Launch of ISDR
	WSSD (Rio+10) process
2001	Defining modalities of process National, sub regional and regional preparatory meetings
2002	Global Prep Com. 2 (New York): Substantive review of implementation of Agenda 21 Global Prep Com. 3 (New York): Review and finalize elements for programme of action Global Prep Com. 4 (Bali): Identification of priority issues, programme of action and elements for political statement World Summit on Sustainable Development (Johannesburg): Adoption of Johannesburg Plan of Implementation - defining national, regional and global commitments
Other Key events	
1982	UNEP's first high level meeting
1991	Children's Summit (New York)
1992	Framework Convention on Climate Change and Convention on Biological Diversity agreed and signed at Earth Summit
1993	Human Rights Summit (Vienna)
1994	First World Conference on Natural Disaster Reduction For a Safer World (Yokohama) Small Island Development States (Barbados) Global Conference on Sustainable Development
1995	Social Summit in Copenhagen Women's Summit (Beijing) World Trade Organization (WTO) established
1996	Human Settlements (Istanbul) Food Summit (Rome)
1997	Kyoto Protocol on Climate Change adopted
1998	Convention on Prior Informed Consent adopted
1999	IDNDR Programme Forum (Geneva)
2000	Millennium Summit (New York) World Youth Forum (Dakar) Biosafety Protocol adopted (Cartagena)
2001	UN Third Conference on Least Developed countries (Brussels) International Conference on Freshwater in Bonn WTO negotiations, including GATS and agriculture
2002	Financing for Development (Mexico) World Food Summit (Rome)

interpretation of sustainable development that exists today. Today, the essential need for environmental strategies to achieve sustainable development is widely understood and accepted, even if implementation is not yet realized fully.

Disaster reduction was not dealt with explicitly in the Rio conference agenda even though it was included in the discussion on human settlements, mountain development, freshwater management and land degradation. Nonetheless, the main

Box A.1
The four broad areas of action in Agenda 21

Elements	Issues
Social and economic dimensions to development	Poverty, production and consumption, health, human settlement, integrated decision-making
Conservation and management of natural resources	Atmosphere, oceans and seas, land, forests, mountains, biological diversity, ecosystems, biotechnology, freshwater resources, toxic chemicals, hazardous radioactive and solid waste
Strengthening role of major groups	Youth, women, indigenous people, NGOs, local authorities, trade unions, businesses, scientific and technical communities, farmers
Means of implementation	Finance, technology transfer, information, public awareness, capacity building, education, legal instruments, institutional frameworks

outputs of the Earth Summit provided an important foundation on which to build a growing recognition of risks related to sustainable development.

These included the Rio Declaration on Environment and Development (Rio declaration) and Agenda 21, a 40-chapter programme of action. UNCED also led to agreement on two legally binding conventions; the United Nations Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC). It produced a Statement of Forest Principles, and began the process of developing the United Nations Convention to Combat Desertification (UNCCD), eventually adopted in 1994.

During the IDNDR, the connection between disaster reduction and sustainable development was emphasized and promoted. UN multilateral conventions further emphasized the connection with the agreements on climate change, desertification and biodiversity signed between 1992 and 1994. These joined the long-standing 1971 Ramsar Convention on Wetlands Preservation to emphasize the importance of natural resource management and risk exposure.

When progress in sustainable development was assessed at the Rio+5 conference held in New York in 1997, many gaps in implementation were identified, particularly with regard to social equity and poverty. Falling levels of official development assistance and growing international debt contributed to this. It also identified failures to improve technology transfer, limited capacity-building for participation and development, institutional coordination, and expressed a need to reduce excessive levels of production and consumption.

The review meeting called for the ratification and implementation of the growing number of international agreements and conventions which refer to environment and development. The same concerns regarding implementation were raised in the preparation to the WSSD. During this process, natural disaster was identified as a serious constraint to sustainable development.

During the preparatory phase of WSSD and at the Johannesburg meeting itself, a number of activities were organized to promote integration of disaster reduction within the sustainable development agenda. In addition to parallel and side events, a background paper on the links between development, environment and natural disasters was developed through a wide consultative process, *Disaster Reduction and Sustainable Development: Understanding the links between vulnerability and risk to disasters related to development*. <http://www.unisdr.org>

Climate change

The United Nations Framework Convention on Climate Change (UNFCCC) was presented for signature at the Earth Summit in 1992. Its ultimate goal is the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climatic system".

"The impacts of extreme weather events across the globe are enormous…..Climate change remains highly relevant to disasters and their reduction for several important reasons. Firstly, the existing trends evident in weather parameters, though quite small, may already be exacerbating the impacts of some hazard events, especially where social and environmental stresses are already high. Secondly, the IPCC [Intergovernmental Panel on Climate Change] has consistently projected the likelihood of increased frequency and intensity of hazards in future. When and where these changes will become manifest is very uncertain, so precautionary preparations are essential.

Steps that enhance our ability to cope with the existing climate will be especially desirable and cost effective. Thirdly, the experience of countries in managing current climate fluctuations and extremes, for example, multi-year droughts, can provide valuable lessons for dealing with projected longer-term changes. Fourthly, disaster reduction provides a solid, meaningful, no-regrets set of activities in support of climate change adaptation plans."

