



Chapter 6

Related international commitments and the UN role in disaster risk reduction

- 6.1 Selected international development agendas and commitments
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Photo: G. Berz, Munich Re

6.1. Selected international development agendas and commitments

The international community has adopted several significant declarations, agendas and conventions during the last decades, on, among other things, environment, fresh water management, climate change and desertification, social development, habitat and food security, which all contain commitments related to disaster reduction. These are often referred to in the text of this review.

The following section will provide a short overview of some of the most relevant ones, in particular those related to sustainable development, which is built around three pillars: social and economic development, and environmental protection. These are all relevant elements for disaster risk reduction and need to be linked to the efforts to implement the objectives of the International Strategy for Disaster Reduction. The full implementation of the global visions expressed below are yet to be realized.

The following mainstream agreements or subjects are touched upon in this chapter:

- Millennium development goals
- Sustainable development agenda
- Climate change
- Desertification and drought
- Wetlands
- Freshwater agenda
- Gender agenda
- Habitat agenda
- Small island developing states
- Least developed countries

An overview of how the different parts of the UN system relate to risk reduction is described in section 6.2. of this chapter.

The Millennium Development Goals

The UN Millennium Summit gathered in New York in September 2000. A total of 189 world leaders met and adopted the UN Millennium Declaration (A/RES/55/2).

Targets, known as *the Millennium Development Goals* were established, setting a new milestone and providing guiding principles for the international community, national governments and, in particular, the United Nations. Many of them touch on areas which are closely linked to vulnerability to natural hazards, such as eradicating extreme poverty and hunger, achieving universal primary education, promoting gender equality, ensuring environmental stability and 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,

"We recognise that, in addition to our separate responsibilities to our individual societies, we have a collective responsibility to uphold the principles of human dignity, equality and equity at the global level. As leaders, we have a duty therefore to all the world's people, especially the most vulnerable and, in particular, the children of the world, to whom the future belongs."
Millennium Declaration

involves poverty eradication, proper land use planning and the improved understanding of vulnerability to disasters in densely populated areas.

Under "Protecting our common 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."



Strategies linked to ISDR for moving ahead on this goal as described in the "Road map towards the implementation of the United Nations Millennium Declaration" (Secretary-General Report to GA 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 megacities, the location of settlements in high-risk areas and other manmade determinants of disasters;
- encouraging governments to incorporate disaster risk reduction into national planning processes, including building codes.

The Sustainable Development Agenda

The World Summit on Sustainable Development (WSSD) is being held in Johannesburg, South Africa, in August 2002, 10 years after the *UN Conference on Environment and Development (UNCED)*. *UNCED*, also known as the *Earth Summit*, took place in June 1992, in Rio de Janeiro, Brazil.

The main outputs of that summit were the *Rio Declaration on Environment and Development and Agenda 21* - a 40 chapter program of action. *UNCED* also led to agreement on two legally binding conventions on *Biological Diversity (CBD)* and *Climate Change*

(*UNFCCC*). It also produced a Statement of Forest Principles. It started the process of developing a *Convention to Combat Desertification (UNCCD)* in those countries experiencing serious drought and/or desertification, in particular in Africa, adopted in 1994. The Earth Summit gave rise to a number of positive responses including the emergence of thousands of local Agenda 21 initiatives and an enhanced political profile of environmental issues. It led to the formation of the *Commission for Sustainable Development (CSD)* and many countries set up strategies for sustainable development. But in only a few cases did these include concerns for risk and disaster reduction.

The journey toward sustainable development is far from being achieved. This is one conclusion reached during the preparatory process to review the implementation of Agenda 21, in preparation for the WSSD. In the last thirty years a whole series of summits, meetings and agreements have brought us to the wide ranging interpretation of sustainable development that we see today.

For a long time, environment was seen as antagonistic to development. However, in 1972 a major step was made towards the recognition of the need to address environmental problems if better living conditions were to be attained. In 1992, although experience had been gained and environmental policy was becoming routine practice worldwide, resistance against the environmental agenda was still high. Thanks to the high political profile of climate change and biodiversity, the environment agenda was boosted. In 2002, the essential need for environmental strategies to achieve sustainable development is no longer questioned, even if in terms of implementation the situation is still far from ideal.

