Disaster Reduction in AFRICA
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The missing link…

Disaster reduction is drawing growing attention in Africa:

National platforms are in place in Djibouti, Madagascar, Uganda; more countries are seeking to form theirs. Disaster reduction laws were voted in Madagascar and South Africa, Uganda is finalizing a bill. A hazard and vulnerability atlas is now available in South Africa. The AU and NEPAD are launching a major initiative; African women plan a *"gender"* one. The list is not exhaustive, and it is getting longer… day after day.

Is such a growing attention mere accident? Surely not:

1. For the first time, an organization devoted exclusively to disaster reduction in Africa is available on the continent (UN/ISDR Africa).
2. Disasters in Africa are often a matter of *"life and death"*, so disaster reduction generates human and social interest and solidarity, as well as result-oriented action. Disaster reduction therefore makes human and social senses.
3. Disasters often result in heavy economic losses. Disaster reduction therefore makes economic sense.
4. Disasters in Africa are generally linked to environmental factors. Disaster reduction therefore makes environmental sense.
5. As disaster reduction makes human, social, economic and environmental senses, it should then simply make "developmental" sense.

Indeed disaster reduction makes *"developmental"* sense.

By sustaining (through disaster reduction) whatever little progress has been achieved (through development efforts), one grows bigger and stronger. *"Sustainable"* development is also development *"sustained"*, and disaster reduction is poised to be a key *"sustainer"*.

But what about the basic causes of vulnerability to disasters in Africa ?

Mr. Martin Owor from Uganda's Ministry of Disaster Preparedness and Refugees, says (see article, p. 16): "Risk reduction is a developmental imperative for achieving sustainable growth, as well as a strategy that protects the lives and livelihoods of the most vulnerable, and hence a poverty eradication factor."

Ethiopia's National Disaster Prevention and Preparedness Commission won a UN Sasakawa Award for Disaster Reduction Certificate of Distinction in 2000 for its efforts to address the root causes of disasters and communities' vulnerability, and for including disaster prevention activities in the development process. Disaster reduction expert, Mr. Kenneth Westgate (see article, p. 13) has monitored Ethiopia's story very closely. He says: "Disaster reduction should go hand-in-hand with poverty alleviation".

This is the… missing link.

Alain Valency R.
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Correction

In our previous issue (Issue 1, 2003; p. 37), we attributed the following quote to John Twigg, a world-renown disaster management expert:

> *"Strictly speaking, there are no such things as natural disasters, but there are natural hazards. A disaster is the result of a hazard's impact on society. So the effects of a disaster are determined by the extent of a community's vulnerability to the hazard (or, conversely, its ability or capacity to cope with it). This vulnerability is not natural, but the result of an entire range of constantly changing physical, social, economic, cultural, political, and even psychological factors that shape people's lives and create the environments in which they live. 'Natural' disasters are nature's judgment on what humans have wrought."*

After seeing the "quote" (picked from the ISDR publication entitled "Living with Risk - A Global Review of Disaster Reduction Initiatives"), John Twigg drew ISDR's attention on the exact rendering of his statement which should read as follows:

> *"Strictly speaking, there is no such thing as a natural disaster, but there are natural hazards, such as cyclones and earthquakes. The difference between a hazard and a disaster is an important one. A disaster takes place when a community is affected by a hazard (as we have seen, it is usually defined as an event that overwhelms that community's capacity to cope). In other words, the impact of the disaster is determined by the extent of a community's vulnerability to the hazard. This vulnerability is not natural. It is the human dimension of disasters, the result of the whole range of economic, social, cultural, institutional, political and even psychological factors that shape people's lives and create the environment that they live in."*
>
> **Twigg, J** (2001), *Corporate Social Responsibility and Disaster Reduction: A Global Overview* (London: Benfield Hazard Research Centre), p.6

We regret the misquote. **Editor.**

IN THIS ISSUE

AU, NEPAD, UN/ISDR Africa embark on major disaster reduction initiative for Africa

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The AU, NEPAD and UN/ISDR Africa have agreed to develop an African Regional Strategy for Disaster Management, to be followed by an African Regional Programme on Disaster Risk Management. This emerged from a consultative meeting organized by the NEPAD Secretariat. The following is a report on the meeting. *(Original text edited by UN/ISDR Africa for wider circulation; intro and sub-headings inserted editorially)*

A "Consultative Meeting on Disaster Risk Management in Africa" was held in Nairobi on 25 June 2003. The meeting was organized by the NEPAD Secretariat, chaired by AU, and supported by UNEP, UNDP and UN/ISDR Africa.

The meeting was attended by representatives from UNEP, UNDP, UN/ISDR, AU (African Union), NEPAD, COMESA (Common Market for Eastern and Southern Africa), IOC (Indian Ocean Commission), IGAD (Inter-Governmental Authority on Development), SADC (Southern African Development Community), ECCAS (Economic Community of Central African States), USAID and InWent.

Meeting objectives

The objectives of the meeting were to enhance regional cooperation in disaster risk reduction and disaster response; to provide a forum for regional and sub-regional organizations in Africa to share views and experiences related to disaster risk reduction; to achieve a shared vision of a regional approach in disaster risk reduction and disaster response ; and to discuss the necessity of developing an African regional framework and guidelines for cooperation in disaster risk management.

Background and context

In his introductory statement, the AU representative said the AU has always been seized with the issue of disaster and disaster risk management on the continent. In this respect, the then Organization of African Unity (OAU), on two occasions between 1999 and 2002, sought the assistance of UN/OCHA (Office for the Coordination of Humanitarian Affairs) to organize regional consultations to discuss and possibly lay the foundation for a regional mechanism for disaster and risk management. Both attempts however failed for various reasons.

The AU representative welcomed the NEPAD initiative as it provided an opportunity to follow on the earlier failed attempts of the OAU. He expressed his hope that the institutions and agencies gathered around the table would give every possible support to NEPAD in its attempt to ensure a viable disaster and disaster risk management mechanism for the continent.

The consultative meeting started with a presentation by Dr Hesphina Rukato of the NEPAD Secretariat on "NEPAD's Approach to Disaster Management". The presentation summarized the outcomes of the first NEPAD-led workshop on disaster management (held in Johannesburg in April 2003) as background and context of the discussions at the consultative meeting. She also outlined the expected outputs and way forward of this consultative meeting. The presentation ended with NEPAD extending its appreciation to UNEP, UNDP and UN/ISDR Africa for their collaboration on this meeting.

From the right to the left, Dr. Hesphina Rukato from NEPAD secretariat and Mr. Foday Bojang from African Union

The main points of Dr Hesphina Rukato' presentation on "NEPAD's Approach to Disaster Management" were as follows:

1. Food security, poverty and vulnerability were the drivers for NEPAD's intervention. A most pressing issue in Africa is food security, which was a major concern at the first NEPAD-led workshop on disaster management held in Johannesburg in April 2003.
2. A list of recommendations from three working group discussions at the April 2003 Johannesburg workshop, recommendations underlining the need for further strengthening of capacity building, networking, strategy and policy development, partnership and coordination, early warning systems, hazard mapping, vulnerability assessment, and food security assessment at various levels.
3. As a follow-up of the first NEPAD-led workshop on disaster management,

participants requested to focus on : (1) modalities for the development of an Africa Strategy for Disaster Management, (2) modalities for development of an Africa Programme for Disaster Management, and (3) suggestions on mechanisms for sharing views and experiences on disaster management at the continental level.
4. Expected results of the one-day meeting to be : (1) a draft outline of a process to develop an Africa Strategy on Disaster Risk Management, (2) a draft proposal for a task team on development of an Africa Programme on Disaster Management, and, (3) proposals for continued and consistent mechanisms for information and experience sharing on disaster management.

Consultation discussions

The participants exchanged views on a number of issues, based on the outcomes of the first workshop held by AU/NEPAD in Johannesburg in April 2003. The discussions included food security, strategy and policy development, and relationships between environment and disasters, and between conflict and risks. Other issues discussed involved the clarification of terminology such as disaster management and disaster risk management, capacity building and capacity strengthening.

Sub-regional presentations

Sub-regional organizations were requested to provide information on disaster risk management in their respective regions.

The IGAD representative stressed that a sub-regional mechanism had already been developed bearing in mind the need for integrated approach. The COMESA representative said the thrust within the COMESA was on economic integration, on setting up a common market, but COMESA wanted to move towards disaster risk management. The ECCAS representative said it had put in place a peace and security system, an early warning system, and a multinational force in central Africa, but disaster management was still very weak, with only 2 of the 11 member countries having taken initiatives on the matter. ECCAS asked for support for the setting up of a disaster management system, especially in its French-speaking countries. Such systems are also needed at national levels.

The way forward

The AU, NEPAD Secretariat and ISDR Africa agreed to embark on a joint initiative on disaster risk management in Africa, and that the joint initiative would consist of two parts.

Part One involves the development of an *African Regional Strategy for Disaster Risk Management.* Part One culminates in a consultative meeting at continental level - including government experts - in April 2004, and the subsequent adoption of the strategy by the AU.

Based on Part One, Part Two will focus on the development of an *African Regional Programme on Disaster Risk Management*, the subsequent approval of the programme by the AU, NEPAD and RECs (Regional Economic Communities), and its implementation.

Ongoing follow-up

The AU Commission, NEPAD Secretariat and ISDR Africa are now working together to push the process forward - in cooperation with regional, sub-regional and national authorities in Africa.

Indeed the three bodies believe that disaster risk management is a shared responsibility among national, regional and international communities. And that multi-level and multi-disciplinary coordination and collaboration is therefore the key to facing the challenges in disaster risk management, challenges that are often are beyond the capacity of a single government or organization.

Meanwhile, two African disaster reduction experts have been selected to carry out the main tasks of the first part of the initiative (development of an *African Regional Srategy for Disaster Risk Management*) on a consultancy basis. The two African experts began their work on 20 October 2003. ■

Expected outcomes of AU/NEPAD – UN/ISDR Africa initiative (Part One) – in chronological order

- Review of existing policies, bills, strategies related to disaster risk management at national, sub-regional and regional levels;
- Inventory of existing capacities and mandates of expansion; Regional Economic Communities and UN agencies;
- Analysis of inter-relationships between risk reduction, poverty alleviation, sustainable development;
- Review report with major findings and "who-is-doing-what-and-where" inventory;
- Outline of African regional strategy for disaster and disaster risk management (which helps to mainstream disaster risk management into development process);
- Draft African Regional Strategy for Disaster Risk Management and regional review submitted to AU Commission, NEPAD Secretariat for circulation among sub-regional organizations;
- African regional consultative meeting – including government experts - to discuss the draft African Regional Strategy for Disaster Risk Management (April 2004);
- African Regional Strategy for Disaster Risk Management approved by NEPAD Secretariat, AU Commission;
- Adoption of African Regional Strategy for Disaster Risk Management by African Council of Ministers, AU summit (presumably in July 2004).

AU disaster prevention, preparedness, response activities in Africa

Mr. Foday Bojang
Senior Policy Officer
African Union
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The following is a presentation by African Union Senior Policy Officer Mr Foday Bojang at a "Regional Workshop on Environmental Disasters" organized by UNEP Africa from 28 to 30 July 2003 in Nairobi. *(Original version abridged and slightly edited by UN/ISDR Africa for wider circulation; intro and some sub-headings inserted editorially)*

Introduction

Natural events that result in disasters have increased in frequency in Africa over the past 30 years. While the continent's principal concern was with drought and related humanitarian crises in the 1970s and 1980s, its concern with other climate-related events such as floods and tropical cyclones has increased since mid-1990s.

The Sahel region has been the principal victim of drought-related disasters, while the eastern and southern African as well as Indian Ocean regions suffered the impacts of floods and strong winds in the recent past.

Need for culture of disaster prevention, mitigation at continental level

In 1997/98, floods devastated parts of Kenya, Tanzania and Somalia. In 2000-2002, southern African countries, particularly Mozambique, Malawi and Zambia, were afflicted with the devastating effects of floods which claimed lives and property and caused extensive damage to infrastructure and, consequently, the economies of these countries. Madagascar suffered the impacts of strong winds, cyclones and downpours that destroyed houses and other properties in her rural communities. The loss of life, property and livelihood resulting from natural and man-made calamities, and the need to mitigate these in the future, call for a culture of prevention and mitigation at the continent level.

African union's response to disasters

Prior to 2002, the Organization of African Unity (OAU), while seized with the issue of disasters on the continent, concerned itself primarily with post-disaster responses. Only during the 1990s did the OAU make any attempts to address the issue of disaster and disaster risk management (preparedness and prevention). Even though these attempts did not result in concrete mechanisms, they laid the foundation for the activities of the successor African Union (AU) and its programme - the New Partnership for Africa's Development (NEPAD) - in the area.

Special Emergency Assistance Fund for Drought and Famine

The OAU had established a Special Emergency Assistance Fund (SEAF) for Drought and Famine in Africa in 1985. The purpose of the Fund was to provide emergency relief assistance to OAU member states affected by unfavourable climatic events, mainly droughts and related famines. The Fund is administered by the ADB (African Development Bank) and a Policy Committee of Ambassadors in Addis Ababa is responsible for its management.

Since its creation, SEAF has provided emergency relief and development (prevention) assistance to about 33 AU member states amounting to over 31m US dollars. The Fund also provided financial assistance - to the tune of 840,000 US dollars - to the Secretariat of the UN Convention to Combat Desertification (UNCCD) for cross-border desertification and land degradation control activities in the Sahel-Maghreb border regions, as the Union's contribution to prevention activities on drought and desertification-related emergencies. Emergency relief provided to member states included provision of food aid, potable water, transportation and procurement of basic commodities. Prevention and mitigation activities that have so far been funded through the Fund include locust control, early warning, disaster management, food security, reforestation and tree planting, bush fire control, agrometeorological rehabilitation, post-emergency reintegration programmes, creation of emergency reserves and provision of equipment, water conveyance for small-scale irrigation, food storage, orchard development, general environment rehabilitation, emergency preparedness, dam construction and repairs, and sinking of boreholes.

Development/Prevention activities "scaled down"

Due to increased demands on the limited resources of the Fund, the OAU Council of Ministers decided in 1998 to limit the use of the Fund to the financing of emergency activities. Funding of development/prevention activities was therefore scaled down in line with this decision. Consequently, mainly food-security-related activities such as rehabilitation of severely degraded rangelands and small-scale irrigation for local food self-sufficiency continued to receive support from the Fund.

OAU/AU attempts to institute prevention, preparedness, response mechanisms

Given the scale and magnitude of recent natural calamities, and realizing the need for a viable prevention, preparedness and response mechanism at the continent level, the OAU approached the UN/OCHA (Office for the Coordination of Humanitarian Affairs) and the UNDP for a joint activity to raise awareness on the need for a disaster management mechanism with the ultimate goal of establishing one on the continent.

A continental conference was planned in 1999 but abandoned due to unforeseen circumstances. The joint venture was renewed in 2001, following the severe floods in southern Africa, with the view to using experience gained in the region during response coordination to advise the way forward. Again this process could not be concluded due to lack of funding amongst other reasons.

NEPAD an opportunity for AU disaster management activities

The coming into being of NEPAD and its environment portfolio now provide the Commission of the AU the opportunity to pursue further the issue of disaster preparedness, prevention and response in the context of disaster and disaster risk management.

The Commission and the NEPAD Secretariat held consultations with some UN agencies, including the Secretariat of the UN/ISDR, UNDP and UNEP as well as other stakeholders, in June 2003 in Nairobi, to plan the way forward towards the realization of this objective.

The AU Commission and the Secretariat of NEPAD will henceforth take leadership in coordinating the resulting planned activities, which will entail consultations with Regional Economic Communities (RECs), national governments and development partners. The RECs will play a central role in the realization of the activities that will be planned in the future.

Towards a development/prevention window

The Commission of the AU has prepared a proposal for the creation of a development/prevention window (Regional Facilitation Fund) in the SEAF (Special Emergency Assistance Fund) to enable the funding of developmental activities to enhance disaster preparedness and prevention on the continent. The anticipated area of focus of the Facilitation Fund will be drought mitigation, land degradation and desertification control.

The proposal will hopefully be examined by the SEAF Policy Committee of Ambassadors at its next meeting before the end of this year. The Policy Committee may decide to expand the focus to cover other disaster preparedness and prevention activities if it approves of the proposal. Finally, pending the SEAF Policy Committee's support, the proposal will be submitted to the AU Council of Ministers for consideration.

Conflict early warning system

Conflicts have become common features of Africa's political scene. The humanitarian prices of these conflicts have been high, especially on children, women and the elderly of the affected areas. Mass population movements within and away from conflict have resulted in acute hunger, the spread of contagious diseases and unwarranted loss of human lives, which could been avoided had adequate early warning and preparedness mechanisms existed on the continent.

The Conflict Management and Resolution Office in the Commission of the AU is currently working on a conflict early warning system that hopefully will help to prevent humanitarian catastrophes related to conflicts. Once in place the early warning system will provide information that can be used to prepare for the settlement of refugees and displaced people in such a planned manner as would prevent undue human sufferings.

Continued political support

As a member of the Inter-Agency Task Force of the UN/ISDR (IATF/ISDR), the Commission of the AU will continue to play its policy advisory role at both international, regional and national levels to advance the institutionalization of safety measures in the face of disasters, especially those that are rapid-setting in nature.

To this end, the AU will continue to give political support to international initiatives as necessary, while, within the limit of its resources, collaborating with relevant organizations and agencies at regional levels to ensure the protection of Africa's populations against the adverse effects of both man-made and natural disasters.

Views on current disaster management initiatives on the continent

There have recently been a number of initiatives related to disaster preparedness, prevention and response at continental and regional levels.
Many of the RECs (Regional Economic Communities) have their own programmes of disaster management albeit weak financial and institutional climates. The UN/ISDR Africa Office recently held consultations with regional and sub-regional organizations, agencies and institutions on early warning with the view to improving the situation on the continent; NEPAD initiated consultations on disaster risk management, and now the present UNEP's initiative on environmental disasters.

Need for unified approach - with NEPAD as framework

While all these initiatives are well intentioned and welcomed, there is need for collaboration and coordination to present a unified approach to disaster and disaster risk management on the continent.

To this end, the AU would like to see that the NEPAD initiative is accepted as framework for a comprehensive and coordinated approach to dealing with the challenges of disaster and risk management, and wish to invite all to liaise with and provide support to the NEPAD Secretariat, backed by the AU, to present a united front to the challenge. ■

** For more details about the above article, please contact UN/ISDR Africa.*

Somalia workshop urges ban on charcoal exports to Gulf states

Mr. Ali Warsame Nagheye
Expert in Disaster Management
Somalia

The most severe impacts of deforestation, land degradation, deforestation and desertification are due to lack of awareness in Somalia. A public awareness workshop was held by the country's National Disaster Risk Management Unit. The participants said large-scale charcoal exports to Gulf states ought to be banned. The following is a report on the workshop. *(Original text edited by UN/ISDR Africa for wider circulation; intro and sub-headings inserted editorially)*

Land degradation directly affects or puts at risk people's livelihoods in Somalia, especially the agro-pastoralist community that constitutes 70 per cent of the country's population.

However, the most severe impacts of land degradation, deforestation and desertification, in many parts of Somalia, are due to lack of environmental conservation awareness.

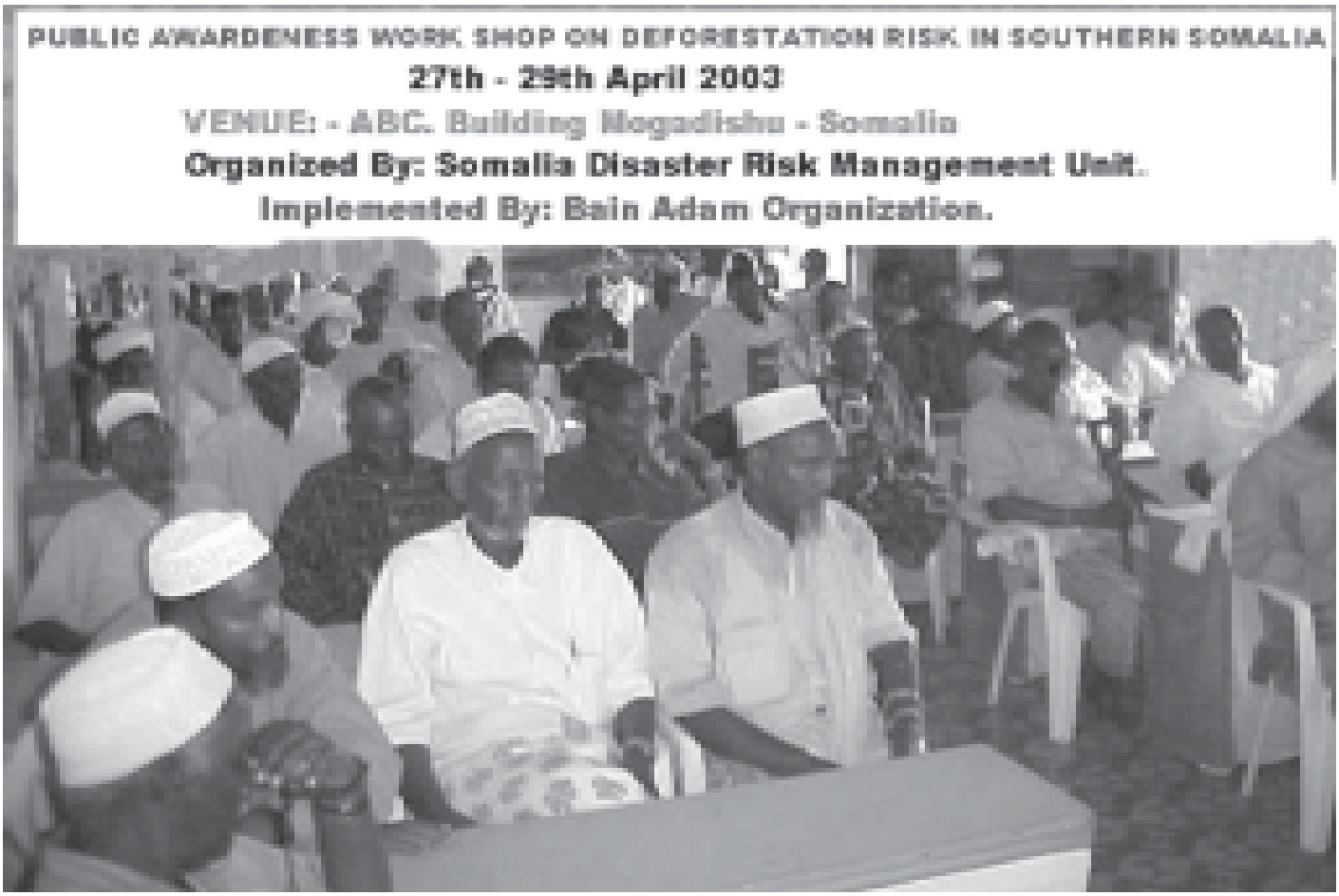
Environmental awareness workshop held

In the light of the above, a three-day *"Workshop on Environmental Protection Awareness in Somalia"* was held from 27 to 29 April 2003 in the capital, Mogadishu. The workshop was organized by the National Disaster Risk Management Unit (NDRMU) and funded by its partner, Bani' Adam Relief and Development Organization (BRDO). Increasing public awareness of natural and related technological hazards and the risk they pose to environment, society and economy is indeed one of the key objectives of NDRMU.