UN Secretary-General's report on the Implementation of ISDR (A/58/277)

A protocol, known as the Kyoto Protocol was adopted in 1997 and added to the Convention. Negotiations relating to its operational details were completed in November 2001 and are compiled in the Marrakech Accords. The protocol contains legally binding commitments for developed countries Party to the convention. With the notable exception of the United States, most OECD countries agreed to decrease their anthropogenic greenhouse gas emissions by at least 5 per cent below 1990 levels in the first commitment period from 2008-2012. Some countries with high emission rates have not yet ratified the Kyoto Protocol. The protocol is therefore not yet in force. By the end of 2003, the Convention counts 188 Parties, while 120 countries have ratified the Kyoto Protocol.

Since the convention's entry into force, Parties have met annually at sessions of the Conference of the Parties (COP), the Convention's supreme decision-making body, to review and monitor its implementation and continue talks on how best to address climate change. The Convention's two subsidiary bodies – the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI) – carry out preparatory work for the COP. As their names suggest, the SBSTA is responsible for providing advice to the COP on scientific, technological and methodological issues, as well as cooperation with the IPCC and other relevant international organizations. The SBI helps with the assessment and review of the convention's implementation, liaison with the Global Environment Facility, and financial and administrative issues. A permanent secretariat is based in Bonn, Germany.

The decisions taken by the COP now make up a detailed rule book for the effective implementation of the Convention. The landmark Marrakesh Accords adopted at the seventh session of the COP in 2001 were especially important in elaborating the convention's rules on issues of particular concern to developing countries.

Industrialized countries, believed to have contributed more to climate change, are requested by the Convention to submit regular reports, known as national communications, detailing their climate change policies and measures. These countries are termed Annex 1 Parties of which there are currently 40 plus those of the European Union.

All remaining countries, mostly developing countries, make up the group of non-Annex I Parties, currently numbering 147. These countries are invited to provide national communications in more general terms on their actions to address climate change and measures taken to adapt to its effects. They also are encouraged to report on their needs to implement the Convention.

Even though the guidelines for national communications do not include any specific reference to disaster reduction or preparedness, much of the information requested from countries will be of relevance for disaster reduction strategies. Information on policy frameworks for implementing adaptation measures and response strategies in the context of disaster preparedness will be beneficial to any national disaster risk management policies, especially in the context of integrating climate change impact information into national planning processes.

Specific needs with regard to financial assistance and technology transfer, along with support for capacity building of particularly vulnerable developing countries, are taken into account under the climate regime.

Some developing countries such as low-lying island states or those with areas prone to natural hazards face high risks from the adverse effects of climate change itself. Others, such as oil exporting states, feel

Box A.2
The Global Environment Facility

The Global Environment Facility (GEF) is entrusted with the operation of the financial mechanism of the climate change convention on an interim basis. It is an international partnership of UNDP, UNEP and the World Bank. It fundamentally provides additional grant and concessional funding to meet the incremental costs of measures to achieve agreed global environmental benefits in climate change. In doing so, it also addresses matters of biological diversity; international waters, ozone layer depletion and persistent organic pollutants. The agreed incremental cost of activities concerning land degradation, primarily desertification and deforestation also are eligible for funding, as they relate to the four focus areas.

Activities financed by the GEF are consistent with the policies and programme priorities established by the Conference of the Parties to the Convention. Between July 2001 and May 2002, total climate change financing was about US$ 900 million, of which US$ 136.64 million was GEF financing.

GEF activities related to adaptation include the preparation of vulnerability and adaptation assessments within the context of national communications, national adaptation strategies and the assessment of adaptation options. In this context, the operational guidelines for expedited funding for the preparation of national adaptation programmes of action by LDCs are now available. The Caribbean Planning for Adaptation to Climate Change and the Pacific Islands Climate Change Assistance Programme are both funded by GEF. Adaptation activities also include multidisciplinary projects that focus on biodiversity, land degradation and international waters.

more threatened by the potential economic repercussions of climate change response measures. The Protocol requests Parties to minimize the adverse effects of their climate change policies and measures, including social, environmental and economic impacts on other Parties.

Climate change legislation and financing mechanisms will have positive benefits for coping with climate- and water-related hazards, which constitute more than two-thirds of all disasters. The time is ripe for forging links between climate change and disaster risks as adaptation is now gaining momentum after years of focusing on greenhouse gas abatement. The Marrakesh Accords took important steps in this direction, and set out a programme of continuing analysis on the impacts of climate change, including consideration of the potential roles for insurance measures to counter them.

The Accords also established a separate work programme to assist Least Developed Countries (LDC) in the preparation of national adaptation programmes of action. It is intended that these programmes will enable LDCs to identify urgent actions to expand their current coping capabilities and enhance resilience to future climate variability and extremes. This process can help LDCs identify and address some of the underlying causes of vulnerability, including such actions as those to reduce the impact of the next hazardous season or the use of land-use zoning that could facilitate future disaster response.

The Marrakech Accords established two new Convention funds, to be managed by the Global Environmental Facility (GEF). Operating as the financial mechanism of the Convention, GEF will administer the special climate fund and the Least Developed Countries fund. The scope of activities eligible for funding under the Convention was extended, notably in the area of adaptation to climate change and capacity building. These include the integration of climate change considerations in sustainable development planning; the development of systematic observation and monitoring networks; use of early warning for extreme weather events and disease outbreaks; the assessment of vulnerability and adaptation options, as well as the implementation of adaptation activities where appropriate.

The Clean Development Mechanism (CDM) established under the additional Protocol also represents a potential for financing projects providing disaster reduction services. This mechanism is meant to ease emission target compliance for developed countries through the financing of energy projects in developing countries. In the first commitment period reforestation projects will also be eligible. A later possibility exists to add land-use projects for the second commitment period. CDM projects will finance an adaptation fund to help vulnerable developing countries adapt to the adverse effects of climate change.