Disaster reduction and sustainable development

The First World Conference on Natural Disaster Reduction convened in Yokohama, Japan, in May 1994, represented a turning point for promoting disaster reduction. It led to the adoption of the Yokohama Plan of Action and changed focus of the work in the second half of IDNDR. The new approach included more focus on risk and vulnerability reduction and renewed effort to incorporate disaster reduction concerns into sustainable development. Increased emphasis was given to social sciences and a focus on public policy and promotion of community involvement to reduce risk to disaster in all stages. A ten-year review of the implementation of the Yokohama strategy will take place in 2004."

Disaster reduction was not dealt with as such during the Rio conference's agenda, even though it was included in the discussion on human settlements, mountain development, fresh water management and land degradation. During the IDNDR, the connection between disaster reduction and sustainable development, including its social, economic and environmental dimensions has been clarified to a greater extent. The awareness of these issues and the nature of the cross-sectoral relationships evolved as an increasing array of United Nations Multilateral Environmental Conventions on climate change, desertification and biodiversity, signed between 1992 and 1994.

These joined the long standing *Ramsar Convention on Wetland Preservation (1971)* to emphasize the importance of natural resource management and the dynamic growth of risk factors that contribute to natural disasters.

History of the Earth Summit

The concept of sustainable development dates back a long way but it was at the *UN Conference on Human Environment (Stockholm, 1972)* when the international community met for the first time to consider the global environment and highlighted the need to support people in this process. The Conference indicated that industrialised environmental problems, such as habitat degradation, toxicity and acid rain, were not necessarily relevant issues for all countries and communities. However, it was the existing environmental problems that dominated the meeting and led to wider public environmental awareness.

In the 1980s, the UN set up the *World Commission on Environment and Development*, also called the *Brundtland Commission*. They produced *Our Common Future*, otherwise known as the *Brundtland Report*, which framed much of what would become Agenda 21 and the 27 principles of the Rio Declaration on Environment and Development. It defined

sustainable development as development which "meets the needs of present generations without compromising the ability of future generations to meet their own needs."

Sustainable development meets the needs of the present generations without compromising the ability of future ones to meet their own needs....

However, the description of sustainable development in Agenda 21 called for a total shift in the status quo of prevalent value systems and institutional processes. Such global change could never have occurred over night. When progress was assessed after five years - Rio+5 in New York, 1997 - many gaps in implementation were identified, particularly with regard to social equity and poverty. Falling levels of official development assistance (ODA) and growing international debt contributed to this. It also showed failures to improve technology transfer, capacity building for participation and development, institutional coordination, and 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 have been raised in the Rio+10 preparatory

The four broad areas of action of 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

process, leading to the WSSD. During this process, natural disaster has been identified as a serious constraint to sustainable development and has been included as an action point in the draft programme of implementation.

More information can be found on
www.earthsummit2002.org

● Expected results of WSSD

- Political declaration on increased commitment for action.
- Programme of implementation building on Agenda 21 and the Rio Principles.

- Partnerships (global, regional or sub-regional) to implement specific parts of the plan of implementation.

Disaster is emerging as one of the new subjects in the draft plan of implementation and will hopefully be recognised as a prerequisite for sustainable development. The subject is dealt with under the issue of protecting and managing the natural resource base of economic and social development, and also touched upon under poverty eradication for adequate and secure housing for the poor and under means of implementation. The sections on small island developing states, as well as the one for Africa, include special concerns and action points related to increased capacities to cope with disasters.



Elements discussed for the programme of implementation of Johannesburg:

"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, which are required at all levels, mentioned in the draft after the last preparatory committee held in Bali, call for a strengthened role of the International Strategy for Disaster Reduction (ISDR), and include:

- The need to strengthen or establish effective regional, subregional and national strategies and scientific and technical institutional support for disaster management, including joint observation and research.
- Wetland and watershed protection and restoration to reduce floods, improved land-use planning, improving and applying techniques for assessing the potential adverse effects of climate.
- Dissemination and use of traditional and indigenous knowledge to mitigate the impact of disasters.
- Promoting community-based disaster management planning by local authorities, including through training activities and raising public awareness.
- Supporting the ongoing voluntary contribution of, as appropriate, NGOs, the scientific community, and other partners in the management of natural disasters according to agreed, relevant guidelines.
- Development and strengthening of early warning systems and information networks in disaster management.
- Strengthening capacity at all levels to collect and disseminate scientific and technical information, especially El Niño and La Niña, through assistance to institutions devoted to addressing such events.



