

Disaster risk reduction and sustainable local development



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Disaster risk reduction: a call to action

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Disasters and their impact: an approximation to the reality

Natural phenomena such as earthquakes, hurricanes, tidal waves, volcanic eruptions, landslides, drought and other events of greater or lesser magnitude have always been present on our planet. They are the consequences of dynamic changes in an earth that is in perpetual motion. Through the history of mankind, many such events have caused damage with disastrous consequences for the local population and their means of subsistence. Most cultures, however, learn how to live alongside, know and respect natural threats and the laws of nature, thus allowing great civilizations to grow up in harmony and balance with the environment and their own surroundings.

The international community began the new millennium by feeling encouraged that although the magnitude, recurrence and number of people affected by disasters due to natural phenomena had increased in the last decades, the number of fatalities had fallen. Sadly, just one year later, the world found itself facing a desperate situation and the heartening picture built up during previous decades proved to be but a temporary respite. The Asian tsunami and earthquake in December 2004, the hurricanes in the Caribbean and the Gulf of Mexico in 2005 and the earthquakes in Pakistan at the end of the same year were just some of the major world events that revealed the vulnerability and fragility of our societies before the horrified eyes of the world and the powerlessness of the international community (despite all our huge resources and scientific and technical advances). This lesson left us with a balance of hundreds of thousands of dead, wounded and missing; millions of homeless people – with their economies and means of subsistence destroyed.



SOURCE: DR. PEDRO BASABE - UN/ISDR

Phreatic-volcanic explosion of the Guagua Pichincha, Quito, Ecuador, October 1999

We estimate that over recent decades, 250 million people per year on average have been affected at various times. More than 58,000 lives and more than 67 billion dollars (USD) have been lost as a result of disasters caused by natural threats. In 1990, 90 million people suffered the impact of disasters compared to 255 million in 2003. Between 1990 and 2003, a total of 3.4 billion human beings on our planet suffered the consequences of disasters¹.

¹ D. Guha-Sapir, D. Hargitt, P. Hoyois, *Thirty Years of Natural Disasters 1974-2003: the Numbers*, CRED/UCL Presses, 2004.

Nearly 75% of the world population live in areas that have been struck by disaster at least once between 1990 and 2000. Every day, an average of 184 people die due to catastrophes in various parts of the world and over the past two decades, more than 1.5 million people have lost their lives as a consequence of these disasters. Only 11% of the world population exposed to natural threats live in countries with a low Human Development Index (HDI) yet these account for 54% of deaths, while countries with a high HDI are home to 15% of the population but the mortality rate is just 1.8%².

These alarming figures beg the question: *is the world progressing inexorably towards forms of development that generate and increase the risk of disasters or is it possible to halt and reverse the current process?* The forecasts are not very comforting. According to United Nations forecasts, it is estimated that losses due to disasters will rise to 300 billion USD and 100 thousand lives per year by 2050³.

The numbers paint a bleak picture and are only the tip of an iceberg, since they do not reflect the true impact of disasters and their consequences in terms of the physical and mental health of the affected target groups; in terms of economies, means of subsistence and production by the local population; in terms of families that lose their breadwinner or in terms of countries with a low HDI, which have little or almost no possibility of recovering after a disaster. Neither do these figures consider the impact of so-called minor disasters that can drastically increase the above statistics.

Disasters are a consequence of development and risk accumulation

At this stage of mankind's history and development, with our high level of scientific and technical knowledge, when we possess unimaginable technological resources that have taken man to space, when communications are immediate and time forecasting and threat awareness technology is better than ever before, we may well ask ourselves how it is possible that the world is going

backwards at such an alarming rate that we cannot even protect the life of our citizens - when we should be progressing in the direction of greater risk reduction. We must start to answer this question by considering whether the development model can continue at its current rate and guarantee a more sustainable planet given the current rate of decline in natural resources and generation of vulnerable areas, or if we need to seriously question current development practices.

Disaster risk is a cumulative process that combines natural, socio-natural and man-made threats with human actions that create conditions of vulnerability. The vulnerability of a society determines its level of susceptibility to a threat being potentially disruptive and causing one or many minor disasters with damage to the community and affected people.