Box A.3
The Intergovernmental Panel on Climate Change

The IPCC, established by UNEP and WMO in 1988, provides important scientific input to the climate change process. The current structure of the IPCC consists of three working groups: working group I addresses the science of climate change; working group II deals with impacts, vulnerability and adaptation; and working group III with mitigation of greenhouse gases. In addition to the three working groups, the IPCC also includes a Task Force on National Greenhouse Gas inventories.

The IPCC is best known for its comprehensive assessment reports, incorporating findings from all three working groups, which are recognised as the most credible source of information on climate change. The latest, Third Assessment Report released in 2001, stated that "there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities and human interference will continue to change atmospheric composition throughout the 21st century".

The IPCC has projected the following alarming chain reaction of events by 2010:

- Largest greenhouse gas emissions would increase from today's level of about 365 ppmv (parts per million by volume) to between 550 and 1000 ppmv.
- Global mean surface temperatures will increase by about 1.5 to six degrees Celsius.
- Incidence of some extreme events will increase including the frequency and magnitude of the El Niño Southern Oscillation (ENSO) phenomenon.

These projections directly affect the very existence of some low-lying states and are likely to have a profound impact on the planet in terms of the likelihood of large-scale disasters.

The IPCC states that there is little evidence that efficient and effective adaptations to climate change risks will be undertaken autonomously. It says that in most developing countries local governments are weak and ineffective at environmental management and have little capacity to integrate disaster preparedness into current tasks and responsibilities.

More information can be found on www.ipcc.ch, see also Chapter 2

Finally, the Convention has a provision to encourage the coordination of activities carried out under relevant international agreements, in particular the UN Convention to Combat Desertification and the Convention on Biological Diversity. Such activities include early warning systems and disaster preparedness and management. <http://www.unfccc.int>

Desertification and drought

The international community has long recognized that desertification poses a major economic, social, and environmental problem of concern to many countries. In 1977, the UN Conference on Desertification adopted a Plan of Action to Combat Desertification.

Unfortunately, despite this and other efforts, UNEP concluded in 1991 that the problem of land degradation had intensified, although there were some examples of success.

As a result, the question of how to address desertification more effectively was still a major concern at the Earth Summit. The summit supported a new, integrated approach to the problem emphasizing action to promote sustainable development at the community level. UNCCD was adopted in 1994 and entered into force in 1996. Over 179 countries are now parties to the Convention.

UNCCD's Conference of the Parties (COP), the supreme decision-making body, held its sixth session in October, 2003. A permanent Secretariat is based in Bonn, Germany. The Convention's Committee on Science and Technology is multidisciplinary and open to the participation of all parties. Composed of government representatives, it advises the UNCCD's COP on scientific and technological matters relevant to desertification and drought.

Countries affected by desertification are implementing the Convention by developing and carrying out national, sub-regional, and regional action programmes. Drawing on past lessons, the Convention states that these programmes should:

- adopt a participatory, bottom-up approach;

- emphasize popular participation designed to allow local people to help themselves to reverse land degradation;
- make politically-sensitive changes, such as decentralizing authority, improving land-tenure systems, and empowering women, farmers, and pastoralists;
- allow NGOs to play a strong role;
- be fully integrated into other national policies for sustainable development; and
- be flexible and modified as circumstances change.

Wetlands

The Ramsar Convention on Wetlands Preservation was adopted in 1971 in the Iranian city of Ramsar. It came into force in 1975 and 131 countries are party to the Convention. The Ramsar Convention is the only global environmental treaty dealing with a specific ecosystem. Its mission concerns the conservation and wise use of wetlands by national action and international cooperation as a means to achieving sustainable development throughout the world.

Some of the main activities of the Convention are the development of national wetlands policies and maintaining inventories of wetlands. It deals with all wetlands issues from surface water to groundwater.

Although the relevance of wetlands for flood control was mentioned in the Convention, it has not been a priority until very recently. However, the subject is included in the strategic work plan for 2003-2004. The eighth session of the Conference of the Parties (Valencia, November 2002) recognized the potential role of wetland restoration in mitigating the effects of floods and drought, adopting guidelines to this effect. Another resolution requested parties to monitor and assess impacts of drought and other natural hazards on the livelihoods of local communities and indigenous peoples dependent on Ramsar sites.

The Ramsar convention bodies are the Conference of the Contracting Parties, the Standing Committee (representatives from Ramsar's six regions), the Scientific and Technical Review Panel and the Ramsar Bureau. The main partners for the implementation of policies are the World Conservation Union (IUCN), Wetlands International, the World Wide Fund for Nature (WWF) and Birdlife International. The Ramsar Convention has a joint work plan with the Convention on Biological Diversity and a memorandum of understanding with, among others, the UNCCD and the World Heritage Programme of UNESCO.
<http://www.ramsar.org>

Wetlands International manages and develops the Ramsar Sites Database under contract to the Ramsar Convention Secretariat, an information tool that provides useful data to the public for

Box A.4
The Ramsar Convention on Wetland Preservation and disaster reduction

Among the many values and functions of wetlands some of the most important involve flood reduction, coastal protection, mitigation of climate change and desertification effects. These considerations are at the heart of the Convention's guidance on management planning for wetlands. In addition to the revised management planning guidelines currently under development for adoption by the Conference of the Parties, additional guidance is also being developed on integrated coastal zone management which stresses these values very strongly.

