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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”.



Living with Risk: A global review of disaster reduction initiatives

“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 2100:

- 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>>



Living with Risk:
A global review of disaster reduction initiatives