The workshop was attended by 80 delegates from 7 regions (Hiiran, Lower Shabelle, Lower Juba, Middle Juba, Bay, Bakol, Banadir) selected from the 18 highly deforestation-prone ones that include the capital city.

Charcoal workers, traders invited

The delegates were from local NGOs, youth groups, women's organizations, community elders, environmental activists and local media. Facilitators and special guests also attended a full session of



the three-day workshop. Charcoal workers and traders were also invited at the workshop.

The workshop's objectives were:
• – To convey knowledge and discuss about possible solutions that can reduce vulnerability and build communities dedicated to making risk and disaster reduction an accepted public value.
• – To make people living in hazard-prone areas (degraded land) realize and understand that they are living in risk areas, become aware of the specific dangers they are exposed to, learn the meaning of warnings issued, and take part in policy and decision-making processes for appropriate risk reduction actions.
• – To introduce the policy of the NDRMU and the role of UN International Strategy for Disaster Reduction, UN/ISDR.

Participants urged to help fight charcoal burning, forest destruction

Speaking during the opening ceremony, Mr Mohamed Amin Adan Abdi of the Environment Ministry and also member of the NDRMU, emphasized the importance of the workshop and the current environmental degradation in Somalia that exacerbates the impact of natural disasters and increases human vulnerability.

He then welcomed the minister of environment, HE Dr Abokar Abdi Osman, who made a brief speech on the importance of environment protection, and urged the participants to promote preservation of life in the ecosystem which, he said, was a God-given responsibility for all mankind. He also stressed that environmental awareness was a tool to reduce disaster risk.

Bani' Adam Relief and Development Organization chairman Mr Mohamed Abshir Hassan, for his part, made an introduction speech about the situation in Somalia. He urged the delegates to become involved in the environmental protection process through rehabilitation and peace building.

He said they were duty-bound to be part of ongoing attempts to mobilize communities against evils like charcoal burning, forest destruction, etc. He also called on the delegates to air their views on the themes of the workshop, and suggest some tangible resolutions.

"Peace, environmental protection cosely interconnected" - elder
After electing the conference chairman and presenting the environmental situation prevailing in their respective regions, the delegates commented, discussed and debated on the topics outlined in the themes of the workshop, assisted by facilitators.

After three days of discussions and exchange of views and experiences, the workshop delegates selected a sub-committee to prepare the workshop's resolutions.
The chairman of the workshop, Ibrahim Mohamed Dhay, who is one of Somalia's prominent traditional elders, said environmental protection and peace building were keys to orderly social life.

He said peace and environmental protection were closely interconnected.

"Complete ban" on exports of "black gold"

After the three-day session, the participants made the following *conclusions* and *recommendations*:
- Public awareness campaign is the primary element of environmental risk reduction.
- Pledge to stress the importance and take up the responsibility of preventing further deforestation activities in their respective areas by informing local communities of the risks presented by environmental degradation and its impact in terms of human and economic vulnerability.
- To introduce disaster management in the current Somali formal and non-formal education curriculum which is being implemented by UNESCO, disaster risk management being a subject that needs great attention in Somalia.
- To develop poverty alleviation projects which would help to prevent "clanism" and mutual hostility between Somali communities from aggravating conflicts and deforestation which has become an escape from poverty.
- To seek complete ban on ongoing large-scale charcoal exports from Somalia to Arabian Gulf countries, which causes tremendous land degradation and increases human, environmental and economic vulnerability. This should be attained under the umbrella of international organizations like UN/ISDR, UNEP and UNDP.
- To introduce environmental sustainable charcoal production systems for local use and also promote alternative energy resources.
- To create a National Environmental Protection Policy/ Strategy and establish baseline data for future monitoring.
- Strengthening the institutional capacity of NDRMU and its partner, Bani' Adam Relief and Development Organization (BRDO).
- To create income-generating activities or job opportunities for those involved in tree cutting and charcoal burning. Indeed, such people, who are generally illiterate and unemployed while catering for big families, constitute over 80 per cent of the adult population (working age group) and find themselves forced to resort to the business of charcoal which they call "black gold". ■

Pastoral communities seek drought resilience

Mr. Mahaboub Maalim
Programme Coordinator
Arid Lands Resource Management Project
Kenya

The Kenyan government, local communities and foreign donors have embarked on drought disaster preparedness, mitigation and prevention measures in 11 arid districts. One such initiative is the Arid Lands Resource Management Project. Negotiations are under way to extend the project to 11 semi-arid districts.
(Original text edited by UN/ISDR Africa for wider circulation; intro and sub-headings inserted editorially)

The Arid and Semi-Arid Lands (ASAL) of Kenya cover an area of 477,000 sq.km (80 per cent of the country's land area) and is home to 5.8 million people (20 per cent of the total population). Low, erratic and unpredictable rainfalls that vary in time and space characterize these areas. High temperatures accompanied by high evapo-transpiration result in negative water balance inadequate for plant growth, livestock production and sustainable livelihoods. Frequent drought occurrences, civil conflicts and occasional flooding - resulting in loss of lives and livelihoods - further exacerbate the situation. It is further daunted by population growth that exerts heavy pressure on the finite natural resource base.

Community survival mechanisms

Fragmented macroeconomic, social and environmental frameworks - both locally and globally - are other dimensions inhibiting sustainable use of natural resources therein. As a result of all of these factors, ASAL pastoral communities have evolved survival mechanisms to bolster their resilience accordingly.

Over the past decades, the Government of Kenya (GoK) and donor communities have embarked on disaster preparedness, mitigation and prevention measures to enable pastoral communities to better cope with frequent recurrence of droughts. One such initiative is the *Arid Lands Resource Management Project* that runs a community early warning system alongside community-driven development activities centred on livestock and non-livestock income-generating activities in 11 arid districts of Kenya.

All these initiatives are tagged to the constraints, potentials and existing traditional natural resource management institutions.

Arid Lands Resource Management Project

The development objective of the project is to reduce chronic poverty and enhance food security in the arid lands. The medium term objective is to build arid land communities' capacity to better cope with droughts. This was done through a participatory bottom approach responsive to institutional structures that enable people to determine and prioritize their own development. The project was also to enable participating line government ministries to adapt their service delivery systems to the arid land populations.

Institutional arrangements

The main food security-related institutional structures are : National Food Security Executive Committee (chaired by the president of the republic); National Food Security Coordinating Committee (chaired by the minister of provincial administration and national security); Kenya Food Security Meeting (co-chaired by the Office of the President and World Food Programme, WFP); Kenya Food Security Steering Group (chaired by the Relief and Rehabilitation Department in the Office of the President); working groups and sub-committees; district-level data gathering/ analysis/reporting structures; communities.

Key responsibilities at each level of these structures include strategic planning and management of droughts and famine, managing early warning systems, coordinating implementation of rapid response, and supporting community capacity-building activities.

Achievements

The project addressed three main thematic areas to achieve its stated objectives:

- ***Drought management*** including the operation of an early warning system, preparation of drought strategic and contingency planning, and response.

Achievements. A total of 539.7 million Kenyan shillings was spent on development of water sources, small-scale agricultural schemes, emergency livestock vaccinations and purchase and construction of emergency animal and human health infrastructures. A total of 1.8 million people in 10 ASAL districts benefited. Additionally, GoK and donor agencies spent 28 billion Kenyan shillings on food and non-food items to combat drought emergency during the 2000-2001 period. This was made possible by established food security structures at community, district and national levels, structures that were crucial in galvanizing timely support to drought monitoring and management efforts countrywide.

- ***Livestock Marketing*** including the development of strategic livestock handling facilities, training of livestock marketing groups, animal health activities, apiculture, and emergency livestock off-take.

Achievements. A total of 73 million Kenyan shillings was spent, benefiting 333,000 people. At the height of drought, livestock worth 10 million Kenyan shillings were saved or salvaged.

- ***Community development*** including capacity building for community groups, implementation of diversified livelihood micro-projects, policy advocacy, and lobby to ennoble the environment for pastoral policy development.

Achievements. A total of 183.4 million Kenyan shillings was spent on supporting community groups involved in income-generating activities, rehabilitation of educational infrastructure, capacity building for participating community project management committees on project cycle management, conflict resolution, pastoral land tenure, and control and policy advocacy activities.

Experiences and lessons learnt

- A drought management system must include all key stakeholders in a multi-agency approach led by the government, within its established structures but collaborating closely with donors, NGOs, local civil society and pastoral groups.
- Effective early warning and quick dissemination of information to all key stakeholders needed to elicit quick response to emergencies.
- Early warning should cover semi-arid and marginal agricultural areas.
- Collaboration needed with other early warning systems in the region.
- Responses to be linked with phases of the drought cycle.
- System requires long-term funding from diverse sources, flexible budgeting and rapid financial procedures at all levels with decentralized decision making and easy access.
- Community capacity building should be facilitated in all drought management aspects.
- Aid needed in food aid targeting and management, and compare savings made with *ad hoc* activities.

The way forward

Based on the above experiences and lessons learnt and concretising on gains so far made to enable long-term sustainable development to take root, the GoK and the International Development Association (IDA) have renegotiated a second phase of Arid Lands Resource Management Project. This second phase not only would be a continuation of the work done previously in 11 northern ASAL Districts but also would cover an additional 11 semi-arid districts. Greater emphasis will be put on the overarching natural resource management upon which vision, strategy, information and awareness, land tenure and control and institutional development for future ASAL policy and programme development will be based. A community-driven approach and support to local development initiatives will further give credence to the whole project concept. Innovative community-based natural resource efforts shall be enhanced to take cognisance of the current national and global debate on devolution of power to local levels responsible for nurturing sustainable development. ■

Botswana is “highly” vulnerable to climate change

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Botswana is a landlocked, arid to semi-arid southern African country covering a land area of 581,730 sq.km. and inhabited by 1.5 million. Its economy is based on mining (particularly diamonds), light manufacturing, tourism and livestock, and its per capita GDP in 1994 was 2,800 US dollars. Botswana has a proud record of steady improvement in the quality of life of its people, and a stable democratic political system.

Rainfall decrease expected

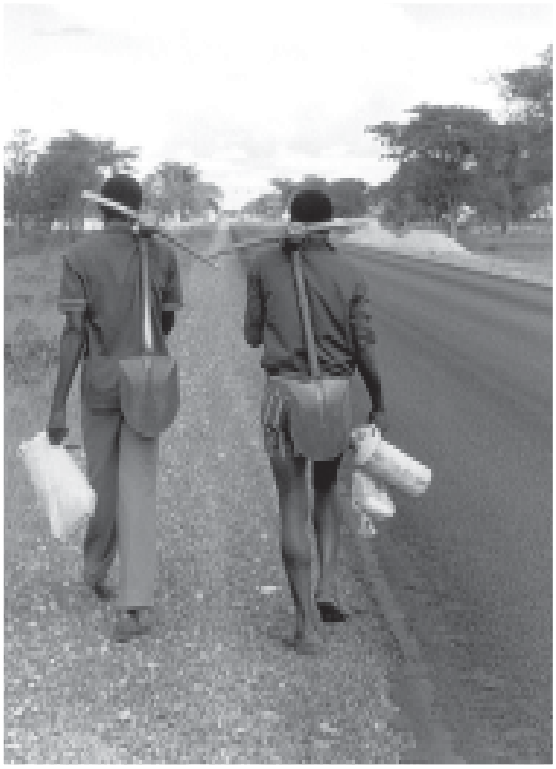
The country experienced severe and prolonged drought periods during the 1960s and 1980s. The drought of the 1980s left a third of the almost 2.5 million national herd of cattle dead. Memories of the drought are still fresh in people’s minds.

The welfare of the people of Botswana, its economic performance, and its environment are all very closely linked to the climate. The available climate change projections and impact studies suggest that Botswana is highly vulnerable to climate change. The overwhelming majority of general circulation models predict a rainfall decrease in the country.

Predicted impact of climate change

The predicted impact of climate change on various socio-economic sectors is as follows:

- *Grazing and livestock*: Livestock production, a socially and culturally important activity in Botswana, has been severely affected by recurrent droughts over the past century, which would become deeper, longer and more frequent under a drying scenario. Desertification is a major concern in Botswana.
- *Crops*: Under a scenario of a hotter, drier future, potential crop yields are predicted to reduce by about 30 per cent for both maize and sorghum – two basic foods.
- *Woodlands and forests*: Under a dry future scenario, the thorn and shrub savannah is predicted to expand at the expense of grasslands and moister forests and woodlands. There is great uncertainty with these predictions, not only with respect to future climates but also the effects of rising CO_2 on plant growth responses.
- *Water resources*: Water supply is a critical issue for the future of Botswana, regardless of climate change, but it will become an even greater challenge if the future climate is warmer and drier.
- *Human health*: A warmer climate, especially if it is also wetter, will lead to a doubling of the population exposed to malaria to over 1 million people by 2021. Several other diseases (dengue fever, ricketsia, yellow fever, bilharzia) could also be affected by climate change.



No dedicated policy yet

There is no dedicated policy to respond to climate change in Botswana, but the potential for future climate change and the associated environmental threats is acknowledged in the National Development Plan.

Climate change issues are addressed in a combination of different policy areas. Specific climate adaptation and mitigation policies are already in place in some sectors, such as the strong governmental support for solar energy in the energy sector. Similar realizations lead to the establishment of local committees or “natural disaster” response groups.

Public awareness, education needed

Based on the country’s drought records, it is now an acknowledged challenge that indeed some of the natural disasters may have to be systematically addressed.

It is necessary that an integrated approach to disaster reduction is explored through a better understanding of the causes and options available.

The best solution may well be summed in the old wisdom saying: *“If you wish to plan for one season, plant food; but if you have to plan for a lifetime, inform and educate people.”* ■

Why poverty alleviation should go hand-in-hand with disaster reduction

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"To succeed in disaster risk reduction in Africa, the basic causes of vulnerability have to be tackled." This is the message conveyed by Kenneth Westgate of UNDP's Bureau for Crisis Prevention and Recovery in the following article. *(Intro and sub-headings inserted editorially by UN/ISDR Africa)*

Global understanding of disaster risks and their context has increased significantly over the past 15 to 20 years. Not long ago, phrases such as "Act of God" were prevalent in discussions and in the media, and disaster risks were faced with a high degree of fatalism.
When disasters occurred, populations picked themselves up, industry and infrastructure were rehabilitated and restored, and life was got on with until the next time.

Disaster risk reduction perceived as luxury

In terms of official policy and strategy, disaster risk reduction, in many countries, has not been high on the agenda. Too many other priorities have impinged to ensure that it is relegated to a luxury to be enjoyed if ever resources are plentiful. This has been particularly pertinent in less developed countries where more and more people are faced with disaster risks but with few tools available to address them.

Meanwhile, for people living on the urban and rural margins, waiting until the next time disaster strikes is a very risky business indeed. Each time a disaster strikes leaves them less able to deal with the next crisis.

Because there is no disaster risk reduction, assets, options, and resources are eroded and not replaced, people's vulnerability is compounded, and the disasters they are faced with need no longer be on a large scale. As vulnerability increases, smaller and smaller "disasters" leave people increasingly debilitated.

For instance, an Ethiopian farmer who loses all his assets because of drought and desertification, has nowhere to go. Even feeding him and his family through the dry period will not help once the feeding stops. His lack of assets means that he is unable to begin again, and that he is exposed to even the mildest of shocks.

The emergence of "mitigation"

Throughout the 1990s, a realisation grew that perhaps the focus should change. Development agencies such as UNDP were acutely aware that much of their development investment was being destroyed or severely disrupted. The UN, as a whole, declared the decade to be the International Decade for Natural Disaster Reduction (IDNDR), based on the knowledge that unless something was done about trying to reduce the potential for disasters to occur, then development gains would be increasingly exposed to destruction and disruption.

Climate change and climate vulnerability (through the increasing understanding of, for example, the El Nino phenomenon) have added urgency to this understanding. Climatic extremes and their meteorological manifestation may no longer be rare events.

The response to this understanding was to encourage "mitigation" - to talk in the long term about reducing the risks from potential disasters, so that fewer and fewer people are exposed over time. Disaster mitigation, it was felt, ought to be the insurance policy for development. If you had good mitigation programmes, then these would protect the process of development.

Indeed, disaster mitigation could be seen as a development "add-on", a mechanism to be used when development programmes were implemented in areas of known disaster risks to ensure that potential gains are sustained.
The broad assumptions that are needed for this assessment are that development is generally "positive" and disaster

is most often "negative", and that disaster mitigation will protect the positive results of development.

Mitigation unworkable under development failures

This is a simplification just as the models are that define a continued process of actions from response (to an emergency) to rehabilitation and recovery, to preparedness, mitigation and development – a sequential pathway that is unhelpful.

Indeed the assumption that reacting to disaster involves an ordered sequence of actions through response to development, and that these activities neatly dovetail, is largely a fiction.

Also the assumption that development is always in the "positive" - in the context of disaster risk - is one that is difficult to justify, given the evidence. The increasingly hazardous living conditions experienced by millions of people cannot be the result of positive development: these conditions are more indicative of development failures or even the absence of development.
In this context, applying disaster mitigation as a development add-on to protect development gains clearly is unworkable. Equally, the integration of disaster mitigation or risk reduction as an element of failed or failing development will only serve to support negative results. The more that disaster risk reduction itself can be defined as a positive development goal, the more effective that risk reduction will be.

"Dynamic development context" vital for successful disaster risk reduction

It is clear that local people, in many parts of Africa, have a strong understanding of the risks to which they are exposed and with which they have to cope. This knowledge has been well recorded whether it concerns agricultural practices, conventional wisdom or cultural mores. Over the centuries, for example, farmers and other artisans have been adjusting and adapting to risks in their environments in order to maximise their output year on year.

Problems arose, however, when the development context became negative, eroding people's options, depleting their resources and assets, diluting their capacity and causing the loss of their assets. To restore these requires more than applying disaster mitigation.
The foundation stone for successful disaster risk reduction is a dynamic development context that provides communities with the security they need to focus on things other than essentials. If people are hungry, the next meal is the priority; if people are in food surplus, then the focus can be other priorities. Populations whose development foundation is secure can focus on risk reduction.

National poverty reduction strategy a possible context for disaster reduction

Thus, a most important component of disaster risk reduction is the development context in which it takes place. In programme countries where UNDP and other UN agencies are working in Africa, the components of development are important precursors to effective risk reduction. Chief among these are strategies for poverty reduction.

By ensuring, for example, that local structures and institutions grow and are sustained in that growth, the national poverty reduction strategy can provide the context for disaster risk reduction to be meaningful and comprehensive.

For instance, transforming rural development and agriculture and establishing food security, developing human resources through training and capacity building, strengthening the economic infrastructure and markets, promoting good and proactive governance, developing the private sector, building appropriate institutions at different levels, tackling the debilitating influence of HIV/AIDS, mainstreaming gender issues in development : these should all contribute to poverty reduction, to the establishment of a sound economic and social base from which people and communities can obtain their security. Effective disaster risk reduction emanates from that security.

Tackling short-term remedial actions "alongside" longer-term structural issues

Strong efforts are being made, for instance, in Ethiopia to tackle the problems of the most food insecure. These are people without food, without

assets. A proposed programme will be implemented in emergency mode in an effort to ensure that people are able to survive at least in the short term. However, there is an understanding that such action is not enough.

Alongside these short-term remedial actions, longer-term structural issues have to be tackled not sequentially (after the short-term programme has been implemented) but alongside, to ensure that the short-term measures have a strong chance of contributing to the building of longer-term food security. That is why food security is a major component of the poverty reduction strategy in Ethiopia.