Ramsar, the World Wide Fund for Nature (WWF), and the Niger Basin Authority are presently working on a project financed by the Global Environment Facility (GEF) to designate wetlands throughout the Niger River Basin as Ramsar sites and develop management plans for them which will help to mitigate the effects of seasonal climate variations. A similar initiative also financed by GEF is currently underway with Ramsar, WWF, and the Lake Chad Basin Commission to bring the entire basin under a cooperative management plan following Ramsar guidelines.

Similarly, Ramsar staff is working with local officials and NGOs on a number of projects in Europe to develop sound management regimes for transboundary wetlands such as the Neretva River delta, the trilateral Prespa Park, the Danube Delta and the Dyje Morava floodplain. Although the main purpose of these activities is sustainable use of resources, all have a component that is relevant to disaster prevention.

Source: Ramsar Secretariat, and G. Bergkamp, B.Orlando, IUCN
RAMSAR secretariat and G. Bergkamp, B.t Orlando, IUCN, 1999

designated wetlands around the globe in order to promote their conservation.
<http://www.wetlands.org/RSDB/default.htm>

IUCN has explored the scientific and institutional linkages between climate change and the conservation and wise use of wetlands. It provided an overview of the relevant programmes of work undertaken by the United Nations Framework on Climate Change (UNFCCC) and the Ramsar Convention, related work of the Intergovernmental Panel on Climate Change, the Convention on Biological Diversity and the GEF. It proposed a set of actions that could be carried out between the UNFCCC and the Ramsar Convention. These involved the promotion of linkages between the two Conventions, predicting and monitoring the impacts of climate change on wetlands, the role of wetlands in adapting to, and mitigating the impact of, climate change and the role of wetlands in reducing greenhouse gas emissions.

Freshwater agenda

Some 1.3 billion people worldwide lack access to safe drinking water and approximately 2.5 billion have inadequate sanitation. Water resource management is a challenge of worldwide significance, as water scarcity grows, quality declines, environmental and social concern mount. The threat posed by floods and drought is exacerbated by increasing population vulnerability and climate change.

There are intrinsic links between the water agenda, disasters and risk reduction. Reducing vulnerability to hazards in the water sector involves far more than just the water sector. Increasing social vulnerability to water stress in many parts of the world reflects a wide range of pressures. Many are beyond the responsibility of water managers.

Reducing the risks of water related hazards will require capacities to monitor the magnitude, duration, timing and location of hazards. While these obviously include floods and droughts, landslides, storms, earthquakes and volcanic eruption also have impacts on freshwater resources and infrastructure.

The assessment and reduction of vulnerability to such extremes additionally require decisions about development issues and planning controls. Various matters such as legislation and land use, environmental management and financial instruments (e.g. insurance) are all relevant to determining water-related risk factors.

There are many political documents that mention risk and water-related hazards forming the so-called freshwater agenda. Prior to the Earth Summit, the UN International Conference on Water and the Environment was held in 1992. The resulting Dublin Statement on Water and Sustainable Development established four guiding principles and an agenda for action which have guided academic and political discussions ever since.

One of the recommendations contained in the Dublin statement relates to the protection of freshwater against natural disasters. In particular, it identifies climate change and rising sea levels as factors that would exacerbate disaster risk, "threatening the apparent security of existing water resources".

Chapter 18 of Agenda 21 covers the "protection of the quality and supply of freshwater resources: application of integrated approaches to the development, management and use of water resources" with ample reference to extreme hydrometeorological events and disasters.

In March 2000, the Second World Water Forum launched the World Water Vision and a Ministerial Declaration on Water Security in the 21st Century was announced. The declaration identifies seven challenges for the global community, including the "management of risk – to provide security from floods, droughts, pollution and other water-related hazards".

A vast body of knowledge exists about water management and flood and drought management in particular. One of the best ways to implement these commonly agreed principles is by focusing more attention on local, national and international programmes that embody them. For example, WMO promotes flood management activities in the context of integrated water resources management.

The reduction of vulnerability to floods and droughts will have to be included in many facets of the freshwater agenda. These include the involvement of all stakeholders in river basin management, an institutional framework to manage water demand more effectively and international trade arrangements which respect national water regulations. Such water management processes need to be accompanied by an increased delegation of responsibility and developed capacities to local authorities.

In October 2002 the UN-WATER committee was launched, with its secretariat supported by DESA. It is composed of representatives of UN agencies and programmes with activities in the field of freshwater, as defined broadly by chapter 18 of Agenda 21. The principal objective of UN-WATER is to coordinate policies, strategic approaches and actions among the agencies and programmes of the United Nations system within the area of freshwater. This seeks to ensure the most effective support to countries in their effort to assess, develop and manage their freshwater resources in a sustainable manner, to reduce the impact of water-related hazards and to protect the integrity of the natural environment. The flagship initiative implemented by UN-WATER is the World Water Assessment Programme/World Water Development Report.
<http://www.unesco.org/water/wwap>

The year 2003 was designated the UN International Year of Freshwater and a third World Water Forum took place in Kyoto in March of the same year. The Ministerial Declaration addresses disaster mitigation and risk management as a priority task.
<http://www.world.water-forum3.com>

Every year, World Water Day is celebrated on 22 March, focusing on a different aspect of water each year. In 2004, the theme of the World Water Day is Water and Disasters, with the celebrations jointly coordinated by WMO and the ISDR Secretariat. The Day also represented the conclusion of the 2003 World Disaster Reduction Campaign *Turning the tide on disasters on sustainable development*, organized by the ISDR Secretariat.
<http://www.waterday2004.org>
<http://www.unisdr.org>

Gender agenda

The Beijing Platform for Action, adopted at the Fourth World Conference on Women in 1995 recognized that many women are particularly affected by environmental disasters, disease and violence.