Steps to Earth Summit 2002

UN Sustainable Development Process	Key Events
1972 UN Conference on Human Environment (Stockholm) UNEP established	1982 UNEP's first high level meeting
1980 World Conservation Strategy (IUCN)	1991 Children's Summit, New York
1983 World Commission on Environment and Development (the Brundtland Commission) set up	1992 Framework Convention on Climate Change (FCCC) and Convention on Biological Diversity (CBD) agreed
1989 Brundtland Report Our Common Future	1993 Human Rights Summit, Vienna
1989 Launch of the International Decade for Natural Disaster Reduction (IDNDR)	1994 World Conference on Natural Disaster Reduction "For a Safer World", Yokohama Conference on Small Island Developing States, Barbados
1992 UN Conference on Environment and Development (the Earth Summit), in Rio de Janeiro. UN Commission on Sustainable Development (CSD) established.	1995 Social Summit Copenhagen Women's Summit, Beijing World Trade Organization (WTO) established
1997 Rio+5 Summit review (critical because of slow implementation)	1996 Human Settlements, Summit Istanbul Food Summit, Rome
1999 End of IDNDR	1997 Kyoto Protocol on Climate Change adopted
2000 Launch of the International Strategy for Disaster Reduction (ISDR)	1998 Convention on Prior Informed Consent adopted
WSSD (Rio+10) process:	1999 IDNDR Programme Forum, Geneva
2001 Defining modalities of process. National, sub regional and regional preparatory meetings	2000 Millennium Summit, New York World Youth Forum, Dakar Biosafety Protocol adopted
2002 Global Prep Comm. 2 (Jan., New York) Substantive review of implementation of Agenda 21 Global Prep Comm. 3 (March, New York) Review and finalize elements for programme of action Global Prep Comm. 4 (May, Bali) Identification of priority issues, programme of	2001 UNEP 21st Governing Council, Cartagena UN Third Conference on Least Developed Countries, Brussels International Conference on Freshwater, Bonn WTO negotiations, including GATTs and agriculture
2002: World Summit on Sustainable Development defining national, regional and global commitments in Johannesburg, South Africa, 26 August-4 September 2002	

Adapted from www.earthsummit2002.org/Es2002.pdf



United Nations Framework Convention on Climate Change (UNFCCC)

The climate change convention was opened for signature at the *UN Conference on Environment and Development in 1992*. Its ultimate goal is the "stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climatic system". The Kyoto Protocol was adopted in 1997, and completed three years of negotiations relating to its operational details in November 2001. It contains legally binding commitments for developed country parties. 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. Many countries with high emission rates have not yet ratified the Kyoto Protocol, the most evident being the United States. The Protocol is not yet in force.

Time is ripe for forging the links between climate change adaptation and disaster reduction.

Since the convention's entry into force, parties have met annually in the *Conference of the Parties (COP)* to monitor its implementation and continue talks on how best to tackle climate change. The decisions taken by the COP at annual sessions 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 Marrakesh, in October/November 2001, were especially important in elaborating the convention's rules on issues of particular concern to developing countries.

Industrialised countries, who have historically contributed most 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 41.

All remaining countries, mostly developing countries, make up the group of non-Annex I Parties, currently numbering 145. 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 effect, as well as on their needs to implement the convention. Much of the information requested from Parties to the Convention will be of use for disaster reduction strategies (for example, information on policy frameworks for implementing adaptation measures and response strategies in the context of disaster preparedness, with a view to integrating climate change impact information into national planning processes).

Specific needs and concerns 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 nations or those with areas prone to natural disasters, face high risks from the adverse effects of climate change itself, while others, such as oil exporting states, feel more threatened by the potential economic repercussions of 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 financial means at the disposal of the poorest countries pursuant to the provisions of the UNFCCC will bring additional benefits to cope with climate-related disasters, which constitute two-thirds of all disasters.