Without a focus on long-term food security goals, the short-term safety nets and income-generation projects are doomed to have little effect. This is crucial for Ethiopia's long-term development, it is also crucial for many other countries in Africa.

Basic causes of vulnerability must be tackled

To succeed in disaster risk reduction in Africa, the basic causes of vulnerability have to be tackled.

These cannot be tackled purely in a disaster context. Rather, disaster risk should be tackled in a development context.

And major national development initiatives such as poverty reduction strategies are the mechanisms that can provide the social, economic and environmental security that allows disaster risk reduction to be successful. ■

Why Uganda is keen to link disaster management to sustainable development

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Natural and man-made disasters leave 50,000 Ugandans dead, and economic losses of at least 120m US dollars every year. But there is a growing awareness that improved development planning and action can reduce the losses. And that risk reduction can help to fight poverty. *(Original text edited by UN/ISDR Africa for wider circulation; intro and sub-headings inserted editorially)*

Drought, floods, landslides, windstorms and hailstorms have destroyed an average of 800,000 ha of crops, making economic losses in excess of 120bn Uganda shillings (some 60m US dollars) every year in Uganda (see box on "Disaster Impact in Uganda").

Transport accidents and fire result in economic losses worth about 50bn shillings (some 25m US dollars) annually.

An earthquake occurs in western Uganda every 5-10 years, destroying infrastructure and property worth over 80bn shillings (some 40m US dollars). An El Nino rain phenomenon also occurs every 3-5 years, followed by a severe drought, both events destroying property and infrastructure worth over 200bn shillings (some 100m US dollars).

Natural and man-made disasters leave 50,000 Ugandans dead every year. And between 1980 and 2003, 1 in 30 people were affected by a natural or man-made disaster, and fell into the poverty bracket.

Improved development planning, action can reduce disaster impact

To prevent the negative effects of disasters on the population and the country's development, the government has initiated various activities and established various institutional structures and arrangements aimed at reducing risk and vulnerability, and for responding to disasters and conflicts.

Disaster management has traditionally been viewed as an approach to the management of discrete events that can overwhelm the capacity of affected communities, countries or regions, and cause severe hardship and loss. While this has been the dominant approach in Uganda, it is increasingly being seen as having limited effectiveness.

Since late 1990s, there has been a growing awareness that disaster losses that drive large numbers of the population into poverty, can be more effectively reduced/averted through improved development planning and action.

Indeed by taking full account in-policy-and-in-practice of known hazards, and the likely risks facing a community and building community capacity to withstand these hazards, we can reduce the likelihood of disastrous events to occur.

Management of frequent hazards a "development issue"

Hazards such as drought, floods, landslides, earthquakes, wild fires, transport accidents and conflicts are integral aspects of our environment. But the fact that they frequently occur dictates that their management should be a development issue.

The development objective of disaster preparedness is therefore to ensure that known hazards do not result into disasters and, in the event that they do, the people affected can continue to meet their minimum needs for food, water, shelter, health, and security through their own efforts and also appropriate assistance in terms of type, time, method of provision and duration.

From a development perspective, disasters therefore should not be seen as isolated random acts of nature. Rather disasters should be viewed as expected consequences of poor risk management over the long term.

From this perspective, both risk reduction and wider disaster management clearly are multidisciplinary processes, engaging a wide range of stakeholders including development actors.

Risk reduction a "developmental imperative", a "poverty eradication factor"

Risk reduction is therefore a developmental imperative for achieving sustainable growth, as well as a strategy that protects the lives and livelihoods of the most vulnerable, and hence a poverty eradication factor.

It is a well known fact that the cost of responding to disasters once they strike far exceed the cost of disaster prevention and risk reduction activities. Indeed worldwide, a threefold multiplier has been found between effective disaster mitigation and emergency response: one dollar for disaster mitigation saves 3 dollars for disaster relief.

The saving in relief costs due to mitigation is not a one-time saving: the value of disaster mitigation also saves response time and disaster victims/workers' lives.

"Cause-effect relationship" between disasters, development

For a long time in Uganda, development planners have ignored the "cause-effect" relationship between disasters and socio-economic development.

Disaster prevention is an element that was not taken into account in the planning process. At best, development planners hoped that disasters would not occur and, if they did, relief from donor countries and relief organisations would handle them.

In the past, development programmes were not assessed in the context of previous disasters and/or the effects of possible disasters.

Neither were they assessed from the point of view of the potential to increase either the likelihood of a disaster or the potential damaging effects of a disaster.

Avoidable losses

Famine and loss of livestock, which are the destructive effects of droughts, could have been greatly minimised, or even prevented, if the population had been prepared in advance with information on the drought. Preparation of the population could, for example, include making them aware of when the rains would begin and cease, and advising them on which type crops to plant as dictated by the amount of the expected rains.

The massive economic destruction caused by earthquakes, floods and landslides could have also been greatly minimized using simple preventive measures as was done during the 2002 El Nino. During the 2002 El Nino, with every small financial support from German development agency GTZ, the population was prepared three months in advance and, as a result, no one died when the El Nino and landslides began later.

Cost of inadequate support for disaster reduction

In Uganda, inadequate support for activities related to disaster prediction, mitigation, prevention and preparedness have resulted into the following:

1. Loss of human lives, livestock and development projects that could have been prevented;
2. Migration of people and livestock resulting into the creation of IDPs and tribal conflicts;
3. Environmental degradation and increased poverty in some areas;
4. Disasters have hampered many development projects in some flood/landslide-prone areas, as lots of funds have been diverted from development to address the consequences of conflicts, droughts, floods and landslides;
5. The social impact of these disasters, although difficult to measure (trauma, depression, grief as a result of losses), is still felt long after the disaster, and such longer-term effects have a negative impact on community life and economic activity.

Disaster policy integrated into Uganda national development plan

Whereas the country has developed a disaster policy considered internationally as one of the most comprehensive and focused towards a coordinated strategy for disaster prediction, mitigation, prevention, preparedness and response,

the policy had not been integrated into the national development plan before the year 2003.

Indeed there is a significant relationship in the way that disasters and development affect one another. Even though this relationship is not clear-cut, it highlights the need to have a sound understanding of risks and vulnerabilities.

Disaster preparedness highlights potential risk areas and the existence of vulnerability. Vulnerability assessments, hazard prediction, risk mapping/zoning of the country and early warning activities play very important roles in poverty reduction and therefore contribute to development.

Disaster reduction one of Uganda's key national priorities

For example, development projects such as classroom construction in earthquake-prone areas should be designed differently to withstand strong earthquakes, while classrooms in windstorm-prone areas should be designed to withstand strong windstorms and their negative consequences. Vulnerability maps motivate policy-makers to engage in risk reduction activities.

When a disaster strikes, it can undo years of development efforts. A flood can destroy lives, livelihoods, property, social services, communications structures, etc., all of which take a long time to establish.

Disasters therefore have direct impact and influence in the overall production and development of the economy, thereby affecting people's incomes and general performance of the economy.

On realizing the above, the Ugandan government, as said earlier, incorporated the country's disaster policy into the national development plan this year, and is now in the process of placing disaster prevention and mitigation amongst key national goals and priorities. ■

IMPACTS OF DISASTERS IN UGANDA

Natural and man-made disasters leave 50,000 Ugandans dead every year. Between 1980 and 2003, 1 in 30 people were affected by a natural or man-made disaster, and fell into the poverty bracket.

Drought, food insecurity. The 1993/94 drought resulted into famine that affected over 1.8 million people – driving them towards poverty, and inadequate pasture/water for a large number of livestock in 16 districts. The 1999 drought resulted into famine that affected 3.5 million people and a large number of livestock in 28 districts.

Transport accidents and fires result in economic losses worth about 50bn shillings (some 25m US dollars) annually.

Insecurity, conflict, internal displacement of persons. Civil conflicts have been the most serious cause of *food insecurity* in Uganda. They disrupt food production and marketing, which renders people more vulnerable to the effects of drought, pest infestation, epidemics and livestock diseases/rustling. This forces large numbers of persons into *internal displacement* and, subsequently, loss of many of their assets, social and economic infrastructure, ending up becoming the destitute poor relying on assistance to survive.

The 1981/86 civil war displaced over 500,000 people and the resulting insurgency caused an estimated 2.7 million people to be displaced. Insecurity that has persisted from 1886 to date has kept an average of 500,000 people internally displaced, and today the number has risen to 1,300,000.

As vegetation is cleared for the new human settlements and firewood, unplanned extraordinary population movements also cause *environmental degradation* in surrounding areas, and results in break-up of communities and families.

The internal displacement of persons also increases unsanitary conditions and *disease risks* such as spread of HIV/AIDS, epidemics of cholera, typhoid and diarrhoea. In a nutshell, the internally displaced persons are living very miserable lives.

Earthquakes, floods, landslides. An earthquake occurs in western Uganda every 5-10 years, destroying infrastructure and property worth over 80bn shillings (some 40m US dollars). In 1994, an earthquake hit 3 districts, affecting over 50,000 people with estimated losses of 70bn Uganda shillings (some 35m US dollars) at 1994 prices.

An **El Nino** rain phenomenon also occurs every 3-5 years, followed by a severe drought, both events destroying property and infrastructure worth over 200bn shillings (some 100m US dollars). The 1997-98 El Nino rains saw 35 people buried by landslides. Heavy rains in 1999 left 18 people dead and over 2,000 others in need of relocation. Roads, bridges and homes worth over 30bn shillings (some 15m US dollars) were also destroyed.

Drought, floods, landslides, windstorms and hailstorms have destroyed an average of 800,000 ha of crops, making economic losses in excess of 120bn Uganda shillings (some 60m US dollars) every year in Uganda.

Disaster hazard, vulnerability atlas needed in Africa

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Disasters are becoming more frequent and more dangerous. Better tools are needed. A global disaster hazard and vulnerability atlas would be relevant. Africa should develop its own regional atlas. A South African one has already been developed.

Natural disasters can be defined as temporary events triggered by natural hazards that overwhelm local response capacity and seriously affect the social and economic development.
The sources of risk are both natural and man-made in Sub-Saharan Africa in general, and in the SADC (Southern African Development Community) sub-region in particular.
Because of its various geographical conditions, the sub-region is prone to natural events of severe intensity.

Huge human, economic losses due to extreme vulnerability

The large economic and human cost associated with these natural events is mainly the result of extreme vulnerability. This vulnerability stems from the pattern of socio-economic development in the region as well as inadequate risk management policies. Despite preventative efforts at national and regional (SADC) levels, as well as globally, the risk associated with natural events has not decreased. Economic costs can be expected to increase as economic assets accumulate and economic interdependence reaches new levels. While the human toll taken by disasters has remained more or less stable, it is unlikely to decrease because of the persistence of widespread poverty, continuing demographic growth and migration towards urbanized areas.
Finally, preliminary evidence regarding climate change seems to indicate that the probability of occurrence of severe weather events will rise in the Africa region.

Why a disaster and vulnerability atlas?

The increase in the frequency of disasters and their associated damage in the SADC region is part of a worldwide trend, which results from growing vulnerability and may reflect changing climate patterns. Global risks seem to be increasing.

These trends make it all the more necessary for a country like South Africa to initiate the development and implementation of a *National Disaster Hazard and Vulnerability Atlas*. The main idea is to design and develop a database-driven, web-enabled interactive "virtual book" (ATLAS) consisting of various "chapters" such as drought, flood, cyclones, storms, etc.

Such a tool will enable users, using web browser, to search and select various data, images, maps, graphs, to perform different calculations, run certain model on-the-fly, and copy-and-paste results to the local computer and print "their own page of the ATLAS".

The South African model

Based on the already developed South African model,
The key tasks of the Atlas are:

- To develop disaster-related hazard, vulnerability and risk assessment tools which enable to report periodically on the global, regional as well as national exposure to natural hazards, patterns and trends or changes in the exposure, and which enlighten on priorities in natural disaster vulnerability reduction efforts.
- To develop an integrated global, regional and national disaster hazard and vulnerability information network to provide tools needed by various levels of government, the private sector, and the general public. The network will also facilitate much-needed augmentation of education and training.
- To increase and strengthen comprehensive, hazard specific programmes.

Here are, in general terms, some of the main elements of the Atlas:

- Developing a comprehensive database to identify hazard, vulnerability and risk-prone areas.
- Understanding and addressing risks.
- Assimilating and disseminating information.

The Atlas particularly attempts to:

- Carry out research on factors contributing to disaster hazard and vulnerability and measures to alleviate this vulnerability.
- Develop methodologies for the analysis of disaster-related hazard, vulnerability and risk indicators, and to improve disaster management.
- Disseminate the research results and methodologies through national (NDMC), regional (SADC) and global (GDIN – Global Disaster Information Network) disaster information networks and other channels to promote increased awareness and preparedness to natural and man-made hazards.

ATLAS was presented at a workshop on the *"Application of Space Technology in Disaster Risk Management*". The workshop was held in Nairobi in February 2003, and was jointly organized by the IGAD (Inter-Governmental Authority on Development) Secretariat and UN/ISDR (International Strategy for Disaster Reduction) Africa.
In their comment, IGAD member countries said: "…With the development and implementation of the integrated database IGAD ATLAS, participants believe that disaster reduction initiatives could be significantly improved and, therefore, prove more effective".

The ATLAS was also presented at a workshop establishing the "Uganda National Platform Workshop". The workshop was held in the Ugandan capital, Kampala, from 16 to 18 June 2003.

ATLAS is currently being discussed as a possible Global Disaster Information Network (GDIN – http://www.gdin.org/) tools. ■

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2. *"Living with Risk"*, UN/ISDR, 2002.

For more details, please contact
http://sandmc.pwv.gov.za/atlas
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Traditional knowledge, use of climatic information for development activities in Kenya

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African traditional knowledge on and use of climatic information for development activities have not been well documented. The following is an excerpt from an article written by Kenyan University Lecturer Ocholla-Ayayo. *(Original paper abridged and slightly edited by UN/ISDR Africa for larger circulation; sub-headings and explanatory emphasises - in last two sentences - inserted editorially).*

The African traditional knowledge on climatic changes and use of food production is among development activities not well documented in the literature of environmental studies. This paper draws on anthropological research over 10 years from 1970 to 1980 documented as *"The Luo Material Culture Patterns"*. Further studies on "grassroots traditional indicators" have been conducted (Drought Monitoring Implementation Centre in Nairobi, 2002/3). The anthropological findings of climatic changes and food production among the Luo and the Abasuba communities of the lower-lake region and the upland-Luo region (both referring to Lake Victoria[2] in western Kenya) come from some of their cultural history of land use and knowledge of types of soil.

"Grassroots indicators"

Traditional knowledge on climatic information, sometimes referred to as "grassroots indicators", has been defined as a measurement of signals of change in the environment. The knowledge derives from direct observation and practices occurring usually over an extended period of time. This pool of information may come from a handful of people who vary in age, gender and occupation (Ocholla-Ayayo, 1970, 1980, 2001, 2002/3; Oduol 2001; Swantz 1993:2).

Some communities stepped in subsistence existence learn of the interactions and habits of other living creatures they share the earth with (animals, insects, birds, etc.) through observation. Their entire life, habits and relationships are shaped in a collage of substances and colours of migratory baits and an organic life all intertwined in their daily existence and survival activities.

These are the interactions and relationships referred to as grassroots indicators used by people to predict environmental changes, monitor food production systems, and plan subsequent activities for implementation.

Observation of plant, crop survival

The knowledge and observation of plant and crop survival helped to plan for production activities. Based on seniority of age, both males and females demonstrate equal experience and knowledge of behaviour of plants, which enables them to plan their farming activities.

The knowledge base and techniques of food production in the Lake Victoria region is poorly documented. Fishing is the main food production for the lakeshore inhabitants, but most young fishermen are unaware of the importance of the traditional community indicators for monitoring and planning their production activities.

Communities around the lake have learnt to use bird behaviour and the direction of winds as indicators of planning their fishing activities. They make use of the behavioural

patterns of some lake/sea birds and changing directions of winds, and also the changing position of the sun and other creatures.

Bird, wind behaviours

The *obalagwasi* is a **fish eagle** that has been observed to predict the directions of the movement of the fish in the lake and large rivers nearby. The arrival of *obalagwasi* in large numbers is a sign of the arrival of the tilapia and other larger fish from the deep lake. As the *obalagwasi* swoops towards the thick trees of the lake, the fishermen interpret this gesture to mean a **storm** is approaching or building up. A descending *obalagwasi* may call loudly to inform the fishermen about the pending storm.

Fishing by "*osadhi"* (fish cage) is done when rivers overflow their banks. *Osadhi* is a fish cage with one entrance only. It is fixed with logs across the flowing water from the direction fish are expected.

TABLE: The table below shows some indicators of changes that determine production behaviour and the expected economic activity. Some indicators of change in ecosystem, soil fertility, commencement of season, development activity (table excerpted from more comprehensive original version)

[illegible]	[illegible]	[illegible]	[illegible] [illegible]
Commencement of rains	**Type of plant**	**Observed behaviour**	**Expected**
Commencement of rains	*Oridio* (water tree)	Drying up	The appearance of buds and flowers make the beginning of planting of some crops sometimes even before the first rain
Rainstorm with strong or violent winds season	Swifts (*opich raten'g gi makwon*)	Long distance swift (*opija*) arrive in the morning hours and may leave the same day depending on the distance of the rain storm behind them	People to prepare covers or shelter because of pending storms
Before the first rains	*Omonyio*, red ants (*tho-morno*)	Insects are transferring their eggs, or food to safer places	Rain makers are busy walking around to tell the people to be careful about lightning, thunder, hailstone and violent winds
Atmospheric condition before the first rains	Too many insects towards the end of the dry season	The insects seem to be busy doing something or looking for something or just chatting	People with leaking roofs are worried – they must be fitted on time. Look at the sky for lightning
First rains of the season with violent winds and thunders sometimes hailstones expected	*Fullo* (small birds)	*Fullo* come out to open their underground roads blocked by the first rain. Small birds disappear – go for hiding	Polygynous home take their first wives to plant crops on the first rain
Second rains of the season with winds and thunders and lightning is expected	Insects of all types disappear during evening and morning times	Insects resurface only when the sun appears during the day	Second wies plant their crops and third day the third wives plant their crops according to tradition
Third rainfall may be normally heavy but not so destructive	Frogs (*ogwande*)	Cry the whole night and evening	Planting of crops continue. Some late cultivation continues

Osadhi fishing is also undertaken during dry season in the middle of larger flowing rivers. The loch and *osadhi* fishing comes to an end when ***nyagenya* wind** begins to blow from the north and/or when *yandha* wind blows from the lake with **strong waves**.

Most of the fishermen do not go to the lake when *kumadhi, misoke and nyakoi* winds are blowing. During these times of the year, many boat users may be killed by storm. *Kumadhi,* like ***nyakoi* wind**, is an indicator of **drought** or **dry season**. In the mainland, *kumadhi* winds usually dry up water from crops and even grass for cattle within a very short time of the drought (Ocholla-Ayayo, IDI and FGD. In Kanamkago and Rusinga, 2002/2003).

Generally, in most parts of Kenya, fish consumption is very low or entirely absent except at the height of rains. In some areas of the lakeshore region, fish consumption is low during the dry season when the *kumasi* wind is blowing. During the rainy season, when ***yandha* wind** is blowing from the lake in April and May and **rivers overflow** their banks, there is plenty of fish (Ocholla-Ayayo FGD, and IDI, February 2003; Rusinga).

***Migenya* wind**, when blowing, is accompanied by **heavy rains** that make the lake to be rough. During this period, fishing activities are suspended, leading to low fish production.

On the lakeshore, fish largely take the place of vegetables and meat as the principal food from January to March which is the time when there is, in most likelihood, grain shortage. The "hungry months" (as the Luo call them) are from January to May when there is no *ugali* (maize meal, Kenyans' staple food) to accompany the supply of fish. The absence of *ugali* means **famine** (*kech*) and must be mitigated. At the same time, the absence of *rechi* (fish) means **drought** that must be planned for in advance.

When ***kumadhi* wind** blows from Kisii highlands in the east, it brings with it **dry season**. At times, when it blows from northeast, **drought** definitely sets in.

"Modern" and "traditional" for better results

The depth of knowledge of traditional indicators of food production by the respondents depended, to a large extent, on age, their intimate and continuous interaction with natural resources as farmers and fishermen or pastoral and cattle keepers, over a long period of time.

In fish production, the youth depend on the luck of the draw rather than on the use of skills and experience. Young fishermen therefore fish under the instruction of senior (old) fishermen who own the boats and the nets.

Even though some young people with money today can afford to buy fishing nets and even a boat, they still often operate under the supervision of old fishermen. This is a clear indication of the fact that "modern" and "traditional" are not always mutually exclusive, and would even, sometimes, produce better results. Not to mention another tradition of the Luo and Abasuba communities - which has nothing to do with climatic information but which is indicative of some values underlying their general relationship and interaction with other living creatures: when a fisherman catches 10 fish, he should return one in the water...