It requested governments to "promote knowledge of and sponsor research on the role of women, particularly rural and indigenous women, in food gathering and production, soil conservation, irrigation, watershed management, sanitation, coastal zone and marine resource management, integrated pest management, land-use planning, forest conservation and community forestry, fisheries, natural disaster prevention, and new and renewable sources of energy, focusing particularly on indigenous women's knowledge and experience."

In 2000, a review of the implementation of the Beijing platform identified natural disasters and epidemics as emerging issues which deserved greater attention. The social and economic impacts of natural disasters and epidemics were noted as remaining relatively invisible as policy issues, in particular their impact on the status of women and the achievement of gender equality.

In responding to a questionnaire, several states in Africa and Asia cited poverty as an obstacle to improving gender equality, often exacerbated by natural disasters and their resulting negative effects such as crop failure.

The twenty-third special session of the General Assembly, entitled "Women 2000: gender equality, development and peace for the twenty-first century", acknowledged an increase in casualties and damage caused by natural disasters. It raised awareness of the inadequacies of existing approaches and means for responding to emergency situations from a gender perspective.

It suggested that gender perspectives be incorporated into disaster prevention, mitigation and recovery strategies. The special session also recommended that the UN system and international organizations should assist governments in developing gender-sensitive strategies for the delivery of assistance and to respond to humanitarian crises resulting from natural disasters.

Several articles of the Convention on the Elimination of All Forms of Discrimination Against Women of 1979 explore the violations of women's human rights in the case of natural disasters. A number of general recommendations, adopted by the Committee on the Elimination of Discrimination Against Women, interpret articles of the Convention as they relate to disasters and the environment.

The Committee has urged states to pay greater attention to environment and natural disasters. For example, in the case of Nicaragua it suggested that aspects of natural disasters impeded women's full enjoyment of their rights. When it considered the reports of Kazakhstan and Uzbekistan, the Committee expressed concern about the degree of environmental degradation in both countries and its extremely negative impact on the health of the whole population, in particular on women and children.

In its programme of work for 2002-2006, the UN Commission on the Status of Women will consider the "environmental management and mitigation of natural disasters: a gender perspective". In preparation for this topic, an expert group was organized by the UN Division for the Advancement of Women, in collaboration with the ISDR Secretariat.

The expert group discussed the link between gender and environmental management, natural disaster reduction and risk management. It adopted a number of recommendations some of which were later adopted by the Commission.

In particular, the experts recommended the systematic inclusion of potential hazards and gender-based vulnerabilities in environmental impact assessments. They also reiterated the importance of women's participation in decision-making in public administration and in governmental arrangements at all levels.

The necessity to introduce a gender perspective into ongoing research on the relationships between climate, natural hazards, disaster and related environmental vulnerability also was highlighted. The group stressed the need to use gender-sensitive indices and indicators, further emphasising the need to develop instruments that foster gender analysis in local disaster risk management.

The Commission called for the integration of gender perspectives in the implementation of all policy documents and treaties related to sustainable development and in the review of the implementation of the Yokohama Strategy and Plan of Action for a Safer World.
<http://www.un.org/womenwatch/daw>

Habitat agenda

The habitat agenda was defined during the Second UN Conference on Human Settlements (Istanbul, 1996). It states that an increasing number of disasters are caused by vulnerabilities created by human action, such as uncontrolled or inadequately planned human settlements, lack of basic infrastructure and human settlements in disaster prone areas.

UN-HABITAT takes actions to improve disaster risk management by working with partners that include local governments, insurance companies, NGOs and the academic, health and scientific communities. The goal is to adopt appropriate norms for land use, building and planning standards.

Health

Disasters challenge public health. For an unacceptable number of people, surviving the elements is the primary objective of daily existence. During the past 20 years, natural disasters killed almost 2 million people and the health sector had the greatest responsibility in responding to them. WHO looks at disasters as major public health issues and views disaster reduction as a core function of the health sector. WHO works to ensure that health development does not stop in situations of crisis, but continues through health relief and recovery.

The health sector does not exist in isolation and must cooperate with other groups involved in the overall framework for emergency preparedness and establish priorities in accordance with the overall disaster response plan. The responsibility of health agencies in disaster reduction includes assisting in developing national disaster response plans, implementing mass casualty management

Box A.5
Kobe - a city adapting and recovering

The Habitat-agenda aims to build capacities for sustainable human settlements issues. A window of opportunity for change is after a disaster. In the case of Kobe, Japan, disaster and risk reduction acquired a new meaning after 1995.

The Kobe earthquake, with a magnitude of 7.2 in the Richter scale, hit the city and its surrounding areas on 17 January 1995 at 5:46. There were over 6,400 casualties and more than 200,000 people (Hyogo Prefecture Government) were forced to find temporary shelter due to the destruction of buildings and infrastructure.

Public facilities such as offices, schools and hospitals were damaged extensively, paralysing services for several days. Utilities were also interrupted - electricity was unavailable in 25 per cent of the city and telephone, gas and water was disrupted in the entire city. Many severe fires broke out, resulting in more than 800,000 square metres of burnt land. The economic damage to the city was estimated at 7 trillion Japanese yen (approx. US$60 billion).