The 2001 Marrakesh Accords took some important steps forward on vulnerability and adaptation, especially decisions on the adverse effects of climate change including response to climate related hazards. Two new convention funds, to be managed by the GEF, were also established, plus one operating under the Kyoto Protocol.

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, systematic observation and monitoring networks and early warning for extreme weather events and disease outbreaks.

The *Clean Development Mechanism (CDM)* established under the 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. The door has been left open to add land use projects for the second commitment period.

More information can be found on www.unfccc.int

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

Combat desertification and drought

The international community has long recognised that desertification is a major economic, social, and environmental problem of concern to many countries. In 1977, the *United Nations Conference on Desertification (UNCCD)* adopted a *Plan of Action to Combat Desertification (PACD)*. Unfortunately, despite this and other efforts, the *United Nations Environment Programme (UNEP)* concluded in 1991 that the problem of land degradation in arid, semi-arid, and dry sub-humid areas had intensified, although there were "local examples of success".

As a result, the question of how to tackle desertification was still a major concern for the 1992 Rio Earth Summit. The Conference supported

a new, integrated approach to the problem emphasizing action to promote sustainable development at the community level. The Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa (UNCCD) was adopted in 1994 and entered into force in 1996. Over 179 countries are now Parties to the convention.

The Conference of the Parties (COP), the convention's supreme body, will hold its sixth session in October, 2003. A permanent secretariat is based in Bonn. *The Committee on Science and Technology (CST)* is multidisciplinary and open to the participation of all Parties. Composed of government representatives, the CST advises the COP on scientific and technological matters relevant to desertification and drought.

UNCCD and desertification/land degradation

Desertification does not refer to the expansion of existing deserts. It occurs because dry land ecosystems, which cover over one third of the world's land area, are extremely vulnerable to over-exploitation and inappropriate land use. Poverty, political instability, deforestation, overgrazing, and bad irrigation practices can all undermine the land's productivity. Over 250 million people are directly affected by desertification. In addition, some one billion people in over one hundred countries are at risk. These people include many of the world's poorest, most marginalized, and politically weak citizens.

Combating desertification is essential to ensuring the long-term productivity of inhabited Rylands. Unfortunately, past efforts have too often failed and the problem of land degradation continues to worsen. This is because the causes of desertification are many and complex, ranging from international trade patterns to unsustainable land management practices.

UNCCD and drought

Drought has received less attention than land degradation in most of the national action programs, possibly due to the lack of capacity in many developing countries to address drought-related issues, and because it is relatively easier to implement concrete measures for combating land degradation. Drought strategies are basically dealt with in terms of adaptation, rather than mitigation.

See more at www.unccd.org (United Nations Secretariat of the Convention to Combat Desertification)

National Action Programme: Countries affected by desertification are implementing the convention by developing and carrying out national, sub-regional, and regional action programme.

Drawing on past lessons, the Convention states that these programmes:

- must adopt a democratic, bottom-up approach
- should emphasize popular participation designed to allow local people to help themselves to reverse land degradation
- must make politically sensitive changes, such as decentralizing authority, improving land-tenure systems, and empowering women, farmers, and pastoralists
- should permit NGOs to play a strong role
- must be fully integrated into other national policies for sustainable development
- should be flexible and modified as circumstances change

Ramsar Convention - wetlands

The Convention was adopted in 1971 in Iran, in the city of Ramsar. It came into force in 1975 and 131 countries already join the Convention and some other are in the process. Ramsar is the only global environmental treaty dealing with a specific ecosystem and the mission of the Convention is "the conservation and wise use of Wetlands by national action and international cooperation as a means to achieving sustainable development throughout

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*

the world." Some of the main activities of the Convention are the development of National Wetlands Policy and inventories of Wetlands. The Convention deals with all wetlands issues from surface water to groundwater (salty, freshwater, etc). Wetlands and flood control was mentioned in the initial Convention. Nevertheless this has not been a priority until very recently. For the Strategic Work Plan 2003-2008, this topic is included.