Disasters are the outcome of a complex mix of actions linked to economic, social, cultural, environmental and political-administrative factors that are determined by inadequate development processes, structural adjustment programmes and economic investment projects which do not consider the social or environmental cost of their actions. The situation is worsened by the unfair distribution of wealth and opportunities, deficient settlement patterns in high-risk areas (mainly involving the most vulnerable target groups), unbridled urban growth with no proper planning, continuous environmental degradation, poor ability to manage and reduce the risk of disasters by authorities and communities, lack of human, technical and material resources in affected societies, etc.

Although it is certain that the impact of disasters is greater in poor countries, especially those with a low Human Development Index, the responsibility for risk reduction and also generation does not lie just at local or national level – it also lies at supranational and even global level, as is the case with global economic policies, global warming of the Earth, climate change, desertification and environmental degradation. The repercussions of many of these measures are felt far from the area where the decisions were taken or where the

² UNDP – Bureau for Crisis Prevention and Recovery, *Reducing Disaster Risk: a Challenge for Development*, UNDP, 2004.

³ A. Lavell, *Local Risk Management. Ideas and Notions Relating Concept and Practice*, CEPREDENAC/UNDP, 2003.

actions were carried out, affecting, in the first instance, developing countries or target groups at the greatest risk of economic and social exclusion. **Risk reduction is everybody's responsibility and, due to ethics and the basic principles of humanism and solidarity, is mainly the mission of those who possess the necessary knowledge, resources and instruments and have the best opportunities to conduct the fight against disasters.**

The above problems are exacerbated by a series of myths or misconceptions that make a society even more likely to be vulnerable to disastrous situations. Even experts assert that *disasters are natural*, that *population growth generates risks*, that *a society cannot deal with the consequences of a disaster on its own and requires external aid*, that *the disaster period only lasts a couple of weeks and things quickly return to normal*, to mention but a few. Reality, local experiences, the wisdom of communities and scientific knowledge has shown us that most disasters may be avoided and are not natural, even though the threat may be natural. Disasters are caused by the vulnerability factors that we ourselves generate together with the threats, lack of ability and poor risk management. Deficient development often reinforces the danger or constitutes new threats.

People are not killed by earthquakes or the wind of a hurricane but by physical constructions or secondary factors that are not necessarily related to the threat. People are not the problem but the solution and the main resource available to developing countries. It has been shown that the local community and the people in the area are the main line of defence and the basis for reconstruction in an emergency situation. In 1998, when Hurricane Mitch hit Central America, it was the local communities in affected countries that rose to the occasion and dealt with the emergency and even with the reconstruction process. In places where disaster reduction strategies are implemented, a better response is achieved and the reconstruction process is more efficient. Dozens of examples in Africa, Asia or Latin America support this statement.

In any case, outside aid is not always sufficient or is

not necessarily adapted to the true needs of a country or area following a disaster and more closely reflect what the financial institutions have to offer than the needs of those affected. Generally, conditions are imposed that the country is not in a position to comply with or the aid schemes do not allow for the forecasting and generation of new risks. This increases the level of debt and economic dependency still more, which can even lead to conditions of greater vulnerability.

The deficient development processes that enhance and exacerbate the impact of threats are compounded by the fact that actions taken by the international community and countries to reduce disasters are mainly focused on response and continue to be dominated by humanitarian aid and emergency management and not on prevention. In many situations, this attitude

Many people living in subsistence economies do not have the means to allow them to live without contributing to the depletion of local natural resources and thus giving rise to vulnerability factors in their areas. Unfortunately this is the source of survival for approximately one third of the world population⁴. Depletion of the means of survival of less favoured people is not, however, the greatest problem: in an attempt to generate short-term financial gain and income, states, international financial institutions and major international corporations promote development megaprojects or projects such as hydroelectric dams, roads, natural resource exploitation (forestry, water, mining, fishing, etc.), town developments in low or high river basins, etc., that do not consider and include risk factors or allow for the generation of new vulnerabilities and threats. Such projects therefore contribute to the generation of high risk indices that endanger the ecological balance of affected areas and also the survival of the local inhabitants, especially those that live in the original villages, which is where most natural resources are conserved.