The earthquake showed the need for a multidisciplinary approach of disaster management with appropriate incorporation of the socio-economic context. A massive reconstruction plan was undertaken following the earthquake both at the city and provincial levels. The basic ideas of the reconstruction plan were:

- balance between the urban conveniences and safety precautions
- raising awareness of both benefits and hazards of nature
- more emphasis on human interaction

Key issues for creating community safety were incorporated in the reconstruction planning and emphasised the following:

- Security. Creation of a community where people can live and work with a sense of safety.
- Vitality. Creation of a community and built environment full of creativity.
- Appeal. Creation of a community consistent with its unique nature and appeal.
- Cooperation. Creation of a community that will work together in mutual trust.

The goal of the reconstruction plan was to create a safer city while respecting the necessity to live a normal, everyday life. Many evaluations were conducted during Kobe's reconstruction period. Following are some of the findings found useful in improving earthquake countermeasures:

- Promoting integrated risk management
- Enhancing community involvement in the formulation of earthquake countermeasures and developing cooperation between administrative organizations and residents
- Continued efforts toward the creation of safe and disaster resistant towns
- Passing results to future generations and establishing a framework for international cooperation concerning earthquake countermeasures.

Source: Kenji Okazaki, 2001

exercises, conducting health services assessments including hospital vulnerability assessments, as well as ensuring continuation of epidemiological surveillance and disease control.

Emergencies and disasters can occur anywhere in the world, affecting human health, people's lives and the infrastructure built to support them. Environmental health problems arising from emergencies and disasters are connected to their effects on the physical, biological and social environment that pose a threat to human health, well-being and survival: shelter, water, sanitation, disease vectors, pollution, etc. Management of environmental health responsibilities before, during and after emergencies and disasters must take into consideration the following:

- Reducing the vulnerability of communities to hazards and increasing their ability to withstand disruption and to recover rapidly.
- Strengthening routine services so that the potential health effects of emergencies and disasters are minimized.
- Responding to emergencies and disasters with appropriate environmental health activities (water supply and sanitation, vector control, etc.).
- Protection of hospitals and health care centres, with the ultimate goal of protecting the lives of patients, staff and other occupants and ensuring that these facilities can continue to function during and after a disaster strikes.

Among risk reduction measures, vulnerability studies in hospitals serve as a base to adjust

methodologies for rules and regulations for improving construction security of existing and new hospitals. Risk mapping in communities helps communities identify risk areas and mitigate against the health consequences of the disaster. Simulation exercises for mass casualty management, involving both the community as well as all disaster response organizations, increases the response capacities of the local population.

Small Island Developing States

In total, there are 43 small island developing states (SIDS) in the Caribbean, Pacific and Indian Ocean regions. Their special circumstances have gained global attention over the years. The Rio Declaration and Agenda 21 recognized the special needs of SIDS, as well as the international conventions signed on that occasion.

The Barbados Programme of Action for the Sustainable Development of Small Island Developing States was adopted in 1994. It expresses the need to develop a vulnerability index, as well as encouraging a focus on disaster prevention and preparedness. A comprehensive review of the Barbados programme of action will take place in Mauritius in 2004. Efforts to build regional strategies that are aimed at fostering the involvement of national constituencies in the implementation of the International Strategy on Disaster Reduction need to take the special circumstances of SIDS into account. In this regard, it is important for risk and vulnerability reduction concerns to be integrated into other relevant programme areas.

At the 2000 UN Millennium Summit, world leaders resolved to "address the vulnerabilities faced by SIDS rapidly and in full by 2015." The Johannesburg Plan of Implementation of the WSSD urges extended "assistance to small island developing states in support of local communities and appropriate national and regional organizations of small island developing states for comprehensive hazard and risk management, disaster prevention, mitigation and preparedness, and help relieve the consequences of disasters, extreme weather events and other emergencies".

Mechanisms were adopted to promote the integration of comprehensive hazard and risk management approaches into sustainable development planning. They include development and implementation of measures of vulnerability, hazard identification and assessment, disaster prevention, mitigation and preparedness, as well as the strengthening of disaster response and recovery programmes.

The Alliance of Small Island States (AOSIS) is pursuing the collective interests of SIDS even though not all SIDS are members of the alliance. As a follow-up to the Barbados programme, an internet network was established to facilitate information exchange, supported by DESA. In a similar vein, UNESCO is also supporting an initiative called Small Islands Voice.
<http://www.sidsnet.org>
<http://www.smallislandsvoice.org>

Owing to their small size, remoteness and fragility of island ecosystems, SIDS are especially vulnerable to hazards and the impacts of climate change. They must also be attentive to the potential for rising sea levels, careful management of coastal and marine resources and scarce freshwater resources. Environmental disasters such as oil spills could also severely damage SIDS.

Least Developed Countries

The General Assembly has designated the poorest countries in the world as least developed countries (LDCs). More than 600 million people live in the 49 LDCs, half of which are very disaster-prone and 32 are located in Africa. In 1981, when the concept of LDCs was first expressed there were only 30 such countries.

LDCs all share the following characteristics:

- low gross domestic product;
- limited human resources, measured in terms of life expectancy, calorie intake, primary and secondary school enrolment and adult literacy; and
- low level of economic diversification.

Three UN conferences have been dedicated to LDCs. All of them have recognized the disproportionately high social and economic costs of

disasters on LDCs. The programmes of action stemming from the first two conferences focussed on the need to improve disaster response capacities, with some references to the need for effective early warning capabilities. However, during the third conference, held in 2001, the focus shifted to the importance of reducing vulnerability and for developing disaster mitigation programmes.

The programme of action for LDCs for the decade 2001-2010 aims to forge strong partnerships between LDCs and industrialized nations to significantly improve the human and economic conditions in the poorest countries of the world. The programme of action also includes a commitment for reducing vulnerability and protecting the environment. It suggests actions which can strengthen institutions and increase ownership for local stakeholders in formulating sustainable development policies.