[1] Paper entitled *"Traditional Knowledge and Use of Climatic Information for Planning Food Production and Other Development Activities in South Nyanza"*.
[2] Lake Victoria, Africa's biggest lake (over 68,000 sq. km), is shared by Kenya, Tanzania and Uganda. ■

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Africa needs to develop its water resources for socio-economic progress

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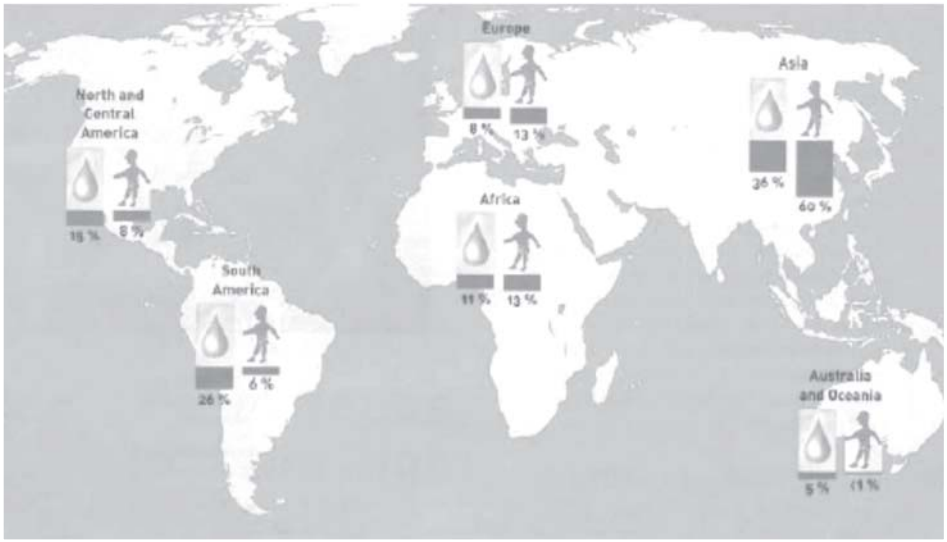
Water. Over 90 per cent of all disasters occurring around the world are related to water. "There is a clear link between water resource variability and risks of disasters," says Dr Kwame Donkor of the UN Economic Commission for Africa[1], in the following article[2] on water resources and socio-economic development in Africa.



A geographic distribution of the water and populations between the five continents

The importance of water for socio-economic development is well recognized globally. However, as a result of increasing population and their demands for various uses, water scarcity is looming in many countries of the world.

Natural, human threats on water

The major issues in the utilization of water for African development are related to water availability and access. This is a major constraining factor in food production, health and industrial development. Water as a resource also faces many threats - both natural and human.

Among the *natural threats* are:

- The multiplicity of transboundary water basins;
- Extreme spatial and temporal variability of climate and rainfall, coupled with climate change;
- Growing water scarcity, shrinking of some water bodies, and desertification.

The *human threats* include:

- Pursuit of inappropriate governance and institutional arrangements in managing national and transnational water basins;
- Depletion of water resources through pollution, environmental degradation and deforestation;
- Failure to invest adequately in resource assessment, protection and development;
- Unsustainable financing of investments in water supply and sanitation.

New vision for water, framework of action needed

These threats pose challenges in managing the water resources on the continent and in meeting competing demands for basic water supply and sanitation, food security, economic development and the environment.

It is widely recognized that the threats cannot be successfully addressed by adherence to business as usual in water resources management at national and regional levels. For such an approach would lead to disastrous consequences.

Such an approach would lead to a future where the available water resources would become inadequate to support competing demands for sustaining life, economic development and the environment.

Addressing the threats calls for a new vision for water, together with a framework for action designed to ensure that we are able to achieve the vision.

The most pressing challenges

Within the existing African frameworks (African Water Vision 2025, NEPAD and the WSSD Implementation plan), the most pressing challenges relate to meeting basic needs and include:

- Reducing the proportion of people without access to safe and adequate water supply and sanitation (by 50% - MDG (Millennium Development Goal) or by 70% - African Water Vision in the year 2015).
- Water for achieving food security by increasing productivity of rain-fed and irrigated agriculture and increasing the size of irrigated areas (by 30% and 50% respectively as desired in the African Water Vision by the year 2015).
- Increase in the development of the water resource potential by 5% in 2005, 10% in 2015, and 25% in 2025 as recommended in the African Water Vision to meet increased demand from agriculture, hydropower, industry, tourism and transportation at national level.
- Conservation and restoration of the environment, biodiversity and life

supporting ecosystems through (i) the allocation of sufficient water for environmental sustainability (to be implemented in all countries by 2015 as recommended by the African Water Vision), and (ii) the conservation and restoration of watershed ecosystems (to be implemented in 50 % of countries by 2015 as recommended by the African Water Vision).

- Effective management of droughts, floods and desertification (to be operational in 50% of countries by 2015 and 100% of countries by 2025 as recommended by the African Water Vision).

All the targets and milestones discussed can only be said to have been achieved if clear indicators of progress and a universally acceptable (by all stakeholders) monitoring mechanism are instituted. These indicators must be reproducible and must present complex phenomena of the water sector in a meaningful and understandable way for decision-makers as well as the public. They should represent benchmarks to measure changes both in space and time, and assist particular policy makers in understanding technical issues and in promoting effective water governance.

The UN System was charged with monitoring progress made in attaining the MDG goals at the 2002 World Summit on Sustainable Development (WSSD). All the UN Agencies involved in the water sector and organized as UN Water/Africa have taken up the challenge by instituting a bi-annual African Water Development Report with the ECA as coordinator.

The major constraints in monitoring progress can be summed up as follows:

- Data availability;
- Information scaling and aggregation from different sources;
- Lack of capacity in utilizing albeit in adapted forms of existing earth systems modelling platforms and data;
- Obsolescence of many hydrological and meteorological measuring systems;
- Lack of readily available and usable sets of socio-economic variables to quantify the use of water especially among the poorer segments of African society;
- Large uncertainties in the accuracy and reliability of existing assessments.

Responding to the most pressing challenges

Africa's response to the most pressing challenges should be multifaceted, participatory and will, to a great extent, require sustained and effective support from its development partners.

Reducing the proportion of people without access to safe and adequate water supply and sanitation *(by 50% - MDG or by 70% - African Water Vision in the year 2015).*
The following approaches are suggested for Africa in meeting this challenge:

1. Policy Shift towards better household water-quality management coupled with improved individual and family hygiene.
2. Expansion of the water supply and sanitation coverage.
3. Upgraded service levels to ensure reliable supplies of acceptable quality.
4. The incorporation of sound, health-based practices such as Health Impact Assessments (HIAs) in water resource development projects.

Water for achieving food security by increasing productivity of rain-fed and irrigated agriculture and increasing the size of irrigated areas *(by 30% and 50% respectively as desired in the African Water Vision by the year 2015).*
Most African economies are agrarian and based on subsistence farming. Almost all agriculture, especially in sub-Saharan Africa, is rain-fed. FAO estimates that North Africa will be using 40% of its renewable water resources for irrigation by 2030, and this threshold represents the point at which hard choices have to be made between agriculture and other competing uses. In the rest of Africa, irrigation water demand is very low and expected to remain so past 2030. The policy question this raises is the following: Why should this continue on a continent facing severe food insecurity?

Africa's response should be emphatically yes to expanded irrigation development with a focus on farmer-managed small-scale systems to avoid the post-independence fiascos of large-scale socialist-oriented and government-controlled irrigation systems.

These systems should focus on the ability of communities to adopt the technological innovations implicit in irrigation. A well thought out irrigation policy, as part of an Integrated Water Resources Management (IWRM) framework, is the only way to ensure sustainable agricultural production - to meet the food requirements of Africa's growing populations.

Increasing the development of the water resource potential *(by 5% in 2005, 10% in 2015, and 25% in 2025 as recommended in the African Water Vision to meet increased demand from agriculture, hydropower, industry, tourism and transportation at national level).*

On a continental scale, most of Africa's water resources have not been developed. Only about 4 % of the aggregate internal renewable resources are withdrawn for agriculture, industry and community use (ECA, 1999). This does not include extensive ground water resources whose magnitude and availability have not been assessed in most parts of Africa, except in the countries bordering the Mediterranean and Southern Africa.

A solution to this challenge for decision-makers is to mobilize the financial, technical and institutional resources needed to meet the development targets. The defining constraint is financial. At regional level, this has been recognized and the African Development Bank (AfDB) has been requested to lead this task.

Some of the current responses that have been initiated within Africa are:

- The setting up of the African Water Facility (AWF) as a funding mechanism to leverage greater investments in the water sector.
- Allocation within AfDB of funds for regional projects, which was not possible before the new Water Policy was developed.

• Ongoing efforts to mobilize targeted funding for African Water Development within the NEPAD (New Partnership for Africa's Development) framework through the Canada Africa Fund, the proposed EU Water Fund and similar initiatives which are outcome of the World Summit on Sustainable Development (WSSD).

Effective management of droughts, floods and desertification *(to be operational in 50% of countries by 2015 and 100% of countries by 2025 as recommended by the African Water Vision).*
More than 2,200 major and minor water-related disasters occurred around the world between 1990 and 2001. The majority occurred in Africa and Asia. Africa accounted for 29% of all the disasters whilst Asia accounted for 35%. The number of people affected worldwide rose from 147 to 211 million and the number of deaths were more than 665,000 with 90% caused by water-related disasters. A disproportionate number of the fatalities occurred in Africa when coping and mitigating capacities are low.

Although floods are more frequent, due to the relative short period of time within which they occur, only 15% of fatalities could be attributed to floods. At the other extreme, although overall droughts represent 11 % of disasters, they caused 42% of fatalities due to their creeping and relatively long duration.

Some of the major disasters experienced in Africa are:
• The Sahelian droughts of the 1970s;
• Droughts in the Horn of Africa which are increasing in frequency. In 1983/84, 300,000 deaths were recorded in Ethiopia alone, and the current droughts are threatening about 14 million Ethiopians, mainly poor peasants;
• Southern Africa has been suffering from acute drought since 2001 and this has affected over 20 million people with economic costs estimated at tens of billions of US dollars;
• The Mozambican floods of 2000 that set back the fragile economic progress made over a decade.
In terms of solutions in confronting this challenge category, African decision-makers must consider combinations of the following strategies:
1. Integrating risk reduction as part of water resource planning and project design;
2. Show more political commitment when preventive measures have to be enforced, such as deterring people from living in floodplains;
3. Investing in risk mitigation or disaster prevention both in terms of infrastructure and social interventions;
4. Pay attention to the three facets of risk management; assessing the risks; implementing both structural (e.g. dams) and non-structural measures (enforcement of zoning policies) to reduce risks, and sharing risks through insurance and other transfer mechanisms;
5. Investing more in forecasting institutions, equipment and personnel.
There is a clear link between water resource variability and risks of disasters, and investment is needed to mitigate risks. These investments yield very favourable returns when compared to the large opportunity costs of countries adapting to the effects of water-induced shocks on their economies. ■

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[1] *The UN Economic Commission for Africa, UN/ECA, is the coordinator of a bi-annual African Water Development Report instituted by all UN agencies involved in the water sector and organized as UN Water/Africa.*

[2] *Article excerpted from detailed and lengthier original paper by Dr Stephen Maxwell Kwame Donkor. For more information about the original paper, please contact UN/ISDR Africa.*

Lessons from 1997-98 El Niño-induced floods in Kenya

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El Niño caught Kenyans "by surprise" in 1997-98, causing losses worth at least 900m US dollars. Yet, three months before the event, a weather forecast had warned against widespread flooding. But since then, lessons have been learnt on how to reduce flood emergencies through early warning and preparedness.

Kenya's short rains, which occur from October to December, were extremely magnified during the 1997-98 El Niño episode. The rains, which started as normal rains in October in most parts of the country, picked up to flooding levels in early November and continued at high levels into January of the following year. They subsided slowly and ended by mid-February 1998 in most parts of the country.

Forecast met with skepticism (due to alleged earlier "wrong" forecasts)

Ironically, the Kenya Meteorological Department (KMD) had issued a forecast indicating widespread flooding in most parts of the country as early as July 1997. KMD says the forecast was sent to the Office of the President, Ministry of Agriculture and Ministry of Information, Transport and Communications, which are usually on their mailing list. The information was also sent to the Kenya Power and Lighting Company which uses monthly and seasonal rainfall forecasts for planning water releases from the country's main hydroelectric dams.

The forecast was subsequently widely published through the electronic and print media. However, it was received with skepticism due to alleged earlier "wrong" forecasts from KMD. It was therefore not taken seriously, and no mitigation and/or emergency response measures were therefore put in place. In general, a sizable percentage of the Kenyan population were aware of the impending heavy rainfall in advance, but did very little to safeguard themselves against the impending floods.

Forecast proved right

As the heavy rains hit the country and continued into December 1997, almost everybody realized that the KMD warnings were real. The interest in and awareness of El Niño was enhanced when its devastating impacts were seen throughout the country. The various articles and presentations in the print and electronic media created more interest and awareness on the subject.

Due to its uniqueness, intensity and destructive power, the 1997-98 El Niño-induced flooding was an intriguing phenomenon to many in the country, even to those involved in ENSO (El Nino-Southern Oscillation) research.
Interestingly, the 1997-98 El Niño was blamed for almost all the problems that individuals, groups and the Kenyan population as a whole were facing, be it the worsening national economy, social ills and diseases, retarded national development or even domestic hardships.

The resultant floods had wide-ranging positive and negative impacts on various sectors of the national economy. The sectors identified as most seriously affected were agriculture, water resources, transport, communications and health.

Economic losses worth over 900 million US dollars

Water resources. The water resource sector was affected by the 1997-98 El Niño induced floods. The negative impacts included widespread flooding that led to the destruction of property in most parts of the country, increased soil erosion in areas with poor land use and management practices, and increased frequency of mudslides and landslides, especially in hilly areas.

Other negative impacts included surface and ground water pollution, destruction of small storage earth dams, and increased sedimentation and siltation in rivers and streams that led to the sedimentation and siltation of major water storage reservoirs. The general cost of these negative impacts amounted to about 9 million US dollars.

Agriculture. The agricultural sector was also affected by the floods. The abundance of rainfall resulted in increased plant and animal diseases that affected the livestock and crop production in several regions. The flooding also affected farms through water logging, leading to further reduction in yields and destruction of livestock water facilities.

Livestock. Several cases of death of animals through drowning were also reported. The estimated combined loss suffered by this sector reached 236 million US dollars.

Roads, road transport. The 1997-98 El Niño floods devastated the transportation sector. The floods and landslides wreaked havoc on roads and transport infrastructures throughout the country. Several bridges and an estimated 100,000 km of both rural and urban roads were destroyed, leading to a general paralysis of the transportation system in most parts of the country. The estimated cost of these damage was about 670 million US dollars.

Aviation, shipping industries. The aviation and shipping industries were also disrupted through the

flooding of the facilities. Scheduled and chartered flights were disrupted due to poor visibility and the submergence of the navigational equipment and runways by floodwaters. Docking facilities at shipping ports were also submerged in floodwaters, making it impossible to offload merchandise from the ships.

Telecommunications. Telecommunications were severely affected by falling trees that destroyed the communication lines. Underground cable channels were also flooded, causing a disruption in services. Interruptions of electric energy supply were experienced as some equipment were destroyed by floodwaters, falling trees and collapsing buildings.

Health. The 1997-98 El Niño-induced floods greatly affected the health sector. Over 300,000 families were adversely affected by the phenomenon. The country's health resources were stretched beyond manageable levels. Several health facilities were physically destroyed and water sources contaminated.

There was also an increase in the number of stagnant water ponds, overgrowth around homesteads and market centres, blockage and overflow of sewers and open drains, and an increase in fly breeding as a result of the decomposition of refuse. These factors led to an upsurge of disease epidemics and higher morbidity and mortality rates.

Education. The education sector was also affected, with schools made inaccessible because of flooding. This led to closure or low attendance rates in schools. The end-of-year examinations were disrupted.

Business. Business was seriously affected through the aforementioned transportation and energy disruptions.

Political, social activities. The general elections for the country's parliament were adversely affected by the generally poor conditions of roads. The heavy rains also interfered with social functions such as weddings, funerals and church services.

Positive effects...

However, some positive effects of the event were recorded:

- The energy sector benefited from a complete recharging of hydroelectric dams and, therefore, enhanced electricity production.
- The water resource sector benefited from the excess rainfall. Water pollution loads were reduced through the washout effect of the floods, and water reservoirs were adequately recharged (hence boosting also the levels of the hydroelectric dams).
- Tree planting and survival rates were also generally increased to nearly 100 per cent.
- In well-drained soils, agricultural production also increased due to enhanced availability of moisture for crops. The rains enhanced and prolonged the time of moisture availability for the biological soil and water conservation structures to flourish.
- In arid and semi-arid areas, the rains were a welcome relief from the perennial dry situation leading to development of good pasture and the resultant improved livestock performance.

No flood disaster management policy, no institutional framework

Considering the impacts of the 1997-98 El Niño event on various sectors in Kenya, it is evident that Kenyans were not adequately prepared and had no facilities in place to cushion the adverse impacts. Although the forecast was available in July 1997, no mitigation or emergency procedures were put in place. Due to the low frequency of widespread flooding problems in the country, the Kenyan government had neither a flood disaster management policy nor an institutional framework to monitor and manage flood disasters prior to the 1997-98 El Niño floods. The only disaster management institution that was in operation during the early periods of the 1997-98 El Niño floods was the National Famine Relief Programme whose mandate is almost exclusively related to monitoring and management of the negative impacts of droughts. This programme was not well equipped to manage the impacts of heavy rains.

Further, an attempt by the government to mitigate the effects of the negative impacts of the 1997-98 El Niño floods was hampered by the diversity of the impacts, which could not therefore be handled by any one government ministry in isolation.

Government, donors, media, private sector join hands

However, after the effects of the rains began, the government acted by setting up a National Disaster Operation Centre to oversee and coordinate all efforts made to address the serious impacts. It also embarked on a public awareness campaign through the electronic and print media and declared the floods a national disaster.

Despite the limitations of the prevailing economic and financial constraints, the government spent large amounts of money to purchase and transport emergency food, water treatment chemicals and medical supplies to the worst affected communities. It also approached donor countries and agencies to help defray the costs of rehabilitation and emergency operations.

The media also played an important role by publishing, on a daily basis, stories related to the effects of the event. It raised the awareness of the public as well as that of policy makers.

Private companies responded to the emergencies by pooling their resources together and participating in the rehabilitation of the infrastructure around them. They resorted to the use of diesel-generated power during power interruptions, and were therefore able to maintain some production levels.

Lessons learnt

Several lessons were learnt from the devastating impacts of the 1997-98 El Niño-induced floods:

- The scientific community, which is involved with research on the El Niño phenomenon and rainfall characteristics in the region, learnt that the warming (or cooling) of the Indian and Pacific oceans adversely affects rainfall patterns in Kenya. However, research has not revealed clearly yet the quantitative association between El Niño extremes in tropical Pacific Ocean and rainfall variations in the east African region.

- A lot of effort is being made towards the understanding of the frequency and occurrence of extreme rainfall events in Kenya, and how these are related to El Niño. Several research papers have been produced on this topic, furthering knowledge about it and El Niño's teleconnections to Kenya. Thus, the relationship between El Niño and rainfall over Kenya is now relatively understood better, leading to better seasonal rainfall forecasts. These forecasts are now being effectively utilized in reducing risks associated with frequent flood hazards of some areas near the shores of Lake Victoria (in western Kenya - Africa's biggest lake shared by Kenya, Tanzania and Uganda).

- The 1997-98 El Niño event hit the country at a time when the government had no plans, no policies in place to deal with the associated floods and resulting health hazards. The country had neither a national plan nor a policy for responding to flood disasters. The government learnt that such a plan or policy had to be developed or added to either the National Disaster Plans or to the National Water Policy, with clear flood early warning, flood management and flood coordination mechanisms. This policy is now in its final stages of development.

The way forward for coping with flood hazards in Kenya

- The seasonal rainfall forecast should, if possible, be for periods longer than 3 months, so that effective control measures can be put in place.
- Storm drainage systems in urban areas should be maintained and serviced regularly.
- The government should educate the public well in advance through proactive awareness campaigns about impending flood hazards.
- Efforts should be made to make the Kenya Meteorological Department's forecasts more accurate.
- Settlements in disaster-prone areas, especially in flood plains, should be discouraged through clear government policies.
- In the future, planners in flood-sensitive sectors should always incorporate climate and weather information in their planning activities.
- The government should institute a policy or plan that supports flood prevention through integrated watershed development programmes in eroded mountainous regions.
- There is need to find a viable response to future disasters through intervention by, for example, capacity building for early warning and disaster preparedness. ■

Sources:
1. Once Bitten, Twice Shy. The case of the 1997-98 El Nino Induced Floods in Eastern Africa, Michael Glantz (ed), 2000.
2. Managing the Flood Disaster of 1997-98. Reports of the National Operations Center, Office of the President, 1999.

MADAGASCAR: Disaster management bill passed by Parliament, ISDR national platform launched

Mrs. Lucile Randrianarivelo
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Disaster-prone Madagascar is making a drastic move to prevent the possible impact of natural hazards. In a single year - 2003, a National Strategy for Disaster Risk Management has been developed, disaster reduction incorporated into an IMF-approved Poverty Reduction Strategy Paper, a Disaster Risk Management Bill passed by Parliament, a National Plan for Disaster Risk Management in preparation, and an ISDR National Platform launched.

Participants at the workshop

Cyclones, floods, drought, locust invasion, epidemics: over the last 35 years, 38 natural hazard events have left more than 4,000 people dead, some 6 million others affected, and a total economic loss of about 1.3 billion US dollars in the south-western Indian Ocean island of Madagascar.

Over 1 natural disaster per year

Escalating environmental degradation (deforestation affecting 200,000 ha per year) has combined with increased human vulnerability (75 % poverty rate) to increase the impact of disasters dramatically. As a result, natural disasters, whose average rate is over 1 disaster per year, now constitute a real threat to sustainable development efforts and poverty reduction initiatives.