By the deforestation of the native tropical woodland to plant exogenous species or for stock rearing, by cutting down or reducing mangrove swamps to rear shrimps or other species, by flooding great swathes of land for reservoirs, by building over extensive fertile areas and covering them with asphalt or concrete, we are eliminating and reducing the natural defences that ecosystems use as windbreaks, to calm waves, keep back water, prevent erosion and thus prevent human, economic and environmental disasters. **A basic principle of any social process is that economic growth cannot come at any price or be valued more highly than sustainable human development, the environment and people's lives.**

⁴ Source: UNEP, 2000, as quoted in the document: *Disasters and Human Settlements. Situation in the Caribbean Basin*, UN-HABITAT, 2002.

can increase the causes of vulnerability if we do not act in a planned manner in conjunction with the local authorities and communities and focus on sustainable development. Emergency actions and humanitarian aid are generally more visible and quantifiable in the short term and, in some way, they serve to assuage guilty consciences, show results, provide greater visibility and gain credibility following a disaster. Aid for development is not increasing on a global scale, but humanitarian aid has grown significantly⁵.

Lengthy periods elapse between the *end of humanitarian aid* and the start of reconstruction activities (processing of plans and projects, resource management, negotiations, etc.). During this time, the local people are left with little or no support for recovery and must make do as best they can, without the appropriate resources and capabilities. During this time lag, new disaster risk scenarios may arise, adding to the risks that were present before the disaster. In some cases, long-term reconstruction never takes place or is delayed due to a death of implementation and preparation capabilities after the emergency stage.⁶

The international community is becoming aware

Despite everything I have said previously, the picture is not entirely gloomy and glimmers of light are beginning to be seen in the struggle against disasters. The international community is increasingly beginning to gain new awareness of the direct effects of disasters on development and also the effects of development systems on disaster risk generation.

We are very gradually changing our habits of acting only in emergencies and ceasing to see disasters as random, fortuitous events but rather as a process of risk accumulation that must be considered and incorporated in all actions involved in the development of a country or area. The disasters themselves have acted as triggers to make the international community sit up and take action to reduce their effect. At present, major disaster risk management processes are taking place on a local,

national and supranational level in the Americas, Asia, Africa and even in Europe.

The United Nations (UN) proclaimed the decade of 1990-1999 the **International Decade for Natural Disaster Reduction** (IDNDR), which allowed us to make significant progress in gaining awareness of and promoting a culture of prevention. Major achievements were made in the setting up of national disaster reduction systems and in raising awareness at national and international level within national governments, local governments and also in civil society. Non-governmental organizations, research centres, universities, municipal promotion institutions, local governments, etc., have been increasingly involved in the area.

At the end of the past decade, the **International Strategy for Disaster Reduction** (UN/ISDR) was proclaimed to keep up the good work begun by the IDNDR and to respond to system needs for a permanent world framework to coordinate and promote disaster risk reduction. The UN also declared a need for the ISDR to incorporate local, national and regional development processes with the aim of seeking greater sustainability in future actions.

At the same time, various system organizations such as the **United Nations Development Programme** (UNDP), the **UN Environment Programme** (UNEP), the **International Labour Organization** (ILO), amongst others, promote programmes and projects designed to reduce risk in the most vulnerable countries and populations of the world.

A set of international instruments such as Agenda 21, the Convention on Climate Change and the Kyoto Protocol, the Johannesburg Declaration and its Plan of Implementation for Sustainable Development, the Convention to Combat Desertification and Drought, the Millennium Declaration and the Millennium Development Goals, are important instruments approved and ratified by the majority of UN member states and may become excellent tools for progress in disaster risk reduction and in sustainable development.

⁵ D. Guha-Sapir, D. Hargitt, P. Hoyois, *Thirty Years of Natural Disasters 1974-2003: the Numbers*, CRED/UCL Presses, 2004.

⁶ Delnet Programme, *Specialization in Sustainable Local Development and Disaster Risk Reduction - Theoretical Framework*, Delnet ITC/ILO, 2006.

These instruments are complemented by the **Hyogo Framework for Action 2005-2015, Building the Resilience of Nations and Communities to Disasters**, adopted at the **World Conference on Disaster Reduction** (WCDR) in January 2005. This tool, which is supported by nations throughout the world and has been ratified by the United Nations General Assembly, serves as a starting and reference point for national and local policies and processes designed to reduce the risk of disasters⁷.