The Ramsar Convention Bodies are the Conference of the Contracting Parties, the Standing Committee (regional representatives of Ramsar's six regions), the Scientific and Technical Review Panel and the Ramsar Bureau (Secretariat), in Gland, Switzerland.

Main partners for the implementation of policies are the non-governmental organizations *IUCN-World Conservation Union, Wetlands International, World Wide Fund for Nature (WWF)* and *Birdlife International*.

The Ramsar Convention shares headquarters with IUCN, and has a joint Work Plan with the *Convention on Biological Diversity* and a Memorandum of Cooperation with UNCCD,

Convention on Migratory Species and World Heritage Programme of UNESCO

For more information see www.ramsar.org

The Fresh water agenda

Some 1.3 billion people worldwide lack access to safe drinking water and close to 2.5 billion are not provided with adequate sanitation. Water is becoming scarce due to increasing demands for food production and growing populations. Pollution is also on the increase, threatening water supplies.

There are two intrinsic links between disasters risk reduction and the water agenda. The impact resulting from climate change on the natural surface and ground water systems is increasingly having an adverse affect on social and economic development patterns. Freshwater infrastructures are vulnerable to natural hazards, such as floods, earthquakes, landslides and volcanic eruptions.

There are many political documents that mention risk and water related hazards, forming the so-called fresh water agenda. Prior to

the Rio Earth Summit, the *UN International Conference on Water and the Environment* (ICWE) was held in January 1992. The Dublin Statement (www.wmo.ch/web/homs/documents/english/icwedece.html) on Water and Sustainable Development establishes four guiding principles, as well as an agenda for action, which have guided academic and political discussions ever since.

One of the recommendations relates to the

World Water Assessment Programme

The *World Water Assessment Programme/World Water Development Report (WWAP/WWDR)*, is administered by UNESCO, and is a UN-wide effort, set up upon the request of governments, to pool UN resources regarding world water management. WWAP will assist developing countries to strengthen their capacity to assess their own water situation. The WWDR will target all those involved in the formulation and implementation of water-related policies and investments.

More information is available at:
www.unesco.org/water/wwap

protection against natural disasters, and calls for proactive measures to reverse the current trends. In particular, the Dublin Statement identifies climate change and sea level rise as factors that would exacerbate disaster risk, "threatening the apparent security of existing water resources". Chapter 18 of Agenda 21 covered 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 disasters and hydrological extreme events.

More recently, 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 developed. 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 on water management, and flood and drought management in particular. An increasing focus in local, national and international programs is on best ways to

implement these commonly agreed principles. For example, the WMO, has set out to promote flood management activities in the context of *Integrated Water Resources Management* (IWRM).

The reduction of vulnerability to floods and droughts will have to be included in the many facets of the freshwater agenda. These include the integration of all stakeholders in river basin management, the institutional framework to effectively manage water demand and international trade arrangements, which respect national water regulations. Such water management processes need to go hand in hand with an increased delegation of responsibility and means to local authorities.

At a global level, the upcoming WSSD, the United Nations International Freshwater Year 2003, as well as the third World Water Forum, to be held in March 2003, will provide opportunities to further develop these concepts.

Research in support of Integrated Water Resource Management and Comprehensive Disaster Risk Management .

WADI (*Water-related Disasters*) is a recent research initiative of the *Potsdam Institute for Climate Impact Research (PIK)* that responds directly to humankind's increasing vulnerability to water-related disasters. It provides a scientific basis for adaptation and mitigation options for sustainable transition programs that are developed in conjunction with the various stakeholders.

See more at: www.pik-potsdam.de

The gender agenda

Fourth World Conference on Women and follow-up

The Beijing Platform for Action, adopted at the Fourth World Conference on Women (1995) recognised 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."

Five years later, the review and appraisal of the implementation of the Beijing Platform for Action (2000) identified natural disasters and epidemics as emerging issues, which deserved greater attention. It was noted that the social and economic impact of natural disasters and epidemics remained relatively invisible as a policy issue, in particular their impact on the status of women and the achievement of gender equality. In their responses to a questionnaire, several states in Africa and Asia cited the feminization of poverty, often aggravated by natural disasters and crop failure, as an obstacle to improving gender equality.