In a bid to reduce the impacts of natural hazards, an informal national platform named *Comité de réflexion des intervenants en cas de catastrophe* (CRIC - Disaster Response Stakeholders' Brainstorming Committee) was set up in 1996 by stakeholders in disaster risk and emergency management. Even though CRIC has become central to disaster risk management and response in the country, Malagasy authorities have sought to formalize CRIC as an ISDR National Platform, in line with growing attention to "prevention" (as opposed to "response").

To this end, a workshop was held on 16 and 17 July 2003 in the capital, Antananarivo, at the request of the Malagasy Interior Ministry. The workshop, which was jointly organized by ISDR Africa and UNDP Madagascar - under the initiative of Madagascar's National Relief Council (CNS), was attended by representatives of various government ministries, international organizations and UN agencies.

UNDP Madagascar was represented by humanitarian affairs officer Mr Michel Matera, and UN/ISDR Africa by the programme officer, Mrs Noroarisoa Rakotondrandria.

Disaster risk management bill passed "unanimously" by Parliament

Speaking during the opening ceremony, UN Resident Coordinator, Mr Bouri Sanhouidi, said Madagascar could not escape the current global trends of disasters, namely the increasing number and impact of natural hazards.

He said disasters were among major problems faced by the country, but the Malagasy government had taken a big step forward by drafting a Disaster Risk Management Bill.

It is to be noted that Madagascar is also among the first African countries to have incorporated disaster risk management (DRM) into its IMF-approved Poverty Reduction Strategy Paper (PRSP). Regarding the above-mentioned bill, Mr Ali Michel, chief of the Office

of the Interior Minister, said the bill was unanimously passed by Parliament on 10 July 2003 (six days before this workshop).

National strategy for disaster risk management in place

Elaborating on the bill, Mr Ali Michel said it was in line with a National Strategy for Disaster Risk Management formulated in collaboration with UNDP – following the recommendations of the 1990-99 International Decade on Natural Disaster Reduction (IDNDR).

Hailing the existing cooperation between Madagascar and UN/ISDR, Mr Ali Michel called for capacity sharing and an integrated approach encompassing other areas linked to disaster risk management - such as insurance, resource mobilization, technical assistance, early warning experiences, etc.
His call was directed not only to Indian Ocean islands but also mainland Africa countries.

From "relief" to "risk management"

Mrs Marie Lucile Randrianarivelo, permanent secretary of the National Disaster Relief Council (CNS), presented a number of steps taken by the Malagasy government to enhance disaster risk management: (1) vulnerability assessment by UNDP, (2) national workshop to formulate the national strategy, (3) drafting and submission of the Disaster Risk Management Bill to the National Assembly (Parliament).

Mrs Randrianarivelo also explained that the Bill sought to replace the National Relief Council (CNS) with a National Office for Disaster Risk Management (*Bureau national de gestion des risques de catastrophe*, BNGRC) whose role is to coordinate disaster reduction, mitigation, preparedness, early warning, recovery and reconstruction activities at national level.

ISDR national platform launched

After agreeing on the formation of the ISDR National Platform, the participants at the two-day workshop issued the following recommendations regarding the national platform:

- **ISDR National Platform named *Plateforme nationale des intervenants en gestion des risques et des catastrophes, PNIGRC*** **(**National Platform for Disaster Risk and Disaster Management)
- Main objectives of PNIGRC: (1) to enhance regional cooperation between national platforms and UN/ISDR Secretariat; (2) to build strong network among national platforms to ensure political and capacity support for ISDR implementation
- Specific objective of PNIGRC: to enhance collaboration between stakeholders in Disaster Risk Management (DRM) to implement the national strategy for DRM
- PNIGRC membership to include[1]: Office of the President, Office of the Prime Minister, ministerial departments, provincial governors, representatives from Senate, National Assembly (Parliament), multi-sectoral bodies, international and national NGOs, UN agencies, bilateral and multilateral missions, private sector, professionals currently working in DRM, media
- ISDR national platform to have its own secretariat and financial resources

Immediate actions to be taken include:
- Enhancing members' capacities
- Networking
- Participation in various workshops, conferences, etc.
- Development of database in disaster reduction
- Standardization of terminology
- Assisting the preparation of a National Plan for Disaster Risk Management and the legal recognition of the ISDR national platform
- Inventory of regional and international cooperation
- Recruitment of national consultant to assist the establishment of the ISDR national platform both technically and legally
- Transfer of two civil servants to ISDR national platform

Recommendations

Institutional capacity

- Evaluation of a Disaster Management Information and Communications System to be completed by CARE/CNS, local government authorities and ISDR national platform members
- Information session for ISDR National Platform members on PRSP (*Poverty Reduction Strategy Paper*)
- Task force to develop national DRM plan to be submitted to national workshop to be held in October 2003
- To request government special funds for DRM (from increased taxation, for instance) to avoid bureaucratic procedures in times of emergency
- To establish a National Centre for Emergency Operations

Advocacy

- National NGOs and international organizations should introduce disaster vulnerability reduction in their activities

Regional cooperation

- To join existing disaster-related networks at African level
- Communication and information with UN/ISDR Africa. ■

[1] CRIC (Disaster Stakeholders' Brainstorming Committee), the informal platform now turned into an ISDR national platform, was composed of key ministerial departments such as Interior, Health, Meteorology and Agriculture; UN agencies including the UNDP, UNICEF, WFP, WMO and FAO; international bodies like the World bank, USAID and international NGOs ; and diplomatic missions. CRIC also developed training materials.

Uganda launches ISDR national platform, drafts disaster management bill

Mr. Martin Owor
Focal point, National Platform
Kampala, Uganda

Uganda is among countries prone to seisme in sub-Saharan Africa. And concerns are growing over the possible impact of earthquakes in particular, and natural disasters in general. A workshop has been held. Officials from various sectors for the first time got together to discuss disaster risk management. An ISDR national platform was launched. A Disaster Preparedness and Management Bill is in the pipeline.

In addition to other natural disaster hazards faced by other east African countries, Uganda is known to be an earthquake disaster prone which have caused death and damage to infrastructure worth billions of Uganda shillings, most of the deaths resulting from collapsing buildings.

However, compared to devastation in other countries hit by earthquakes of the same magnitudes, the toll has been lower in Uganda mostly because most the events occurred in areas of little infrastructure and low population density.

However, as a result of the high economic and population growth of the last 17 years, infrastructural development, such as modern concrete housing stocks, has doubled in numbers. Hence growing concerns over the magnitude of the disaster when the next significant earthquake strikes.

ISDR national platform needed

It is in the light of the above, and other threatening natural hazards, that a "Uganda National Platform Workshop" took place in the capital, Kampala, from 16 to 18 June 2003, sponsored by the Nairobi-based Africa office of the UN International Strategy for Disaster Reduction (UN/ISDR).

The three-day workshop offered the first platform for representatives from major ministries and departments to get together to discuss disaster risk management. The participants were from the following ministries and organizations : Ministry of Finance, Planning and Economic Development; Ministry of Education and Sports; Ministry of Agriculture, Animal industry and Fisheries; Ministry of Local Government; Ministry of Health; Ministry of Water, Lands and Environment; Ministry of Works, Transport and Communications; Office of the Prime Minister; Uganda People's Defence Forces (the Ugandan national army); Uganda Police; Uganda Prisons; National Environmental Management Authority; Mulago Hospital; Uganda Red Cross; Uganda Seismic Safety Association (USSA); Oxfam GB; UN/OCHA (Office for Coordination of Humanitarian affairs); UNDP.

Need for "strong", "effective" inter-ministerial coordination, cooperation

The main objective of the workshop was to set in motion a process for the establishment of an ISDR National Platform, based on the UN International Strategy for Disaster Reduction, the 1994 Yokohama Strategy and Plan of Action for a Safer World, and the 1990-99 International Decade for Natural Disaster Reduction (IDNDR).

Its main focus was on how to make inter-ministerial coordination and cooperation strong and effective.

"Disaster incident always finds us unprepared"

Opening the workshop, Mr Martin Odwedo, Permanent Secretary in the Office of the Prime Minister, observed that each time a disaster incident occurred in the region, it finds them unprepared. He said

From right to left, The Permanent Secretary, Office of the Prime Minister, and the UNDP Resident Representative in Uganda at the opening of the establishment of ISDR national platform

disasters and emergencies were realities that come without notice and one ought therefore to plan in advance for them. He said it was human action that either increased or reduced vulnerability to disasters. He then called for proactive approaches such as putting in place integrated disaster early warning systems.

Mr Odwedo said : "When the proposed National Disaster Preparedness Platform is set up, we shall not only be fulfilling the requirement of the National Disaster Preparedness Policy - that calls for multi-sectoral, multi-disciplinary approach in disaster management, but we also be able to ensure timely early warning information that reach both key stakeholders and vulnerable groups of the society or community concerned whenever a disaster is predicted."

"Operationalizing" disaster risk analysis into development strategies
Speaking also during the opening ceremony, the UN humanitarian affairs coordinator, Mr Daouda Toure, examined the relationship between natural disasters and the Millennium Development Goals (MDGs).

He noted that there was urgent need to : (1) incorporate and operationalize disaster risk management analysis into poverty reduction, development and environmental strategies; (2) support capacity development at national and local levels to deal with disaster risk reduction, response and recovery; (3) ensure that existing planning tools used by the government and its development partners reflect disaster risk management.

Disaster preparedness and management bill being drafted

Mr Martin Owor, the assistant commissioner for disaster management, presented a review of Uganda's national policies, legislation and strategies for disaster management. He said the National Disaster Policy provided for the establishment of an Inter-Agency Technical Committee (IATC) under which the proposed ISDR Uganda National Platform would fall.

Mr Owor also said : "To give a legal backing to the policy, the Office of the Prime Minister is drafting a bill on disaster preparedness and management. And with support from Oxfam GB, the process of developing a strategic plan for implementation of the policy has also been initiated by the same Office of the Prime Minister."

Disaster reduction a "shared" responsibility

Ms Feng Min Kan, the Africa Region representative of the UN International Strategy for Disaster Reduction (UN/ISDR), for her part, took participants through trends in disaster reduction at global, regional and national levels.

Her presentation focused on five parts: (1) Current trends in impact of disasters on development, (2) International Strategy for Disaster Reduction (ISDR), (3) UN Inter–Agency Secretariat for International Strategy for disaster reduction (UN/ISDR), (4) Hazards, vulnerability, disasters and disaster reduction, (5) Disaster risk management.

She said disaster reduction was a shared responsibility, and national governments had to be the driving force in the implementation of International Strategy of Disaster Reduction. Effective inter-ministerial cooperation and collaboration, she said, was crucial for the success of disaster reduction.

Ongoing disaster management, risk reduction initiatives

Mr Capson Sausi, disaster management officer in the Office of the Prime Minister, took participants through a review of the ongoing initiatives on disaster risk reduction and disaster management in the country:

- Very successful research on the causes and impact of landslides on the population of Sironko District carried out by the Department of Disaster Preparedness (Office of the Prime Minister) with support from the German government through GTZ in the year 2001.
- Vulnerability risk mapping of Kotido District completed, and food early warning network system for the same district developed by the Department of Disaster Preparedness with support from Oxfam GB.
- Together with Save the Children UK, the Department of Disaster Preparedness has completed a study on the value and effectiveness of assessments before disaster response in Gulu District (northern Uganda) and the report was being compiled.
- Together with the International Organization for Migration (IOM), the department has initiated the development of a National Data and Information Centre for all hazards and disasters.
- Together with the Uganda Human Rights Commission, the department has set up an inter-ministerial task force to develop a strategic plan for rolling out the IDP Policy.
- Plans to roll out the main disaster policy being worked out with Oxfam GB.

Topics discussed

Discussion groups were formed and the proceedings went on guided by the following questions:

1. How to make inter-ministerial coordination and cooperation strong and effective?
2. How to ensure that appropriate enabling mechanisms are in place, including policy, structure, capacity building and resources (human and financial)?
3. How to sustain capacity-building effort at national and local levels?

4. How to effectively integrate disaster risk reduction into development policies, strategies and undertakings at national level?
5. How to enhance local authorities' ownership of disaster risk reduction initiatives and sustain their efforts or the progress made?
6. How to mobilize the mass media and the public for a national campaign on disaster reduction with the current limited resources?

Priority recommendations

At the end of the workshop, participants made the following recommendations:
1. Each ministry to designate a Disaster Focal Point Officer.
2. The Department of Disaster Preparedness to organize high-level sensitization meetings for policy makers.
3. The Department of Disaster Preparedness to ensure Cabinet approval of the newly developed National Policy on Disaster Management.
4. The Department of Disaster Preparedness to develop guidelines on the functions of focal points (both individual and leading existing departments) in line ministries or agencies.
5. The Department of Disaster Preparedness to encourage active participation of different stakeholders to ensure ownership and sustainability of disaster reduction and programmes.
6. Government to put functional structures in place at national and district levels, including national platform for disaster reduction.
7. The Department of Disaster Preparedness to identify disaster risks by sectors.
8. The Department of Disaster Preparedness to plan for monthly meeting of the national platform for disaster reduction.
9. The Department of Disaster Preparedness to sensitize and educate the district authorities on disaster risk reduction and their roles and responsibilities in disaster risk reduction.
10. The Department of Disaster Preparedness to develop and integrate disaster risk reduction into district development plans.
11. The Department of Disaster Preparedness to invite mass media representative to the membership of the national platform on disaster reduction. ■

DJIBOUTI NATIONAL PLATFORM: Plan of action adopted, district support units formed

Mr. Ahmed Mohamed Madar
Focal point
ISDR National Platform
Djibouti

Since its independence in 1977, disaster-prone Djibouti has experienced sub-regional conflicts, internal conflicts and a large number of disasters triggered by droughts, earthquakes and floods. The disasters left considerable impact on human lives, livelihoods and an already fragile rural economy.

Before the setting up of an ISDR national platform in February 2003, the national platform's core team members were given some training, and a Disaster Reduction Plan of Action was adopted on 25 January 2003.

Other initiatives followed the adoption of the Plan of Action. Two two-day disaster prevention and management capacity building seminars called *National Capacity Building in Disaster Management* were held in mid-February.

Another four-day seminar called *Principles and Means for Establishing Emergency Operation Centres* (COU in French) was also held in mid-March within the framework of a joint project by the Interior Ministry and the UNDP, in cooperation with the US embassy.

Field trips were also made to the country's four districts to establish support units, and the four units have been effective since early April 2003. Following all the above activities and initiatives, a one-day workshop was held in each region - from 25 to 28 May - to strengthen and raise awareness on regional disaster management capacities.

The workshops' overall objectives were to strengthen regional capacities not only in disaster prevention and response, but also in disaster coordination ; and their specific objectives
(1) to institutionalize the four districts' regional disaster prevention and management committees,
(2) enhance the understanding of disaster management cycles,
(3) enhance the understanding of disaster and risk management, and
(4) introduce other tools and methods for strengthening coordination.
The four workshops were attended by participants from various government ministries and local NGOS with clearly defined roles and responsibilities in disaster prevention and response and in development.

Also present during each of the workshop was a delegation made up of ISDR National Platform national coordinator Mr Ahmed Mohamed Madar (of the Interior Ministry), the project administrator (UNOPS), the head of the Civil Defence Department, and a representative of the National Meteorological Department. ■

NATIONAL PLATFORM NEWS

Mrs. Noroarisoa Rakotondrandria
Programme Officer
UN/ISDR Africa
Nairobi, Kenya

Djibouti

- The Government of Djibouti is planning to establish a **Department of Disaster Risk Management and Response.** The new department will be headed by the national coordinator of the ISDR National platform. For better coordination of disaster prevention and response, the existing Department of Civil protection will also be accommodated at the Ministry of Interior and Decentralization headquarters.
- Djibouti is seeking to start formulating a **national strategy for disaster risk management,** but there is need to conduct formative and informative evaluation by each concerned government ministry. The IGAD (Inter-Governmental Authority on Development) Secretariat is willing to assist in the national strategy formulation process.
- The Government of Djibouti, with assistance from UNDP Djibouti and a national consultant on GIS (Geographical Information Systems), is undertaking a **vulnerability and risk assessment in the country.** The consultant is expected to submit a basic map at the end of November 2003, and the final vulnerability and risk assessment at the end of December 2003.
- **An ISDR National Platform meeting** was held in the capital on 6 October 2003, attended by UNDP Djibouti, Mrs Noro Rakotondrandria of UN/ISDR Africa and Mr Kenneth Westgate who is the UNDP/BCPR (Bureau for Crisis Prevention and Recovery) Africa regional advisor for disaster reduction. Members of the national platform stressed the importance of communication between members and the need to formalize the existence of the national platform by decree - to allow them to work under a formal framework.

A task force was formed to draft the related decree. UN/ISDR Africa shared the disaster reduction and national platform experience of other countries - like Uganda and Madagascar - with the national platform members who welcomed the exercise.

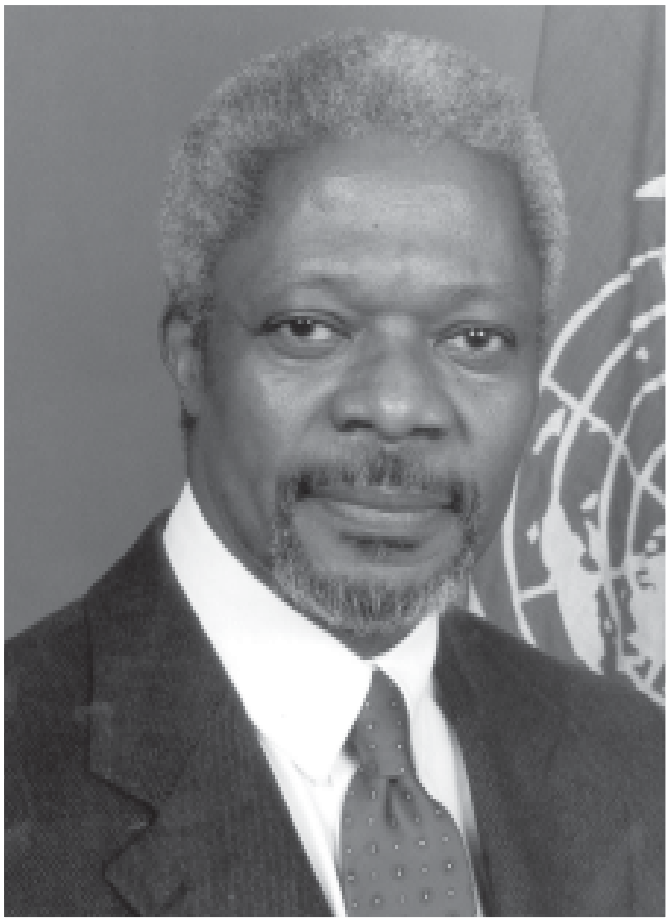
Madagascar

- Madagascar's ISDR **National platform** is still operating under its previous name, CRIC (*Comité de réflexion des intervenants en catastrophes* – Brainstorming Committee on Disasters), pending a cabinet meeting that would discuss its new operational mode.
- Madagascar's ISDR National platform and CRS (Catholic Relief Services) have produced **public awareness materials.** The materials were launched on 8 October 2003 which was the International Day for Disaster Reduction.

Uganda

- Uganda's ISDR National platform was established in June 2003 under the Office of the Prime Minister and the Ministry of Disaster Preparedness and Refugees.
- Two members of Uganda's ISDR National Platform are now undergoing **training on the vulnerability atlas in South Africa.**
- A five-member task force has been set up to visit each Ugandan government ministry to seek more information on activities related to disaster reduction in the country.
- **A Disaster Information Centre** was established in late September 2003. The Centre acts as a reference centre for all stakeholders in disaster reduction. Uganda's ISDR National platform appealed to government ministries, international organizations and UN agencies to provide the Centre with material related to disaster reduction. ■

THE UN SECRETARY-GENERAL MESSAGE FOR THE INTERNATIONAL DAY FOR DISASTER REDUCTION 8 October 2003



Mr. Koffi Annan
Secretary General
United Nations

The theme of this year's International Day for Disaster Reduction is "turning the tide on disasters towards sustainable development".

This theme reminds us, during the International Year of Freshwater, that the task is not just to preserve water resources to sustain life, but also to reduce the capacity of water to take life away. More than 90 per cent of all disasters occurring around the world today are related to water – either too little of it, in the case of droughts, or too much of it, in the case of floods, landslides, cyclones, hurricanes and typhoons. Many communities suffer repeated disasters year after year.

Natural hazards are a part of life. But hazards only become disasters when people's lives and livelihoods are swept away. The vulnerability of communities is growing due to human activities that lead to increased poverty, greater urban density, environmental degradation and climate change.

It is well within our power to do something about this. Better decision-making, improved planning, effective risk management, innovation in development and environmental protection activities – these are the human activities that can reduce the vulnerability of communities. To this end, risk assessment and disaster reduction should be integral parts of all sustainable development projects and policies.

On the International Day for Disaster Reduction, let us remind ourselves that we can and must reduce the number and impact of disasters by building sustainable communities that have the long-term capacity to live with risk. ■

THE UN/ISDR SECRETARIAT

MESSAGE FOR THE INTERNATIONAL DAY FOR DISASTER REDUCTION 8 October 2003

Dear friends,

Water – too much, or too little – plays an integral part in our lives, holds our imaginations and impacts our communities. Hydrometeorological hazards, such as floods, droughts, landslides, tropical cyclones, hurricanes and typhoons, pose a risk to livelihoods and to the process of sustainable development.