Challenges for the future: a call to action

Understanding that disaster risk is determined by a pre-existing situation, in which the human factor plays a part, allows us to become aware of the need to seek development strategies based on disaster risk reduction processes aimed at sustainability. To do this, we must set out a twofold objective: reduce existing vulnerability (built up by historical process through the implementation of unsustainable development practices) and promote processes that prevent conditions arising that could give rise to new risk scenarios in the future. We must act on the structural development causes that generate the risk and not only on their symptoms, as has been the predominant tendency in the past.

A wide-ranging consciousness-raising process has allowed us to make progress to the extent that communities and societies can call on the necessary tools, agreements, strategies and above all, an international framework for action and consensus (the Hyogo Framework for Action) that allows us to promote a culture of prevention and make progress in reducing the risk of disasters with a view to sustainable human development. It is now the responsibility of states, international organizations, the UN System and all actors involved to apply the measures, strategies and recommendations that they themselves have proposed, signed and ratified. The necessary bases and tools have already been established and there can be no more excuses for dragging our feet. Risk reduction cannot continue to be a matter of reacting to emergencies but must become a matter of development.

The states, the international community and the key actors must trust in and promote to a much greater extent a reinforcement in local capabilities and the participation of all sectors. They must enhance the use of endogenous resources in countries, areas and communities and base disaster risk reduction strategies on the local situation, treating the environment, the natural habitat and people as the main resources for carrying these processes forward.

International financial institutions, states and donor organizations must assume responsibility for allowing for a risk component in all projects to reduce current risk and also to prevent the generation of new vulnerabilities and threats. During the post-disaster reconstruction stage, the actions implemented should not place affected communities or countries into debt but should consider interest-free loans for economic and social development that are adapted to the true situation in countries and not based solely on offers of cooperation and subject to conditions that those affected cannot meet.

One new and great challenge that is gaining ground is to develop new economic, credit and loan policies that will give states incentives to invest in disaster prevention and reduction. These could include the reduction of foreign debt, the provision of interest-free loans and the implementation of local economic development projects aiming to reduce poverty, etc. At the same time, we must promote policies to penalise projects or actions that deplete the environment and generate risk. A "environmental or disaster tax" could be applied to activities that generate risk, pollute the environment and deplete natural resources. These resources could be invested in an attempt to reverse the negative consequences of unsustainable actions and be managed at the local level to fulfill a twofold objective: reduce disaster risk and create job opportunities in the territories.

Transnational corporations and companies that are not properly regulated in such countries must establish minimum ethical standards and criteria to halt the decline in natural resources and environmental pollution and the destruction of the means of subsistence of the people who inhabit the affected areas, particularly in the

⁷ For more information on the Hyogo Framework for Action, see section IV of this review, in the chapter on international organizations.

original villages whose very existence is under threat and fundamental rights are violated.

The struggle against disasters means a serious, ethical and moral commitment since the lives and means of subsistence of major sectors of the world population hangs in the balance. This is the responsibility of all actors who play a part in risk reduction and/or generation. We will make little progress in risk reduction and sustainable development without any firm commitment by states to include risk reduction as a public and development policy in economic, social, cultural and environmental sectors, with proper administration, monitoring mechanisms and true decentralization and allocation of competences and resources to the local environment (which is the place actually affected by the decisions, measures and disaster risks).

Experience tells us that the key to preventing, alleviating and, in the best possible scenario, avoiding the impact of disasters is to: reduce the risk before it arises in the first instance; guarantee a good preparation if a potential destructive event occurs; and ensure rapid, effective and appropriate reconstruction after the emergency phase.

Reconstruction may be considered a window of opportunity and one of the best times to introduce the topic of disaster risk reduction in the planning of sustainable development while also promoting proactive and permanent strategies that allow the building of safer societies. Reconstruction must focus on reinforcing the capabilities of key actors in local development and in the affected communities but also on improving quality of life, reducing poverty, creating sources of dignified employment and safe economic development, and also guaranteeing a higher level of safety in the future for assets, means of subsistence and particularly people's lives.