It encourages LDCs and their development partners to involve the private sector in the areas of disaster mitigation and disaster preparedness. It also encourages more participation by local communities and NGOs in disaster mitigation, early warning systems and relief efforts. The international donor community has been encouraged regularly to give priority attention to LDCs.

The United Nations Conference on Trade and Development (UNCTAD) plays a leading role supporting efforts to implement the LDC programme of action.
<http://www.unctad.org>

Annex 5

Extracts from the Johannesburg Plan of Implementation (JPoI) of the World Summit on Sustainable Development

(A/CONF.199/20)

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The following extracts highlight sections of the JPoI relevant to disaster risk reduction, compiled by the ISDR Secretariat.

Chapter II. Poverty eradication

7. (l) Combat desertification and mitigate the effects of drought and floods through such measures as improved use of climate and weather information and forecasts, early warning systems, land and natural resource management, agricultural practices and ecosystem conservation in order to reverse current trends and minimize degradation of land and water resources, including through the provision of adequate and predictable financial resources to implement the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa, as one of the tools for poverty eradication;

11. (b) Use low-cost and sustainable materials and appropriate technologies for the construction of adequate and secure housing for the poor, with financial and technological assistance to developing countries, taking into account their culture, climate, specific social conditions and vulnerability to natural disasters;

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Chapter IV. Protecting and managing the natural resource base of economic and social development

24. Human activities are having an increasing impact on the integrity of ecosystems that provide essential resources and services for human well-being and economic activities. Managing the natural resources base in a sustainable and integrated manner is essential for sustainable development. In this regard, to reverse the current trend in natural resource degradation as soon as possible, it is necessary to implement strategies which should include targets adopted at the national and, where appropriate, regional levels to protect ecosystems and to achieve integrated management of land, water and living resources, while strengthening regional, national and local capacities.

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26. Develop integrated water resources management and water efficiency plans by 2005, with support to developing countries, through actions at all levels to:

(d) Develop programmes for mitigating the effects of extreme water-related events.

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37. An integrated, multi-hazard, inclusive approach to address vulnerability, risk assessment and disaster management, including prevention, mitigation, preparedness, response and recovery, is an essential element of a safer world in the 21st century. Actions are required at all levels to:

(a) Strengthen the role of the International Strategy for Disaster Reduction (ISDR) and encourage the international community to provide the necessary financial resources to its Trust Fund;
(b) Support the establishment of effective regional, sub-regional and national strategies and scientific and technical institutional support for disaster management;
(c) Strengthen the institutional capacities of countries and promote international joint observation and research, through improved surface based monitoring and increased use of satellite data, dissemination of technical and scientific knowledge and the provision of assistance to vulnerable countries;
(d) Reduce the risks of flooding and drought in vulnerable countries by, *inter alia*, promoting wetland and watershed protection and restoration, improved land-use planning, improving and applying more widely techniques and methodologies for assessing the potential adverse effects of climate change on wetlands and, as appropriate, assisting countries that are particularly vulnerable to these effects;

(e) Improve techniques and methodologies for assessing effects of climate change and encourage the continuing assessment of these adverse effects by the Intergovernmental Panel on Climate Change;
(f) Encourage the dissemination and use of traditional and indigenous knowledge to mitigate the impact of disasters, and promote community-based disaster management planning by local authorities, including through training activities and raising public awareness;
(g) Support the on-going voluntary contribution of, as appropriate, NGOs, the scientific community, and other partners in the management of natural disasters according to agreed, relevant guidelines;
(h) Develop and strengthen early warning systems and information networks in disaster management, consistent with the International Strategy for Disaster Reduction;
(i) Develop and strengthen capacity at all levels to collect and disseminate scientific and technical information, including the improvement of early warning systems for prediction of extreme weather events, especially El Niño/La Niña, through the provisions of assistance to institutions devoted to addressing such events, including the International Centre for the Study of the El Niño phenomenon;
(j) Promote cooperation for the prevention and mitigation of, preparedness for, response to and recovery from major technological and other disasters with an adverse impact on the environment in order to enhance the capabilities of affected countries to cope with such situations.

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38. Change in the Earth's climate and its adverse effects are a common concern of humankind. We remain deeply concerned that all countries, particularly developing countries, including the least developed countries and small island developing States, face increased risks of negative impacts of climate change and recognize that, in this context, the problems of poverty, land degradation, access to water and food and human health remain in the centre of global attention…

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41. Strengthen the implementation of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa to address causes of desertification and land degradation in order to maintain and restore land, and to address poverty resulting from land degradation. This would include actions at all levels to:

(d) Integrate measures to prevent and combat desertification as well as to mitigate the effects of drought through relevant policies and programmes, such as land, water and forest management, agriculture, rural development, early warning systems, environment, energy, natural resources, health and education, and poverty eradication and sustainable development strategies;
(e) Provide affordable local access to information to improve monitoring and early warning related to desertification and drought;

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42. Mountain ecosystems support particular livelihoods, and include significant watershed resources, biological diversity and unique flora and fauna. Many are particularly fragile and vulnerable to the adverse effects of climate change and need specific protection. Actions at all levels are required to…

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VII. Sustainable development of small island developing States

58. (h) Extend assistance to small island developing States in support of local communities and appropriate national and regional organizations of small island developing States for comprehensive hazard and risk management, disaster prevention, mitigation and preparedness, and help relieve the consequences of disasters, extreme weather events and other emergencies;