The 2003 World Disaster Reduction Campaign looks at how we cope with water-related hazards, serving to raise awareness among decision-makers and the public that there is much we can do to reduce the impacts of hazards. While it is widely acknowledged that hydrometeorological hazards are on the rise due to human activities increasing vulnerabilities, there is still greater attention (and investment) paid to the disasters themselves and the resulting deaths and destruction.

Rather, we should be looking at the longer-term investment of disaster risk reduction strategies – incorporating disaster preparedness, mitigation and prevention – that would in fact in the end significantly reduce their impacts and costs. We need to shift our focus: *from disaster relief to disaster reduction*.

The World Disaster Reduction Campaign builds momentum throughout the year, culminating in the International Day for Disaster Reduction on 8 October whereby it is celebrated worldwide. We invite you to take part in the Campaign by organizing activities to highlight the importance of reducing the impacts of water-related hazards. ■

Mr. Sálvano Briceño
Director
UN Inter-Agency Secretariat of the International Strategy for Disaster Reduction

International Day for Disaster Reduction marked in Djibouti, Madagascar, Uganda

Mrs. Noroarisoa Rakotondrandria
Programme Officer
UN/ISDR Africa
Nairobi, Kenya

UN/ISDR national platforms in Djibouti, Uganda and Madagascar marked the International Day for Disaster Reduction on 8 October 2003. Each country had its own way of marking the Day.

Djibouti

Stakeholders in disaster reduction and risk management gathered at the conference room of the Ministry of Interior and Decentralization, in the presence of the Minister of Interior and decentralization, Mr Adboulkader Doualeh Waiss. They represented government ministries, the IGAD (Inter-Governmental Authority on Development) Secretariat, UN agencies, the private sector, the civil society and the ISDR National Platform.

Interior and Decentralization Minister Adboulkader Doualeh Waiss addressed the gathering. He said Djibouti had passed the first phase of trial in disaster reduction and wished to proceed on the next phase of formulating a national strategy and setting up a solid and reliable structure for disaster management. He also thanked various partners and donors and assured that his ministry is ready to learn from other countries, but also share their experiences with other countries in the future.

Then the interior minister proceeded on his speech for the day which was followed by the UN Secretary General's message (on the occasion of the International Day for Disaster Reduction) read by Mr Asare of the UNHCR who was the acting UN Resident Coordinator, in the abscence of Ms.Mbaranga Gasarabwe.

The theme of the International Day for Disaster Reduction this year is "Turning the Tide on Disasters towards Sustainable Development". Mr Mohamed Ismael, director at the Ministry of Water Resources, gave a presentation on water and disasters in the Djibouti context. He said that in the

case of floods, Djibouti had learned a lesson from the 1994 floods that left many people died and a large number of houses destroyed. Regarding drought which has been experienced by the country every year and has a negative impact especially on women, children and livestock, Mr Mohamed Ismael said his ministry, in partnership with the Ministry of Agriculture, was conducting a pilot project on irrigation and farming in northern Djibouti.

UN/ISDR Africa was represented by its Nairobi-based programme officer, Mrs Noroarisoa Rakotondrandria. Her address was focused on linking disaster reduction with sustainable development. She said sustainable development was also development "sustained", and that disaster reduction was poised to be a key "sustainer" - provided that communities were involved in all activities. She also thanked the organizing committee and UNDP for supporting the International Day.

The various speeches and presentations were followed by discussions during which members of the ISDR national platform renewed their commitments to disaster reduction in the country.

T-shirts were also distributed to mark the Day. The Djibouti Campaign on Disaster Reduction will not stop there: the national platform will organize a school information session at the end of October 2003.

UN/ISDR Africa produced a radio programme is composed of 4 scripts in French on hazards and disasters, the impacts of disasters, drought and UN/ISDR's Role. The tape was launched on that day and distributed to various radio stations. Plans are under way to translate the radio programme into local languages to be broadcast on the national radio.

Madagascar

The International Day for Disaster Reduction was marked on 8 October at the CNS (National Relief Council) headquarters. Interior and Administrative Reform Minister Jean Seth Rambeloalijaona based his speech on the Day's theme "Turning the Tide of Disasters towards Sustainable Development". He also comforted disaster victims. The ISDR national platform chose the theme "Drought and Floods" for the day.

Public awareness materials in French and Malagasy on drought and floods were launched on the International Day. Produced jointly by the CNS/National Platform and Catholic Relief Services (CRS), they were made up of posters, advice maps, technical guides and leaflets. T-shirts and caps were also distributed. The materials are destined for use by stakeholders in disaster reduction in public awareness activities in the country after they are given some training. An evaluation will be carried out on the proper use of the material.

A documentary film on "Drought and Floods" was presented. The film, which was produced by the National Office for the Environment and entitled "Water is Life", focused on two regions of southern Madagascar: the flood-prone region of Morondava and the drought-prone region of Androy. The 14-minute film is an educational material on the importance of water in daily lives both for humans and animals, and also its importance in local customs and culture. The film was followed by discussions.

Stakeholders for Disaster Management either natural disasters or man-made disasters participated in the exhibition.

Uganda

The ISDR National platform of Uganda and the Ministry of Disaster Preparedness and Refugees published a **news supplement on 8 October in the local newspaper "New vision".** The minister presented the UN Secretary General's message on local TV and radio stations.

A live phone-in radio debate on disaster reduction was held in the evening. As, on the day before, two road accidents left at least 50 people died, and as landslides were reported in the western part of the country, the debate ended up focusing on these disasters.

The Government of Uganda on 9 October held a **meeting with institutions dealing with disasters** to see how to address their causes and seek solutions to reduce their impacts. It is worth noting that the government had formed a task force on the root causes of disasters. The task force is expected to submit a draft report and will develop another report to be used by the cabinet to develop a Cabinet Paper for action. ■

Speech by Hon. Abdoulkader Doualeh Wais, Minister of interior and decentralization Republic of Djibouti

Dear representatives of international organizations, dear representatives of the National Platform for Disaster Prevention and Management, distinguished guests, ladies and gentlemen:
I am very pleased to be able to make an address on this International Day for Disaster Reduction.
The International Day for Disaster Reduction is marked annually on every second Wednesday of the month of October, and the International Strategy for Disaster Reduction this year selected "Water" as a theme.
Water plays an integral part in our lives. It enables to us to settle somewhere, to produce, and to ensure our survival and our health.

But it can also be dangerous because it can flood, destroy, devastate and, when polluted, transmit diseases.

In fact, water has invariably been a major government concern since our country's independence.
Now, as you surely know, disaster management involves a wide range of activities including prevention, preparedness, early warning and response to disasters. And to date, governments and donors have allocated huge funds to relief assistance at the expense of planning which is expected to prevent, and reduce the impact and social and financial costs of disasters.

Considerable resources have been allocated to relief assistance, yet these resources could have been directed to development. If such a trend persists all over the world, no resource will be left for both developed and developing countries for their development.

Therefore, for the sake of proper disaster management, we must encourage the implementation of the International Strategy for Disaster Reduction.

Meanwhile, my ministerial department will very soon establish a permanent structure in charge of disaster prevention and disaster relief coordination at national level. And as from this year, disaster prevention information and awareness programmes will be implemented through the media and in schools. This year's programmes will begin within the next few days.

Ladies and gentlemen, we must invest in disaster preparedness, prevention and early warning. Even though these are long-term investments, they will ultimately reduce considerably the impact and cost of disasters.

In short, we should shift from relief to prevention.

I thank you for your attention. ■

Speech by Rt. Hon. Lt. Gen. Moses Ali, 1st Deputy Prime Minister and Minister for Disaster Preparedness and Refugees Republic of Uganda

The International Day for Disaster Reduction is observed on the 8th of October every year the world over.

The theme of this year's International Day for Disaster Reduction is *"turning the tide on disasters towards sustainable development"*.

This theme reminds us, that the task is not just to effectively respond to disasters in order to save lives, but more to reduce the chances of hazards turning into disasters, taking life away and destroying development gains.

In 2002, some 11,000 people were reported killed in natural catastrophes throughout the world. Similarly, close to 250,000 people were reportedly killed by drought and famine over the last decade. Not appropriately reflected in these statistics are the millions of poor people who have seen their lives indirectly shattered by the economic impact of the natural disasters, their ability to raise a modest income reduced or annihilated and the prospect to escape poverty postponed indefinitely.

In Uganda, drought, floods, landslides, windstorms and hailstorms destroy an average of 800,000 hectares of crops making economic losses in excess of 120 billion shillings very year. Economic loses resulting from transport accidents and fires is estimated at shillings 50 billion annually. Death tolls resulting from natural and man-made disasters exceed 5,000 annually. Between 1980 and 2003, 1 in 30 people in Uganda were affected by a natural or man-made disaster and fell into the poverty bracket.

At intervals of 5 to 10 years, an earthquake occurs in Western Uganda destroying infrastructure and property estimated at over shillings 80 billion. Also between 3 and 5 years periodically an el *nino* rain phenomenon occurs followed by a severe drought in Uganda, also causing destruction to property and infrastructure estimated at over shillings 200 billion.

More than 90 per cent of all natural disasters occurring around the world today are related to water – either too little of it, in the case of droughts, or too much of it, in the case of floods, landslides, epidemic diseases and pests. Likewise a high percentage of man-made disasters occurring around the world today are related to political conflicts and technology. Many communities suffer repeated disasters year after year.

Too often, natural hazards such as drought, floods, earthquake, fire, endemic diseases, climate change, pest infestation and livestock diseases are regarded as abnormal events, divorced from normal life. Disasters and emergencies are fundamental reflections of normal life; they are consequences of society's social and economic settings and therefore an integral part of life. Hazards only become disasters when people's lives and livelihoods are affected.
Disaster risk reduction therefore cannot be addressed outside the framework of development and the latter is futile without the former. If development is building communities, then disaster risk management is making sure that the foundations are strong.

One of the first steps towards disaster risk reduction is the act of differentiating between risks and vulnerabilities. Risk is the probability that a hazard will occur. It may also be the product of a hazard and vulnerability which is the extent to which a community, structure, service, or geographic area is likely to be damaged or disrupted by the impact of a particular hazard, on account off their nature, construction or proximity to the hazardous area.

Environmentally unsound practices, global environmental changes, population growth, urbanization, social injustice, poverty, and short-term economic visions produce vulnerable societies.

The vulnerability of many Ugandan communities is growing by the day due to many undesirable human activities such as deforestation, ecosystem degradation, environmental pollution, rebel activities in the North and North East, bad climate in the Karamoja region, transport accidents, urban and wild fires, and poor landuse in many parts of the country.

It is well within our power to do something about this. Better decision-making, improved planning, effective risk management, innovation in development and environmental protection activities – these are the human activities that can reduce the vulnerability of communities. To this end, risk assessment and disaster reduction should be integral parts of all sustainable development projects and policies.

On the International Day for Disaster Reduction, let us remind ourselves that we can and must reduce the number and impact of disasters by building sustainable communities that have the long-term capacity to live with risk.

By taking full account in-policy-and-in-practice of known hazards, the likely risks facing a community and building the community's capacity to withstand these hazards, we can reduce the likelihood of disastrous events occurring. The fact that they frequently occur dictates that their management should be a development issue.

It is a well known fact that the costs of responding to disasters once they strike far exceed the costs of disaster prevention and risk reduction activities. Indeed, worldwide, a threefold multiplier has been found between effective disaster mitigation and emergency response. Thus shillings one million for disaster mitigation saves shillings three million for disaster relief.

Finally, on behalf of the Office of the Prime Minister, I convey condolences to the families of the people who perished at the Kiira Dam road accident.
I thank you. ■

Speech by Mr Jean Seth Rambeloalijaona, Minister of Interior and Administrative Reform Chairman of the National Relief Council (CNS) Republic of Madagascar

Honourable guests; Dear friends, colleagues, representatives of the Office of the Prime Minister, government ministries, local government authorities, civil society organizations and NGOs; Ladies and Gentlemen,

On behalf of the Government of Madagascar, in my capacity as the minister of interior and administrative reform and also chairman of the National Relief Council, I am honoured to welcome you and thank you all for attending this gathering.

The International Day for Disaster Reduction is marked every year on the second Wednesday of the month of October, which is today 8 October 2003. Its theme this year is "*Turning the Tide of Disasters towards Sustainable Development*".

On this particular day, our thoughts go to those who lost their lives, their parents and friends, and their properties. They are many and they are dear to all of us.

The disasters which hurt them urge us to be more organized and to seek ways to reduce their increasingly harmful impacts. And also to prepare the adequate and appropriate preparedness measures and actions required to rehabilitate the affected regions, help the afflicted communities to start a new life, and transform devastated areas into new development sites and centres.

Indeed, as a result of man-made land degradation, the Greenhouse Effect and the El Nino phenomenon, the frequency and intensity of disasters have increased worldwide over the last 10 years or so. Very few countries are today spared by disasters, be they cyclones, earthquakes or floods...

In Madagascar, we have to deal with many types of disasters. Because of the frequency and geographical locations of hazards in our country, at least one region is affected every year by a disaster. Even now, at this moment in time, as we are entering the cyclone season, a moderate tropical storm named "Abaimba" is already reported northeast of our coastline. And every one knows how harmful such natural disasters can be for our economy.

How to turn the tide of disasters towards sustainable development? This can only by achieved by reducing vulnerabilities and risks through public awareness - by making people increasingly aware of the fact solutions do exist, by doing this in such a way that communities are determined to own risk and disaster prevention as a common wealth.

In this connection, Madagascar has approached disaster issues in an innovative way over the last few years. We are one of the few African countries with a national strategy for disaster risk and management, a national strategy that was reinforced recently by a law on disaster risk management. We must congratulate ourselves for the adoption of this law which is the culmination of considerable efforts made by the Government of Madagascar and all of you - who are present here: you fully supported us in this endeavour.

Meanwhile, as Madagascar is committed firmly to rapid and sustainable development, we have adopted a poverty reduction strategy that is the country's most important public policy framework. Most of the ingredients of the risks faced by the Malagasy society and its vulnerability in all aspects – socioeconomic, environmental, governance and security – are covered by this strategy.

Therefore, the above poverty reduction strategy is already a potentially powerful tool of disaster risk and management, in addition to the fact that disaster risk and management also features on its own, as a strategic action, in our Poverty Reduction Strategy Paper.

As we are marking this International Day for Disaster Reduction, I wish to call on the general public to become increasingly aware of the fact that disaster reduction can save human lives, protect properties and reduce disaster impacts.

On the same occasion, I also wish to call on the media to involve themselves in public awareness and education efforts. Their involvement in the dissemination of news and meteorological reports will enable warning messages to reach threatened communities rapidly and will help to save hundreds and thousands of human lives every year.

Disseminating accurate and correct information before, during and after emergency situations is one of the media's social responsibilities because well-prepared and timely warnings help to avoid losses and protect resources.

On behalf of the Government and in my capacity as the chairman of the National Relief Council, I wish to express my sincere thanks to all our friends and partners in the field of disaster risk and management for working tirelessly with us. Rest assured that your much needed and valued contribution is highly appreciated.

I also express the wish that our communities become more resilient to natural disasters. Indeed, if they prepare themselves adequately and take all the timely measures and actions required, they will be able to reduce the impact of disasters, which will also benefit our country's development.

I thank you. ■

« We are fully aware of the link between disasters and poverty, between disasters and sustainable development. »

Mr Jean Seth Rambeloalijaona, Minister of Interior and Administrative Reform, Republic of Madagascar

A UN/ISDR Africa workshop was held on 16 and 17 July 2003 in Antananarivo to launch the ISDR national platform. Malagasy Interior Minister Jean Seth Rambeloalijaona on 18 July received the UN/ISDR Africa programme officer, Mrs Noroarisoa Rakotondrandria, in his office. Their talks, which centred on cooperation between the Malagasy government and ISDR Africa, were followed by the interview below.

Mr. Rambeloalijaona, 64, was already an interior minister in 1994-95, before being appointed special adviser to the Prime Minister and permanent secretary in the Ministry of Civil Service. He recovered his interior minister's job in 2002. He is also a lecturer at two Malagasy state universities and at the Malagasy National School of Administration.

[Noroarisoa Rakotondrandria] **Mr Minister, as the top official in charge of disaster risk management in Madagascar, what do you say about this topic?**

[Jean Seth Rambeloalijaona] First of all, I wish to stress that the just-concluded UN/ISDR Africa workshop is for us a very significant event. Indeed it marked, in a concrete and tangible manner, through cooperation, Madagascar's return to the big African family. As we all know, Madagascar has just been readmitted officially to the African Union.

Now regarding disaster risk and management, the Malagasy government is involved with determination in it, not only at rhetoric level but especially at action level. A Law on Disaster Risk and Management was adopted unanimously by the National Assembly [Parliament] on 10 July. We can enforce it immediately as the necessary text has already been drafted, but in conformity with our procedures, it had to be referred to the Senate first.

This law stemmed from our National Strategy for Disaster Reduction, a strategy that our government was eager to develop rapidly. Why? Because we felt that it was high time to reduce the short-term and long-term impacts of all these successive disasters that occur every year : cyclones, floods, drought, locusts, etc. Another thing is that we had to put an end to all these series of recommendations that had never been translated into action. All the more because disaster reduction features prominently in our PRSP[1] . This is because we are fully aware of the link between disasters and poverty, between disasters and sustainable development.

Meanwhile, the CNS [Conseil National de Secours – National Relief Council] honours the government's commitments towards disaster prevention and response. Even though the credibility of the CNS cannot be questioned, members of the National Assembly, when examining the above-mentioned law, requested further clarifications on

matters relating to information, follow-up and control. So before its ratification, this law will be slightly revised in the light of the concerns expressed by our people's representatives. Their concerns were mainly on the distribution of seeds to affected communities during disaster recovery periods.
At institutional level, « Disaster Prevention Units » have also been established at communal level in each and every province.

N.R.- **Mr Minister, you are also a politician. Which message do you wish to convey to politicians regarding disaster management?**
J.S.R.- First of all, at disaster response level, when people are in distress, politicians in general, the political community as a whole should play a leading role in relief assistance. To be able to do so, they should have a perfect knowledge of the affected region or regions, they should be able to sensitize the population, they should be monitoring how the measures taken are implemented – especially regarding relief assistance management so that these can reach the victims effectively.
They should also help to identify weaknesses and shortcomings immediately. Why? Because crises invariably result from some weaknesses, some inadequacies. A crisis is therefore, to some extent, a source of new opportunities.
Also opinion leaders like politicians should also help to introduce change. Therefore – I wish to stress this – they should promote a culture of disaster risk and management.
At this juncture, I wish to note that disaster management is in perfect consonance with some of our government policies. It enables us to demonstrate a heatlhy and adequate use of foreign aid. It also boosts national solidarity in the context of our fihavanana[2]. Indeed, as disasters are often a matter of life and death - at least in Madagascar, and as their much feared impacts are not only of material but also moral character, « sterile » differences are automatically discarded by the resulting collective solidarity and patriotism.
Even our artists get involved, you know! Maybe we should also start associating psychologists to the disaster management process…

N.R.- **What do you expect from UN/ISDR?**
J.S.R.- In general terms, we expect sufficient and relevant information that enable us to take immediate action. And also latest information on ISDR as an organization and as an « international strategy for disaster reduction ».
Meanwhile, as I was not able to launch the just-concluded UN/ISDR workshop personally, I still have to know more about our obligations towards the ISDR, ISDR's expectations from us, and the forms and practical modalities of our cooperation with ISDR.

Exchange of information – both inside and outside the country – because we still have to deal with communication problems in Madagascar.
We also need regional cooperation : I do not know whether UN/ISDR can assist us, or at least can facilitate assistance for us to cope with the following very specific problem. Before every rainy season – which, for us, means cyclone season, we find it difficult to send and receive information through land lines and radio transmission, because of our country's geographical condition and poor means of communications.
Also on regional cooperation, we now wish to boost our cooperation with not only the IOC[3] but also the entire African continent. For instance, for each and every cyclone, Madagascar has invariably dealt with them in isolation from other countries. Yet, cyclones, by nature, are of regional character, hence the need for increased regional cooperation.
Again on cyclone, we plan to establish reception and supply centres for cyclone victims. The necessary legal text is already in place. I hope the ISDR can be of some assistance to us.

N.R.- **What do you say about the famine and drought which are still reported in southern Madagascar ?**
J.S.R.- I can assure you that now, after analyzing the whole issue, these drought and famine are just false problems. Why? Because it has emerged that they can be solved through mere water management, for instance through dam construction, crops adapted to the region and other activities. The government is tackling all these so-called « problems ». More information will be made available on this in due course.

N.R.- **Thank you for this interview, Mr. Minister.**

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[1] PRSP stands for Poverty Reduction Strategy Paper which is a government framework document submitted to the IMF as a reference document for multilateral, sometimes bilateral, funding for poverty reduction.
[2] *Fihavanana*, which literally means parenthood, is a Malagasy philosophy of individual and social action modelled on family ties of mutual tolerance and assistance. Most of major political claims and crises in Madagascar have invariably been resolved more or less peacefully through *fihavanana*.
[3] IOC stands for Indian Ocean Commission which is the institutional framework for regional cooperation between the Indian Ocean islands of Madagascar, Mauritius, Seychelles, Comores and Reunion. ■

UN/ISDR World in Action

UN/ISDR Africa
Nairobi, Kenya

Second International Early Warning Conference: The UN/ISDR Secretariat and the Government of Germany co-organized the Second International conference on Early Warning from 16 to 18 October 2003 in Bonn, Germany. The theme of the conference is "Integrating Early Warning into Public Policy". Some 40 African disaster managers, experts and high-ranking government officials attended the conference.