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 and raised awareness of the inefficiencies and inadequacies of existing approaches and intervention methods in responding to such emergency situations, from a gender perspective.

It suggested that a gender perspective 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 responses to humanitarian crises resulting from natural disasters.

● **Convention on the Elimination of Discrimination against Women**

Several articles of the Convention on the Elimination of Discrimination against Women 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, also offer interpretation of articles of the convention as they relate to disasters and environment.

Gender mainstreaming: This is the process of bringing a gender perspective into the mainstream activities of governments at all levels, as a means of promoting the role of women in the field of development, integrating women's values into development work. Gender mainstreaming builds on the knowledge and lessons-learned from previous experiences with gender equality policies.

Gender analysis: Gender analysis involves the collection and use of sex-disaggregated data that reveal the roles and responsibilities of men and women, to be fed into the policy process for enabling assessments of how existing and future policies and programmes potentially affect men and women differently. Gender analysis needs to be both quantitative and qualitative.

The committee has urged certain states to pay greater attention to environment and natural disasters. In the case of Nicaragua, it suggested that aspects of natural disasters impeded women's full enjoyment of their rights. When it considered the report of Kazakhstan, the committee expressed concern about the degree of environmental degradation in the country and its extremely negative impact on the health of the whole population, in particular on women and children.

The committee also expressed its concern about the degree of environmental degradation in Uzbekistan and its negative impact on the health of the whole population, in particular women and children.

In the case of Belarus, the committee noted the government's attempts to deal with the health impact of the Chernobyl disaster and addressed this issue as a principal area of concern.

● **Commission on the Status of Women**

The UN Commission on the Status of Women, in its programme of work for 2002-2006, 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 *United Nations Division for the Advancement of Women (DAW)* in collaboration with the ISDR Secretariat.

The expert group meeting discussed the link between gender and environmental manage-

ment, natural disaster reduction and risk management. It adopted a number of recommendations some of which were later adopted by the commission.

Experts recommended, in particular, to systematically include hazard proneness 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 structures at all levels.

Experts also highlighted the necessity to introduce a gender perspective into the ongoing research on the relationship between climate, natural hazards, disaster and related environmental vulnerability. They stressed the need to use gender-sensitive indices and indicators and further pointed out the need to develop instruments for including gender analysis in local disaster risk management.

The Commission on the Status of Women in 2002 also 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 for a Safer World.

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The Habitat agenda

More vulnerable cities...

As more and more people move to cities, the pressure on the land increases. Often, the poorest end up in badly-built housing in high density areas on marginal land such as exposed coastal areas, river deltas and steep slopes. These are the same areas likely to have the poorest supply of water, the most rudimentary sewage disposal, and where government is least likely to enforce safety standards. These are the places where, in the event of a disaster, the rescuers will find it hardest to get to.

The Habitat agenda was defined during the Second United Nations Conference on Human Settlements in Istanbul, 1996. It includes a series of commitments and guiding principles for sustainable cities. Most disasters are caused by vulnerabilities created by human action such as uncontrolled or inadequately planned human settlements, lack of basic infrastructure and the occupation of disaster prone areas. The most efficient and effective disaster preparedness systems are usually provided at the neighborhood level through volunteer contributions and local authority actions. Specific actions are required at the appropriate levels of central government and local governments in close coordination with the private sector and all community groups.

UN HABITAT takes actions in improving disaster management in human settlements by working with partners that include local governments, insurance companies, NGOs and the academic, health and scientific community. The goal is to adopt appropriate norms for land use, building and planning standard.