(i) Support the finalization and subsequent early operationalization, on agreed terms, of economic, social and environmental vulnerability indices and related indicators as tools for the achievement of the sustainable development of the small island developing States;
(j) Assist small island developing States in mobilizing adequate resources and partnerships for their adaptation needs relating to the adverse effects of climate change, sea level rise and climate variability, consistent with commitments under the United Nations Framework Convention on Climate Change, where applicable;

* * *

VIII. Sustainable Development for Africa

65. Deal effectively with natural disasters and conflicts, including their humanitarian and environmental impacts, recognizing that conflicts in Africa have hindered, and in many cases, obliterated both the gains and efforts aimed at sustainable development, with the most vulnerable members of society, particularly women and children, being the most impacted victims, through efforts and initiatives, at all levels, to:

(a) Provide financial and technical assistance to strengthen the capacities of African countries, including institutional and human capacity, including at the local level, for effective disaster management, including observation and early warning systems, assessments, prevention, preparedness, response and recovery;
(b) Provide support to African countries to enable them to better deal with the displacement of people as a result of natural disasters and conflicts and put in place rapid response mechanisms;
(c) Support Africa's efforts for the prevention and resolution, management and mitigation of conflicts and its early response to emerging conflict situations to avert tragic humanitarian consequences;
(d) Provide support to refugee host countries in rehabilitating infrastructure and environment, including ecosystems and habitats, that were damaged in the process of receiving and resettling refugees.

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X. Means of implementation

89. Reduce unsustainable debt burden through actions as debt relief and, as appropriate, debt cancellation and other innovative mechanisms geared to comprehensively address the debt problems of developing countries, in particular the poorest and most heavily indebted ones...

a) Implement speedily, effectively and fully the enhanced heavily indebted poor countries (HIPC) initiative, which should be fully financed through additional resources, taking into consideration, as appropriate, measures to address any fundamental changes in the economic circumstances of those developing countries with unsustainable debt burden caused by natural catastrophes, severe terms-of-trade shocks or affected by conflict, taking into account initiatives which have been undertaken to reduce outstanding indebtedness;

* * *

105. Promote, facilitate and finance, as appropriate, access to and development, transfer and diffusion of environmentally sound technologies and corresponding know-how, in particular in developing countries and countries with economies in transition on favourable terms, including on concessional and preferential terms, as mutually agreed, as set out in Chapter 34 of Agenda 21, including through urgent actions at all levels to:

(e) Promote the access and transfer of technology related to early warning systems and to mitigation programmes to developing countries affected by natural disasters.

* * *

109. Improve policy and decision-making at all levels through, *inter alia*, improved collaboration between natural and social scienticies, and between scientists and policy makers, including actions at all levels to:

(a) indigenous knowledge in a manner respectful of the holders of that knowledge and consistent with national law;
(b) Make greater use of integrated scientific assessments, risk assessments and interdisciplinary and intersectoral approaches;

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130. Encourage further work on indicators for sustainable development by countries at the national level, including integration of gender aspects, on a voluntary basis, in line with conditions and priorities.

134. Support efforts to prevent and mitigate the impacts of natural disasters, including through actions at all levels to:

(a) Provide affordable access to disaster-related information for early warning purposes;
(b) Translate available data, particularly from global meteorological observation systems, into timely and useful products.

Annex 6

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The **International Strategy for Disaster Reduction (ISDR)** aims at building disaster resilient communities by promoting increased awareness of the importance of disaster reduction as an integral component of sustainable development, with the goal of reducing human, social, economic and environmental losses due to natural hazards and related technological and environmental disasters.

Established by the United Nations General Assembly in 2000, the ISDR is a global framework for action to reduce vulnerability and risks of natural hazards and related technological and environmental disasters.

As an inter-agency effort, its main purpose is to facilitate governments and communities to integrate risk management into development policies and programmes, enabling communities to become resilient to disasters and saving lives as well as social, economic, and environmental assets.

By working through a network of international organizations, scientific and expert institutions, civil society, private sector interests and government officials, the ISDR's objectives include increasing public awareness about disaster reduction, motivating commitment from public authorities, and stimulating inter-disciplinary and inter-sectoral partnerships to improve scientific knowledge on natural hazards and the causes of disasters.

The ISDR comprises two mechanisms for its implementation:

- **Inter-Agency Task Force on Disaster Reduction**, chaired by the Under-Secretary General for Humanitarian Affairs and comprising the following members:
  African Union
  Asian Disaster Preparedness Center
  Asian Disaster Reduction Center
  Centre for Research on the Epidemiology of Disasters, Catholic University of Louvain (Belgium)
  Council of Europe
  Drought Monitoring Centre (Kenya)
  European Commission: Directorate-General Joint Research Centre
  Food and Agriculture Organization
  Global Fire Monitoring Centre
  Iberoamerican Association of Civil Defence and Civil Protection
  International CIS Council
  International Federation of Red Cross and Red Crescent Societies
  International Telecommunication Union
  Munich Reinsurance
  New Partnership for Africa's Development (NEPAD) secretariat
  Organization of American States: Inter-American Committee for Natural Disaster Reduction
  South Pacific Geosciences Commission
  UN Centre for Human Settlements
  UN Centre for Regional Development
  UN Development Programme
  UN Educational, Scientific and Cultural Organization
  UN Environment Programme
  UN Institute for Training and Research
  UN University
  World Bank
  World Food Programme
  World Health Organization
  World Meteorological Organization
- **Inter-Agency Secretariat** based in Geneva, Switzerland.

Further information about ISDR is available at http://www.unisdr.org