2003 World Annual Campaign on Disaster Reduction: The UN / ISDR launched its World Annual Campaign on Disaster Reduction on 8 October 2003, the International Day for Disaster Reduction. The theme of the campaign is "Turning the Tide of Disasters for Sustainable Development". Information kits on water-related disasters have been prepared and disseminated in English and translated into French and Spanish. To highlight the importance of reducing the impacts of water-related disasters, activities raising public awareness of disaster risks have been organized by the UN/ISDR Geneva headquarters and its outreach offices in LAC (Latin America/Caribbean) and Africa, in cooperation and collaboration with their partners.

UN Sasakawa Award for Disaster Reduction - 2003
To promote additional public awareness about disaster risk reduction, every year the UN Sasakawa Award for Disaster Reduction is awarded during the International Day for Disaster Reduction. This international honour is given to an individual or organization for their outstanding contributions to the prevention of disasters and the reduction of vulnerability, consistent with the aims and objectives of the ISDR. The 2003 Laureate and recipients of Certificates of Distinction and Certificates of Merit were announced on 8 October 2003, the International Day for Disaster Reduction. Their names appear below.

LAUREATE
Mrs. Tadzong, née Esther Anwi Mofor, Global Centre for Compliance, Hazard and Disaster Management (GLOCECOHADIM), Bamenda, Cameroon

CERTIFICATES OF DISTINCTION
Fundación para la Prevención del Riesgo Sísmico (FUNDAPRIS), Merida, Venezuela
Mr. Meda Gurudutt Prasad, Coastal Area Disaster Mitigation Efforts (CADME), Andra Pradesh, India
Mr Rafi Ahmad, University of the West Indies, Kingston, Jamaica

CERTIFICATES OF MERIT
Association Prévention 2000, Tours, France
Gujarat State Disaster Management Authority (GSDMA), Gujarat, India
Dr. Jean-Pierre Massué, Council of Europe, Strasbourg, France

The Award Ceremony took place on Thursday 16 October 2003, coinciding with the Second International Conference on Early Warning (EWC-II) in Bonn, Germany.

Fellowship Programme: UN/ISDR and UN/OCHA (Office for the Coordination of Humanitarian Affairs) have jointly launched a fellowship programme. The fellowship programme will be implemented in partnership with eight institutions from Asia, Africa Europe and Latin America with the main objective of facilitating the participation of professionals from developing countries in short-term training programmes addressing disaster risk reduction issues. Some 80 participants from developing countries will receive financial support for the short-term training in disaster risk reduction. In Africa, the UN/ISDR has selected the African Centre for Disaster Studies of Potchefstroom University (South Africa) and University of Cape Town (South Africa) for its initial phase of the fellowship programme.

Euro-Mediterranean Forum on Disaster Reduction: The Forum was co-organized by EUR_OPA Major Hazards Agreement of the Council of Europe and the ISDR Secretariat in Madrid, Spain, from 6 to 8 October 2003. The Forum brought together a wealth of experiences in disaster reduction. Participants came from academia, government, civil society, research, civil protection, environment and development. The forum provided an opportunity to discuss principles and policies, and to exchange information and practices. The Forum emphasized that disaster reduction was one central element of sustainable development, and that the associated integrated disaster risk management was a primary responsibility of governments. The Forum also said such a risk management ought to be based on a holistic approach to risk prevention and reduction that combines scientific knowledge, vulnerability assessment and the competencies of disaster managers. It was stressed that the civil society, the private sector, including insurance companies, experts and academia had to be fully involved. ■

Major ongoing and upcoming activities of UN/ISDR Africa in 2003

UN/ISDR Africa
Nairobi, Kenya

Development of African Regional Strategy for Disaster Risk Management

UN/ISDR Africa has developed a partnership with the NEPAD Secretariat and the Commission of the AU since the first NEPAD-led disaster management workshop held in Johannesburg in April 2003. AU/NEPAD and UN/ISDR Africa are now making joint efforts and sharing the costs for the development of an African Regional Strategy for Disaster Risk Management. AU/NEPAD will lead the strategy development process and UN/ISDR Africa will support AU/NEPAD in its endeavor to develop the regional strategy throughout the process. Two selected consultants started the work in late October under the leadership of AU/NEPAD and supervision of UN/ISDR Africa.

IOC Sub-regional Consultation on Disaster Reduction

The five member countries (Madagascar, Mauritius, Seychelles, Comoros, Reunion) of the Indian Ocean Commission (IOC) are often subject to disasters caused by natural hazards. The IOC Secretariat has decided to further its effort to assist national authorities in disaster reduction. In this context, the IOC Secretariat requested UN/ISDR Africa to join its efforts in disaster reduction. The IOC Secretariat and UN/ISDR Africa agreed to start with a review process so that follow-up actions will be responsive to actual needs in the sub-region. The IOC Secretariat will lead the process of sub-regional review and UN/ISDR Africa will facilitate the process. A Sub-Regional Consultative Meeting will be held in the third week of November 2003 with the main objective of : (1) enhancing sub-regional cooperation in disaster risk management, (2) providing a forum for IOC member countries and main UN agencies to share views and experiences, and (3) reaching a consensus on how to address disaster risk management for sustainable development in the sub-region. The results of the sub-regional consultative meeting will lay the foundation of the sub-regional review process. The results of the review will also provide input to the development of the proposed African Regional Strategy for Disaster Risk Management.

Disaster Risk Management – from a Gender Perspective

Growing interest in disaster reduction has remained largely gender-blind and has failed to consider gender-based vulnerability and needs and recognize that disasters often impact on women disproportionately. UN/ISDR Africa is working together with UN Habitat, UNIFEM Nairobi and Kenya's executive and professional women members of Soroptimist International to promote women's active participation in disaster risk reduction and advocate gender–sensitive approach in disaster risk management. The joint initiative started in October 2003 with the following three-fold objectives: (1) to review the status of gender concerns in existing policies, strategies and legislations and implementation related to disaster risk management: the final report of the review will be used as background paper in a Regional Women's Conference on Gender and Disaster Reduction scheduled in April 2004 ; (2) to develop an African strategy for mainstreaming gender concerns in disaster risk management, based on the results of the review and extensive consultations: the draft strategy will be used as input into the development of the proposed African Regional Strategy for Disaster Risk Management and will be finalized at the proposed Regional Conference on Gender and Disaster Reduction ; and (3) to make policy recommendations for mainstreaming gender concerns in disaster risk management: the policy recommendations will be used as input to the Second World Conference on Disaster Reduction to be held in Kobe, Japan, in January 2005.

Mobilizing women for active participation in disaster reduction

As UN/ISDR Africa has been using different forums to advocate disaster risk reduction among women, an increasing number of women expressed interest and willingness to learn more about disaster issues. To respond to the needs and requests, UN/ISDR Africa will provide support to Kenya's executive and professional women members of Soroptimist International in their efforts by organizing a two-day workshop for women representatives from different parts of the country. The main objective of the workshop is to sensitize women on issues related to disasters and mobilize women to participate in disaster reduction actively in their communities. The workshop will invite Mrs Tadzong of Cameroon, the 2003 laureate of the UN Sasakawa Award for Disaster Reduction, to share her experience. The workshop is scheduled to take place on 27 and 28 November 2003.

Linking water-related disaster risk reduction with water resource management

The Pan-African Implementation and Partnership Conference on

Water will be organized jointly by the African Ministerial Council on Water, UN-Water/Africa and Africa Water Task Force from 8 to 13 December 2003 in Addis Ababa, Ethiopia. To advocate the necessary link between water-related disaster risks with water resource management, UN/ISDR Africa has cooperated with the organizers of the conference to provide input into the theme "Managing risks". UN/ISDR will address water-related disaster risks at the event. To this end, UN/ISDR Africa is working in partnership with Umvoto Africa (pty) ltd (consultants for water resource development and management) to produce booklets under the title of **Water and Risks in Africa**, one of which being a "Guide for Community Leaders", another destined to 12-15 year-old school children. Meanwhile, as a follow-up to an already published children's booklet, *Safari's Encounter With Landslide*, another booklet entitled *Safari's Encounter With Floods* is being finalized for school children in cooperation with Nairobi Drought Monitoring Center and a local artist. *Safari's Encounter With Drought* is also under preparation.

Integrating disaster reduction into relief assistance and sustainable development

UN/ISDR Africa will prepare information kits - facts and figures, to explain the trade-offs of disaster reduction and sustainable development. Well-documented and argued facts and figures will be used to advocate how disaster reduction is a trade-off with national and international efforts towards poverty reduction and economic investment, and how it will reduce human suffering and mounting humanitarian needs. The work is under preparation and will start in early December 2003.

Linking disaster reduction with disaster-related issues

With support from experts and national governments, UN/ISDR Africa will endeavour to produce simplified information kits on how disaster reduction can be linked with initiatives related to environment protection, climate change adaptation, water and poverty alleviation. The objective of the endeavour is to facilitate national authorities' and community leaders' efforts to integrate disaster reduction in routine development programmes. Preparations are under way and the work is expected to start in early December 2003. ■

African's active preparation for Second world conference on early warning

UN/ISDR Africa
Nairobi, Kenya

An "*African Regional Consultation in Preparation for the Second International Early Warning Conference*" (EWC– II) was held in the Kenyan capital, Nairobi, on 23 and 24 June 2003, attended by a total of 47 participants from at least 32 African and international organizations and institutions.

The consultation, which was covered by the Kenyan media, was organized by UN/ISDR Africa - with financial support from the German Foreign Ministry and the UNDP Bureau for Crisis Prevention & Reduction (BCPR), and conference support services from the Drought Monitoring Centre Nairobi (DMCN).

As suggested by its name, the consultation was held primarily in preparation for the *Second International Early Warning Conference* which took place in Bonn last October.

But it also offered a first-time opportunity for early warning practitioners and some key stakeholders to interact and network on developing the science and art of early warning and promoting its integration into public policy. The key stakeholders included political authorities, regional and sub-regional organizations, UN agencies, bilateral donor partners, academics and civil society organizations.

"Integrating EW into Public Policy"

The consultation was one of a series of preparatory regional consultations held in Asia, Europe and the American continent to provide regional input into EWC II. In consonance with EWC II, the theme of the African regional consultation was *"Integrating Early Warning (EW) into Public Policy"*.

Launching the consultation, Kenyan Assistant Minister of State for Provincial Administration and National Security Prof Kivutha Kibwana stressed that remedial measures were necessary to mitigate the devastation caused by weather-related hazards. He said EW systems were therefore vital in national and regional development, and that they had to be integrated into development policies.

Also speaking during the opening ceremony, Mr Isaac Tarirai Chivore UNDP-Kenya decried the loss of traditional EW systems that sustained people in the past. He recommended that it was important not to completely ignore these practices in the quest to develop modern EW systems.

Major constraints to EW for disaster reduction in Africa

It emerged that the major constraints faced by EWs for disaster reduction were:

Participants of the Regional Consultation on Early Warning

Participants during a group discussion

- Inadequate technological and human resources for developing effective EW systems due mainly to financial constraints that limit public investment in development of EW systems and disaster prevention and mitigation in general
- Inadequate awareness at policy level and among the general public on natural disaster risk management which affects sustainability of initiatives on EWS
- Poor enforcement of physical development regulations and planning standards
- Narrow focus of EW systems on hydrometeorological disasters, with inadequate coverage of disease epidemics, conflicts and other hazards
- Deteriorating hydrometeorological networks
- Inadequate integration and coordination of key institutions involved in EW and disaster prevention and mitigation
- Inadequate translation of EW into response planning and activities
- Inadequate integration of EW in development planning
- Inadequacies in user orientation of EW systems
- Weak transboundary and international cooperation

Successful stories

However, cases of successful application of EW to disaster reduction were also highlighted during the consultation.

They include cyclone management in Mauritius, vulnerability assessment in the SADC region (with country examples on Mozambique and Zambia), EW on limnic eruptions in Cameroon, traditional EW practice in Kenya's Lake Victoria region, EW in Madagascar (where disaster reduction features in the IMF-approved Poverty Reduction Strategy Paper).

Suggestions

Regarding the identification of issues to be considered by authorities in implementing EW systems, the participants suggested that this had to be enriched by seeking to integrate EW into the three pillars of sustainable development.

It was also noted that governments had to make disaster risk reduction a priority in their budgetary allocations, abandon the project approach to funding disaster management, and adopt innovative approaches to meeting the funding needs of EW systems.

Some participants stressed the need to accelerate and deepen bottom-up approaches to disaster risk reduction. They said resources had to be directed to local levels to induce greater willingness of communities to participate in disaster risk reduction activities, and enhance their knowledge of disaster risk reduction by demonstrating the economic gains offered by EWs.

Regarding the coordination of EW systems, particularly for drought and desertification, it was noted that it was essential to consider the EW systems being developed under the UN Convention to Combat Desertification (UNCCD).
Last but not least, the participants agreed on the vital need to adopt proactive disaster risk reduction and to integrate EW into sustainable development practices such as land-use planning.

Donors "unwilling" to fund long-term disaster risk reduction activity

Discussing the issue of donor financing for EW development, some participants noted the importance of global politics and its negative effects

on donor financing for EW and disaster risk reduction in Africa. Others, however, pointed out that it was also important to note that donors needed to be induced to invest in disaster risk reduction, and that donors do not often receive funding requests from national authorities in time.

It was also noted that since donors were unwilling to finance long-term activities in disaster risk management, a key challenge in integrating EW into sustainable development was there how to transform post-disaster relief assistance into a disaster risk reduction mechanism. One suggestion was that post-disaster rehabilitation and reconstruction assistance should not be limited to merely replacing damaged resources, but should include explicit risk reduction interventions.

Another suggestion was that governments had to maintain their own priorities since donors were more sensitive to disasters than to normal development activities - because of the ethical-humanitarian dimension of disasters.

Key recommendations for better integration of EW into public policy

- Strengthening and establishing national, sub-regional EWS, including through capacity building
- Maintenance and enhancement of hydrometeorological networks and facilities
- Establishment and development of operational processes for data and information sharing and exchange - including through networking, to enhance synergies between different EW stakeholders and initiatives
- Enforcement of the rule of law for regulations and standards, especially in the private sector
- Integration of EW and disaster risk management into national and regional policies
- Establishment, at country and regional levels, of technical structures that are able to integrate scientific and technical data into planning and decision-making processes
- Inclusion of disaster prevention and management into the NEPAD framework
- Strengthening conflict prevention mechanisms in Africa
- Support from international partners, including through financial assistance, knowledge exchanges and other capacity development resources
- Promoting African ownership and anchor for EW system development and support initiatives, particularly those driven by external partner inputs

Concluding remarks

In his concluding remarks, Mr Foday Bojang of the African Union Commission, called for the strengthening of UN/ISDR/Africa as a technical unit to work with the African Union, NEPAD and sub-regional entities in enhancing the EW and disaster risk reduction agenda in Africa. He also called for urgent action to support the creation of a Regional Disaster Management Centre for Africa and the upscaling of national and local EW systems.

Mr Andrew Maskrey of UNDP/BCPR (Bureau for Crisis Prevention and Recovery) emphasized the need (1) to keep EW interventions simple, (2) to consider that EW was part of risk management along with other equally important factors, and (3) to remember that EW was a visible investment with short-term benefits that provide a mechanism to deal with longer-term development issues.

UN/ISDR Director Salvano Briceno noted that it was important to ensure appropriate risk reduction response action as the end goal of EW, otherwise all efforts in developing EW would not yield the expected disaster risk reduction benefit. He also said it was crucial to strengthen the collaborative process underlying the consultation, and work together to promote EW in Africa as an effective tool for disaster risk reduction. ■

African Regional Consultation in Preparation for the Second International Early Warning Conference (EWC II)
23-24 June 2003
Nairobi, Kenya

FROM OPENING & CLOSING SPEECHES

Mr. Foday Bojang, the AU senior policy officer, stressed the high importance attached by the AU Commission to reducing the impacts of disasters on the continent. He noted the ongoing efforts by the Commission - and its predecessor, the OAU - to institutionalize effective disaster management in the region, and hoped that the Bonn conference would facilitate this process.

Mr. Peter Platte of the Ministry of Foreign Affairs of the Federal Republic of Germany said some 50 million people were affected by drought disasters in Africa, and that it was therefore crucial to link early warning to effective response initiatives. He also reported on the extent and approach of the German government support for disaster prevention and early warning activities globally and in Africa in particular.

Mr. Salvano Briceno, the UN/ISDR Secretariat director, said it was essential to empower communities, facilitate gender balance and encourage collaboration and team building. He also made two key points:
(1) Disaster impacts may have been diminishing but economic losses have been increasing in Africa,
(2) While extremes may be increasing due to climate change, vulnerabilities are increasing at much higher and alarming rates. Hence, he said, the urgent need to focus on disaster risk management and address issues of early warning or vulnerabilities. ■

Soroptimist International world convention discusses gender, disaster reduction in Africa

Mrs. A. Kirambi & Mrs. M. Alambo
Soroptimist International, Kenya

With a membership of over 100,000 women executives and professionals in 122 countries, Soroptimist International (SI) is the world's largest women's service organization. UN/ISDR Africa has forged a partnership with SI Nairobi in "Mainstreaming Gender Concerns in Disaster Reduction". Two Nairobi SI members attended a recent SI congress.

The 17th Soroptimist International[1] (SI) Convention was held in Australia from 28 to 31 July 2003. Soroptimist members, who are exclusively women executives and professionals, came to Sydney from 113 countries to develop strategies on how to achieve the organization's vision of being "A Global Voice for Women"[2].

The keynote speaker, Dr Eileen Pittaway, director of the Centre for Refugee Research, University of New South Wales (Australia), quoted shocking statistics from reputable UN sources, including the fact that 12 per cent of the world's population used 85 per cent of the world's water supply.

Some of the issues discussed were: "How can we use such thought-provoking statistics for the betterment of society?" "How then should UN link disaster risk reduction to the Millennium Development Goals?"

Soroptimist attended Bonn early warning conference

In this connection, SI Club of Nairobi (under the umbrella of SI Union of Kenya) had forged a partnership (see Box) with UN/ISDR Africa and endeavoured to work on a joint programme focusing on disaster risk reduction and early warning systems – from a gender perspective.

Based on this, two SI Kenyan officials participated in the SI International Convention to share and create awareness on disaster preparedness with a gender perspective. During a workshop, they presented UN/ISDR Africa disaster reduction initiatives and the important role African women can play in any kind of natural

disasters.

Their presentation sought to draw attention on gender issues that affect disaster risk management in Africa, with a view to collecting views and proposals which SI could share at the forthcoming Second International Early Warning Conference (EWC II) taking place in Bonn, Germany, in October this year.

Indeed SI Nairobi wishes to lobby for the mainstreaming of gender issues into early warning systems and disaster risk reduction.

Awareness was thus created on how gender issues should be articulated by the delegates in their respective countries.

Women "uniquely" positioned as key to disaster reduction

- In all disasters, African women are the sufferers as they are left back at home to tend the children and cater for the family's domestic needs
- Women concerns similar in both developed and developing countries
- Disasters affect women and men differently
- Women key to mainstreaming the family unit, keeping ties with community structures and meeting family basic needs
- *Women uniquely vulnerable to effects of degraded environments subject to natural hazards, and uniquely positioned as key to disaster prevention*
- Gender inequality a root cause of fashioned vulnerability to conflict and disasters around the globe
- Women's greater vulnerability due to lack of empowerment arising out of patriarchy, traditionally imbedded cultural values, and (in most countries) lack of favourable policies and political will

Recommendations

- Need to develop early warning policies
- Early warning systems should be developed for women
- Women should be trained in disaster management
- Unified approach needed in areas exposed to disaster risks
- Women should be considered as equal partners in disaster management
- Youth should be prepared even at school on their roles in disaster management
- Policy making in disaster risk reduction and early warning to incorporate women
- Identify and fully describe priority needs
- Identify strategies and resources required

Conclusions

General observations from the workshop was that (1) there is need for governments, civil societies and community-based organizations (CBOs) to address the gender concerns in disaster management/ reduction, and (2) there is also need for women's active participation and skill mobilization in the identification of disaster vulnerabilities. ■

SI Nairobi partnership with ISDR Africa

Some of SI Nairobi's pledges:

- To seek cooperation from other African Soroptimist members to address some specific issues on gender concerns in disaster reduction
- To establish partnership with other SI/Europe women to promote gender concerns in disaster risk management
- To identify the major constraints in mainstreaming gender concerns in disaster management in the development of early warning systems
- To document women suffering from disasters and how women play a key role in disaster prevention
- To document "best practices" and "success stories" of women's role in disaster management
- To develop and lobby for gender-sensitive material that help women in communities at risk to understand disaster risk management ■

1 *Soroptimist International* is the world's largest women's service organization. Founded in 1921 in Oakland, California, USA, and now composed of over 100,000 members in 122 countries, it was established mainly to promote help and support for their sisters throughout the world. Deriving its name from the Latin words *soror* (sister/woman) and *optima* (best), the word *"soroptimist"* is interpreted as *"the best for women"*.

[2] *Soroptimist International* has a Category 1 (highest category) Consultative Status with the UN Economic and Social Council (ECOSOC) under which some UN specialized agencies like WHO, UNICEF, UNESCO, etc. work.