Chapter III - CommitmentsSustainable human settlements

"We commit ourselves to the goal of sustainable human settlements in an urbanizing world by developing societies that will make efficient use of resources within the carrying capacity of ecosystems and take into account the precautionary principle approach, and by providing all people, in particular those belonging to vulnerable and disadvantaged groups, with equal opportunities for a healthy, safe and productive life in harmony with nature and their cultural heritage and spiritual and cultural values" "Preventing man-made disasters, including major technological disasters, by ensuring adequate regulatory and other measures to avoid their occurrence, and reducing the impacts of natural disasters and other emergencies on human settlements, inter alia, through appropriate planning mechanisms and resources for rapid, people-centred responses that promote a smooth transition from relief, through rehabilitation, to reconstruction and development, taking into account cultural and sustainable dimensions; and rebuilding disaster-affected settlements in a manner that reduces future disaster-related risks and makes the rebuilt settlements accessible to all" *Extract from the Habitat Agenda, Istanbul 1996.*

In the five-year follow up review of the Habitat Agenda in 2001, renewed commitment to engage in disaster preparedness and risk reduction was stated.

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

Small island developing states and disaster reduction

All together there are 43 small island developing states and territories (SIDS) in the Caribbean, Pacific and Indian Ocean regions. Their special circumstances are increasingly gaining global attention. For example, the Rio Declaration and Agenda 21 recognised the special needs of SIDS. Subsequently, the *Barbados Programme of Action for the Sustainable Development of Small Island Developing States* was adopted in 1994. It includes the call to develop a vulnerability index, as well as the need to focus on disaster prevention and preparedness. At the 2000 UN Millennium Summit, world leaders resolved to "address the vulnerabilities faced by SIDS rapidly and in full by 2015."

The *Alliance of Small Island States (AOSIS)* is pursuing the interests of SIDS collectively, even though not all SIDS are members of the Alliance. As a follow up to the *Barbados Programme of Action*, an internet network, supported by UN/DESA, has been established to ensure easy access of information (www.sidsnet.org). UNESCO is also supporting an initiative, *Small Islands Voice*. (www.smallislandsvoice.org)

Owing to the small size, remoteness and fragility of island ecosystems, SIDS are especially vulnerable to hazards and the impact of a changing climate. They must also deal with the visible sea level rise, careful management of coastal and marine resources, scarce fresh water resources - in contrast to susceptibility to flood- and waste management. Environmental disasters such as oil spills could also severely damage SIDS.

Caribbean islands- vulnerability to hazards

Similar to the Pacific small island developing states are the Caribbean islands. Idyllic though they may seem, the islands have not escaped global trends of increasing urbanization and occupation of marginal lands resulting in higher levels of vulnerability and exposure to more risk. The economies of most islands are underpinned by tourism, the very nature of which exposes the industry's infrastructure and investments to coastal flooding from storm surges and tsunamis. Exploitation of natural resources for tourism or the mining industry and development of coastal areas all increase vulnerability. Pollution destroys coral reefs and seagrass beds important to reducing impact of storm surges. Destruction of mangrove stands for coastal development or charcoal production also increases coastal vulnerability.

Past events in banana-based economies have reduced GDP by up to 40% as in the case of St. Lucia and Tropical Storm Debby.

Least developed countries

Least developed countries (LDCs) are the poorest countries in the world, officially designated as such by the UN General Assembly. More than 600 million people live in the 49 LDCs, half of which are very disaster prone, and 32 of which are located in Africa. In 1981, when the concept of an LDC was articulated, there were only 30 such countries.

The criteria for being an LDC are the following:

- A low gross domestic product.
- A low level of economic diversification.
- Weak human resources, measured by life expectancy, calorie intake, primary and secondary school enrolment and adult literacy.

Three UN conferences have been dedicated to LDCs. All of them have recognised the disproportionately high social and economic costs of disasters. The programme of action stemming from the first two conferences focussed in this area on the need to improve disaster response capacity, with some references to early warning capacities. However, during the third conference, held in 2001, the focus had shifted to reducing vulnerability and developing disaster mitigation programmes.

The programme of action for the least developed countries for the decade 2001-2010 aims to forge strong partnerships between north and south 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 to strengthen institutions and increase ownership for local stakeholders in formulating a sustainable development policy.

It encourages both LDCs and development partners to involve the private sector in the areas of disaster mitigation and disaster preparedness. It also encourages the involvement of local communities and NGOs in disaster mitigation, early warning systems and relief efforts. A reference is made to the donor community to give priority attention to the LDCs for implementing the programme set out within the International Strategy for Disaster Reduction at national level.

A special Trust Fund within the ONU is open for contribution to support this action plan. Administered by UNDRO.