African lady wins major international award for disaster reduction

UN/ISDR Africa
Nairobi, Kenya

Mrs Tadzong of Cameroon has been nominated laureate of the 2003 UN Sasakawa Award for Disaster Reduction. She is not only the first woman to win the prestigious award but also the first African individual to achieve such an international recognition. Indeed an African organization, Ethiopia's Relief and Rehabilitation Commission, had won the same award in 1989. Mrs Tadzong's achievement also highlights UN/ISDR's full recognition of women's indispensable role in disaster reduction.

In the middle of the three women, Mrs. Tadzong, née Esther Anwi Mofor

The UN SASAKAWA Award for Disaster Reduction was established in 1986 by the Sasakawa Foundation, later renamed Nippon Foundation. The UN Sasakawa Award for Disaster Reduction is one of the main mechanisms used by the UN/ISDR Secretariat to promote advocacy and awareness raising among affected communities on disaster prevention issues worldwide.

In April this year, the UN/ISDR Secretariat launched its 2003 Sasakawa nomination and selection process and the world responded positively. By 15 August, the UN/ISDR Secretariat received nominations from different parts of the world, including Africa. In September, the UN Sasakawa Jury, composed of representatives from five continents, met in Geneva and carefully examined each nomination and reached consensus that the laureate winner of the 2003 UN Sasakawa Award for Disaster Reduction was Mrs Tadzong Esther Anwi Mofor of Cameroon.

This is a great honour and pride for women, especially African women who play an important role to maintain the well-being of communities and households before, during and after disasters.

Mrs Tadzong has been working, since 1986, for Global Bare-foot Farm Doctors which, later on, was renamed Global Centre for Compliance, Hazards and Disaster Management. She strongly believes that one can reduce the impact of disasters if necessary steps and actions are taken before they occur. She translated her belief into long-term personal commitment and dedication to disaster risk reduction. She has worked tirelessly to advocate the importance of environment-friendly practices that mitigate disaster risks at community level. This has won her a strong and outstanding reputation in disaster reduction in Cameroon.

In the recommendation letter to UN/ISDR, one of her colleagues says: "Mrs Tadzong is the sole principled leader who provides guidance and counselling to all victims and survivors of calamities in the region, particularly to handicapped persons after any disasters."

Together with her colleagues, Mrs Tadzong has successfully provided comfort and restored hope for those affected by disasters. For example, Mrs Tadzong and her colleague urges people not to hide under trees or steep slopes - when it rains - because of landslide, soil creep and rock fall. They introduced agroforestry systems to small farmers to retain soil fertility, and successfully advised farmers to integrate trees into crop land to maintain soil.

They have succeeded in combining activities of disaster risk reduction, environmental protection and agricultural activities. As a result, Ms Tadzong and her colleagues have played an important role in helping the poor to sustain their safety and livelihood through their educational, social and economic activities at the community level.

Mrs Tadzong received her laureate award at the Second International Early Warning Conference which took place in Bonn, Germany, from 15 to 18 October 2003.

Mrs Tadzong and her colleagues plan to use the award money to continue their community-based disaster reduction and sustainable development efforts which include supporting women groups with refresher courses, preparing women on disaster prevention, and funding an ongoing project on reducing hazards through garbage management and compost manure production. ■

* For more details, please contact Tomukum Chia, Head Office, Public Enquiry Resource Centre, PO Box 110, Belo, North West Province, Republic of Cameroon.

Administration, Selection, Nomination Processes

The UN Sasakawa Award for Disaster Reduction was administered by

- the UN Department of Humanitarian Affairs (UN/DHA) until 1988;
- the UN/IDNDR (International Decade for Natural Disaster Reduction) Secretariat from 1988 to 1999; and
- the UN/ISDR Secretariat – under the direct supervision of the UN Under Secretary General for Humanitarian Affairs - since January 2000.

The ISDR Secretariat is assisted, in the selection process of the laureate, by a Jury composed of representatives selected on a regional distribution basis by the Administrator of the Prize, the ISDR Director, who is the final decision-making entity.

The Jury meets once a year for a period of three or four days to make their decisions.

The UN Sasakawa Award for Disaster Reduction is awarded every second Wednesday of October, within the global framework of the World Disaster Reduction Day.

Laureates

2003: Mrs. Tadzong, née Esther Anwi Mofor, Cameroon
2002: Prof Dr Serguei Balassanian, Armenia
2001: Global Fire Monitoring Centre, Germany
2000: Fondo para la Reconstruccion y el Desarrollo Social del Eje Cafetero (FOREC), Columbia
1999: Prof Mustafa Erdik, Turkey
1998: H.E. Mr Ji Cai Rang, China
1997: Observatorio Sismologico del Sur-Occidente (OSSO), Columbia
1996: Dr Ian Davis, United Kingdom
1995: No Laureate
1994: National Emergency Commission, Costa Rica
1993: Dr Vit Karnik, Czech Republic
1992: Geophysical Institute of the National Polytechnic School, Ecuador
1991: Mr Franco Barberi, Italy
1990: Mr Julio Kuroiwa, Peru
1989: Relief and Rehabilitation Commission, Ethiopia
1988: ESCAP/Typhoon Committee, Philippines
1987: Ratu Kamisese Mara, Fiji

Dushanbe Water Appeal

International Fresh Water Forum
30 August – 1 September 2003,
Dushanbe,
Republic of Tajikistan (Central Asia)

Some 53 countries and 91 international organizations have adopted an international appeal known as "Dushanbe Water Appeal". This took place during the International Fresh Water Forum held from 30 August to 1 September 2003 in Dushanbe, capital of the Republic of Tajikistan (central Asia, on the northeastern border of Afghanistan).

Organized with the joint effort of UN/DESA (Department of Economic and Social Affairs) and the Tajik Government, with financial support from UN/DESA, UNDP, AKDN (Aga Khan Development Network), SDC, USAID, and UNEP, the Forum was opened and chaired by the President of the Republic of Tajikistan and attended by delegates from some 53 countries and 91 international organizations.

Participants were able to reaffirm their commitment to support and implement actions towards maximizing water contribution to the achievement of the MDGs (Millennium Development Goals) and to the realization of targets agreed at the WSSD (World Summit on Sustainable Development).
At the end of the three-day event, the following "Dushanbe Water Appeal" was adopted:

Dushanbe Water Appeal

Freshwater is essential for daily life and the integrity of ecosystems, and is a key to sustainable development and poverty reduction. At the Millennium Summit in 2000 and the World Summit on Sustainable Development in Johannesburg in 2002, world leaders recognized the importance of freshwater and committed themselves to a clear and time- bound agenda for protecting the world's current and future water resources, promoting sanitation and addressing environment issues.

The International Year of Freshwater 2003, declared by the UN General Assembly at the initiative of the Government of Tajikistan, has further raised the awareness for

freshwater problems and the urgent need for their resolution. Using this momentum, this year should mark a transition from commitments and promises to actions and implementation.

The vital nature of water makes it a basis for cooperation between people and nations. Integrated water management should be used to promote stability, poverty reduction and sustainable development. Countries should share knowledge, experience and technologies for the rational and effective use of water resources, and countries sharing the same river basin should work jointly to protect and utilize this common resource to improve the economic and social well-being of all the people living in this basin.

***We**, the participants of the Dushanbe International Fresh Water Forum, representing governments, scientific and educational institutions, local authorities, non-governmental and international organizations, private businesses,*

***Reaffirm** our commitment to support and implement actions towards maximizing the contribution of water to the achievement of the Millennium Development Goals and to the realization of targets agreed at the World Summit on Sustainable Development.*

***We call upon** all stakeholders, especially those present here, to **commit themselves** to achieving the MDGs and the targets and actions agreed under the Johannesburg Plan of Implementation by:*

- *targeting actions in wise water management first of all to the reduction of poverty;*
- *implementing integrated water resources management, based on an ecosystem approach, considering the interests of all sectors benefiting from water resources (energy, agriculture, industry, environment, water supply and sanitation, etc.);*
- *working towards developing and implementing effective agreements for the management of transboundary watercourses, while building further on international frameworks agreed so far and making river basin organizations more effective in terms of their capacities to implement their mandates and functions;*
- *enhancing the efficiency of hydroelectric production and distribution capacities to increase the share of renewable energy with due consideration of environmental and social impacts;*
- *pursuing innovative and pro-poor resource mobilization strategies, including the implementation of efficient water pricing policies, charging for ecosystem services and forging partnerships, including with the private sector, that give priority to the needs of the poor;*
- *promoting the sustainable use and restoration of water-related ecosystems such as forests, wetlands and coastal ecosystems as a contribution to achieving the WSSD biological diversity goal of a significant reduction to its current rate of loss by 2010;*
- *raising public awareness on effective responses to the challenges of the new millennium;*
- *promoting the exchange of information with the aim of equitable and efficient use of water resources and reasonable resource allocation among water users;*
- *making use of the website network established after the 3 World Water Forum in the follow up of the Portfolio of Water Actions announced at the Ministerial Conference.*

***We take note** of the decisions and appeals made by the Heads of States of the Central Asian Region with regard to various regional initiatives, including the establishment of the International Water and Energy Consortium and enhancing the status of the International Fund for Saving the Aral Sea as UN institution on coordination of the programs and projects in the Aral Sea basin.*

***We welcome** the decision of the United Nations General Assembly to declare 2003 as an International Year of Fresh Water in response to the resolution moved by the Government of Tajikistan, and **express** our appreciation for the commendable efforts made by the Government of Tajikistan for hosting the Dushanbe International Fresh Water Forum as part of the events of this year.*

***We appeal** to the United Nations to follow up the findings and recommendations of the Commission on Sustainable Development dealing with water, sanitation and human settlements by declaring the period of 2005 through 2015 as the International Decade of "Water for Life". **We request** the Government of Tajikistan to bring this proposal to the attention of the UN General Assembly as a contribution to the follow-up of the International Year of Fresh Water.*

***We call upon** Governments, international agencies, the private sector and other stakeholders to make it a decade of action by taking concrete measures that contribute to:*

- *reducing by half the proportion of people without access to adequate and safe drinking water and sanitation by 2015;*
- *improving the health conditions to reduce the risks that lead to the death of 2 million children every year due to poor access to safe drinking water;*
- *protecting the resource base both in terms of quantity and quality to ensure that present and future generations are able to sustain their lives on the planet;*
- *mobilizing and investing adequate resources to finance drinking water supply and sanitation;*
- *moving from preparation of water management plans to their implementation, with a focus on increasing water productivity in agriculture and water supply and sanitation.* ■

Resource mapping body contributes to early warning in Greater Horn of Africa

Mr. Ambrose Oroda
Regional Centre for Mapping of Resources for Development
Nairobi, Kenya

The Nairobi-based Regional Centre for Mapping of Resources for Development, RCMRD, has, since 1988, been involved in early warning system projects in the Greater Horn of Africa. RCMRD's Ambrose Oroda highlights the needs, constraints and status of early warning in the sub-region, and his organization's involvement in the field.

The Greater Horn of Africa sub-region is an expansive land mass, more than 6 million sq. km, comprising about 9 countries: Sudan, Eritrea, Djibouti, Ethiopia, Somalia, Kenya, Uganda, Rwanda, Burundi. Seven of these form the Inter-Governmental Authority on Development (IGAD) sub-region.

The IGAD countries (Sudan, Eritrea, Djibouti, Ethiopia, Somalia, Kenya, Uganda) have a total human population of more than 150 million (World Resources Information, 1996; 1995 estimates).

Needs, constraints for early warning in Greater Horn of Africa

Ecologically and environmentally, the area is highly precarious, more than 60 per cent of the sub-region being classifiable as semi-arid or arid. Other countries such as Sudan experience real desert-like conditions with less than 250mm annual rainfall. The sub-region has experienced very frequent droughts and rainfall distribution, with their intensity varying considerably, spatially and temporally.

Frequent drought-related disasters include famines as a result of crop failures and lack of grazing and browse. The famines often result into human calamities such as hunger, starvation, malnutrition, mass migration of populations and, in many cases, death.

These negative impacts of famine - resulting from environmental factors, are often compounded by several socio-econo-political factors that have, over the years, impacted negatively on the general production of the area.

Because famines are often realized late many times when it has taken its toll on the population, the sub-region greatly needs an Operational Early Warning System (EWS) for monitoring environmental conditions and crop yields.

Overview of status of early warning in Greater Horn of Africa

Through experiences, it has been established that IGAD countries lack a central operational early warning system, which would provide member states with advance information on famines and food security prospects. Each of the countries has its own system that varies from country to country, and even the reasons for such a system also vary from one country to another.

The existing national early warning systems are not adequately elaborate, which is probably why the fight against drought-related famines in eastern Africa has not been successful.

This inadequacy can be attributed to several factors including lack of facilities and equipment, and lack of well-trained personnel in the sub-region. Lack of a reliable and operational EWS has all along caused inadequacy in food supply information, a situation significantly exploited by unscrupulous and speculative traders, thereby denying a reasonable population size access to food.

RCMRD involvement

The Regional Centre for Mapping of Resources for Development, RCMRD, has, since 1988, been involved in developing an early warning system for environmental monitoring, famine and food security. It helped to implement some EWS projects funded by the Japanese and French governments through FAO.

The following are examples of the Centre's involvement in early warning system situations in Greater Horn of Africa countries (see Box for more details):

FAO/IGAD EWS Project - 1988-1993. In this project, the Centre (RCMRD) provided early warning information to relevant countries and agencies on a 10-day and monthly basis through a bulletin. This was very instrumental and useful information during the 1991-1993 droughts in the IGAD region.

Regional Famine Early Warning System (REFEWS) - 1995-2000. In this project funded by the Netherlands government, the RCMRD - in collaboration with the Environmental Analysis and Remote Sensing (EARS), a methodology providing quantified end-of-season crop yields estimates was used. The reliability of the methodology was confirmed by the very high degree of accuracy in predicting the 1998-2000 droughts in eastern Africa.

Early Warning Information. In collaboration with its partners, the Centre has continued to provide early warning information on a monthly basis for Greater Horn of Africa countries. The information is distributed to over 3,000 individuals, including government officials and international agencies. The information has been very instrumental in monitoring drought calamities in Ethiopia, among other countries. The information has also been useful in monitoring recent floods and malaria outbreak conditions in Kenya in May-June 2003.

Alert Warning Information. Using high-resolution satellite data since the 1980s, RCMRD has provided alert warning information on forest degradation, land degradation, pollution of water systems, cypress aphid infestation monitoring in East Africa. ■

RCMRD & Early Warning in Greater Horn of Africa

FAO/IGAD EWS Project – 1988-1993. In this project, the Centre (RCMRD) provided early warning information to relevant countries and agencies on a 10-day and monthly basis through a bulletin. This was very instrumental and useful information during the 1991-1993 droughts in the IGAD region. The information was used for food donation appeal. The principal data were rainfall estimates derived from Meteosat Cold Cloud Duration (CCD) and NDVI from NOAA–AVHRR.

Regional Famine Early Warning System (REFEWS) – 1995–2000. In this project funded by the Netherlands government, and the RCMRD – in collaboration with the Environmental Analysis and Remote Sensing (EARS), a methodology that provides quantified end of season crop yields estimates was used.

The reliability of the methodology was confirmed by the very high degree of accuracy in predicting the 1998-2000 droughts in eastern Africa. The information derived from the project was used by eastern African governments, especially that of Kenya, in maintaining its strategic food reserves and deficit importation. With technical and financial support from donors, RCMRD, and its development partners such as EARS, are able to participate in the alleviation of agrometeorological problems afflicting Horn of Africa countries.

EARS (Environmental Analysis and Remote Sensing) is one of the oldest and most experienced remote sensing private companies in Europe. The company has developed innovative technology, including the Meteosat Energy and Water Balance Monitoring System, EWBMS.

The crop yield forecasting system developed by EARS consists of two sub-systems :
(1) EARS-EMS (Energy Monitoring System), an energy balance monitoring system which converts Meteosat noon and midnight thermal and visual imagery into 10-daily image products of actual evapotranspiration and radiation;
(2) EARS-CMS (Crop Monitoring System), a crop monitoring system which feeds the evapotranspiration and radiation data into a crop growth model, and generates an image product of the expected relative crop yield at the end of the season. Actual expected yields at the end of the season can be obtained by multiplying the relative yield with the maximum historical yield.

The whole system operation – from Meteosat reception to the generation of the early warning image products - is largely automated. The crop yield forecasting products have demonstrated the following qualities:
(1) quantitative and sufficient reliability,
(2) very timely, available within one or two days,
(3) provides for a stable crop yield forecast halfway the growing season,
(4) presented as maps with a resolution of 1 Meteosat pixel (5 km).

Although the EARS Crop Yield Forecasting System is operational, it needs further research, for example in the validation of the methodology using actual yield data.

Early warning information. The Centre, in collaboration with its partners (mainly FEWSNET, USGS, Drought Monitoring Centre - DMC, among others) has continued to provided early warning information on a monthly basis for Greater Horn of Africa countries. The information is distributed to over 3,000 individuals, including government officials and international agencies. The information has been very instrumental in monitoring drought calamities in Ethiopia, among other countries. The information has also been useful in monitoring recent floods and malaria outbreak conditions in Kenya in May-June 2003.

Alert warning information. Using high resolution satellite data since the 1980s, RCMRD has provided alert warning information on :
(1) forest degradation in East Africa such as through the East African Arc Mountains Project; (2) land degradation such as in Baringo District, Kenya;
(3) pollution of water systems: for instance, water hyacinth infestation of Lake Victoria and Lake Kyoga monitored using satellite technology, and also water sedimentation/siltation of Kenya's Lake Baringo and Kisumu Bay of Lake Victoria;
(4) cypress aphid infestation monitoring where RCMRD provided satellite imageries. ■

Water-Related Disasters Web Sites

The Associated Programme on Flood Management (APFM)
http://www.wmo.ch/apfm/
A collaboration between World Meteorological Organization, and Global Water Partnership, the APFM aims to incorporate flood management as a component of Integrated Water Resources Management; provide the necessary tools to facilitate the above; provide a mechanism for coordinating regional activities on flood management and assist in the preparation of relevant projects at regional and national level.

Dialogue on Water and Climate -
http://www.wac.ihe.nl/home.html
The Dialogue on Water and Climate aims to improve the capacity in water resources management to cope with the impacts of increasing variability of the world's climate, by establishing a platform through which policymakers and water resources managers have better access to, and make better use of, information generated by climatologists and meteorologists.

Southern Africa Flood & Drought Network
http://edcw2ks40.cr.usgs.gov/sa_floods/
Sponsored by Southern African Development Community, this website aims at providing up-to-date information on development and impacts of floods, drought and adverse weather in the Southern Africa region and to facilitate the exchange of technical and other useful information that can be used by the disaster and technical communities in preparing for and responding to the occurrence of cyclones, floods and droughts.

National Drought Mitigation Center (NDMC)
http://www.drought.unl.edu/index.htm
The NDMC helps people and institutions develop and implement measures to reduce societal vulnerability to drought. Based out of University of Nebraska-Lincoln, it stresses preparation and risk management rather than crisis management. The website provides tools for drought monitoring and planning for drought. It also gives an overview of community risk assessment.

National Landslide Information Center
http://landslides.usgs.gov/html_files/nlicsun.html
This site provides special information for students and professors on landslides, images, publications, recent landslide events and projects under execution.

Natural Hazards Center and HazLit
- http://www.colorado.edu/hazards/
- http://www.colorado.edu/hazards/litbase/litindex.htm

HazLit is the on-line library database of the Natural Hazards Research and Applications Information Center at the University of Colorado at Boulder. The library of the Natural Hazards Center houses an extensive collection of social science literature focusing on how society prepares for, responds to, recovers from, and mitigates natural disasters.

PAHO http://www.paho.org/disasters
The Pan American Health Organization (PAHO) is an international public health agency with 100 years of experience working to improve health and living standards of the people of the Americas. It enjoys international recognition as part of the United Nations system, serving as the Regional Office for the Americas of the World Health Organization, and as the health organization of the Inter-American System. Their disasters and humanitarian assistance web page highlights events and projects linking disasters and public health. The page also provides a topic based index on disaster issues.

Duryog Nirvaran
http://www.duryognivaran.org
Duryog Nivaran net is a network of individuals and organizations working in South Asia who are committed to promoting the alternative perspectives on disaster and vulnerability as a basis for disaster mitigation in the region. Their programmes and research highlights case studies of community involvement in disaster preparedness and reduction.

United Nations Environmental Program (UNEP)'s Fresh Water Site
http://freshwater.unep.net/
Aside from background and information on fresh water issues and resources, the UNEP site features a subsection on Droughts and Floods which features articles on disaster planning and mitigation. Various links to relevant UN documents can also be found on the site.

International Year of Fresh Water
http://www.wateryear2003.org/
The United Nations General Assembly in resolution 55/196 proclaimed the year 2003 as the International Year of Freshwater. It encourages Governments, the United Nations system and all other actors to take advantage of the Year to increase awareness of the importance of sustainable freshwater use, management and protection. It also calls upon governments, national and international organizations, non-governmental organizations and the private sector to make voluntary contributions and to lend other forms of support to the Year.

Water Media Network
www.worldbank.org/wbi/sdwatermedianetwork/index.html
The Water Media Network is an initiative designed to help journalists examine the social, environmental, regulatory and financial issues relating to water, and experience the difference that water can make to the economy in your regions. The program features workshops, field visits, distance learning courses and more.

World Water Council, Third World Water Forum
http://www.worldwatercouncil.org
The World Water Council is the International Water Policy Think Tank dedicated to strengthening the world water movement for an improved management of the world's water resources.