However impossible this may seem, no effort is too big if its aim is to prevent human catastrophes and guarantee greater harmony between people, society and the environment. *A society is safe when it learns to live with itself as well as to live with the Earth. Disaster risk reduction strategies will be successful when governments and the general public understand that disasters are much more than a chance event, that they constitute a lack of readiness on their part and reveal their own negligence*⁸. ■

Sources consulted

1. T. Braine, *Was 2005 the Year of Natural Disasters?* article published by the Pan American Health Organization (PAHO), on its website, January 2006.
2. Delnet Programme, *Specialization in Sustainable Local Development and Disaster Risk Reduction – Theoretical Framework*, Delnet ITC/ILO, 2006.
3. D. Guha-Sapir, D. Hargitt, P. Hoyois, *Thirty Years of Natural Disasters 1974-2003: the Numbers*, CRED/UCL Presses, 2004.
4. Hyogo Framework for Action: UN/ISDR website: <http://www.unisdr.org>.
5. S. Moss, contributions by K. Alam, *In Harm's Way: How International Finance Institutions' Policies Can Increase Poor People's Vulnerability to Disaster*, Action Aid International and Christian Aid, 2005.
6. International Strategy for Disaster Reduction and Pan American Health Organization *Hurricane Mitch: a Look at Tendencies for Risk Reduction*, ISDR and PAHO, 2000.
7. International Strategy for Disaster Reduction, *Living with Risk. A Global Review of Disaster Reduction Strategies*, UN/ISDR, 2004.
8. A. Lavell, *Local Risk Management, Ideas and Notions Relating Concept and Practice*, CEPREDENAC/UNDP, 2003.
9. J. Telford, M. Arnold, A. Hart with ASONOG, *Learning Lessons from Disaster Recovery. The Case of Honduras*, World Bank, 2004.
10. United Nations Development Programme, Bureau of Crisis Prevention and Recovery, *Reducing Disaster Risk: a Challenge for Development*, UNDP, 2004.
11. UN-HABITAT, *Disasters and Human Settlements: Situation in the Caribbean Basin*, UN-HABITAT, 2002.

⁸ International Strategy for Disaster Reduction, *Living with Risk. A Global Review of Disaster Reduction Strategies*, UN/ISDR, 2004.

Africa seeks to shift from disaster response to disaster prevention

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Africa is not the most disaster-prone region, but it is the most vulnerable one. However, measures have been taken, over the last four years, to address this situation.

With support from the Africa Regional Outreach Office of the UN Inter-Agency Secretariat for the International Strategy for Disaster Reduction (UN/ISDR Africa) or from UNDP country offices, African countries have taken major steps to shift from disaster response to disaster reduction.

A Ministry for Disaster Reduction in Gabon

In Gabon, a National Platform for Disaster Risk Reduction was launched on 4 August 2004. During the launching, officials from various ministries issued recommendations such as the establishment of a National Council for Disaster Risk Reduction under the leadership of the Prime Minister.

Still better, the Gabonese Government, in March 2006, after considering that disaster risk reduction was a component of sustainable development, established a Ministry of Disaster Reduction and Management. The UN/ISDR Africa focal point, also the immediate former director-general in the Ministry of Welfare, has been appointed Permanent Secretary in the new ministry.

The Ministry is planning to organize a sub-regional workshop for 19 African countries with the view to establishing a Disaster Reduction Centre for Central African countries.

Toward a flood early warning system in Angola

The Angolan Department of Civil Protection, with sup-



Kenya, Africa

port from UNDP and NORAD (Norwegian Agency for Development), is carrying out a pilot "Flood Early Warning System" project in the province of Benguela (western Angola) where many people living along the Coporolo, Cavaco and Catumbela rivers – therefore in vulnerable flood areas - suffer almost annually from the impacts of floods.

The early warning system is being established in close collaboration with scientists, educationists, national institutions and local communities. Local leadership

structures (administrative, communal, traditional, and religious) are also involved in awareness and educational programmes on early warning issues and disaster prevention measures aimed at reducing the impacts of floods.

The early warning system works in six different phases: data collection, data updating and storage, data analysis, flood forecast, warning dissemination, disaster preparedness. After completion of the pilot phase, the system will be adapted to the country's national early warning system.

Disaster reduction mainstreamed into development plans in Madagascar

Disaster risk reduction has been mainstreamed into regional and municipal development Plans in Madagascar's disaster-vulnerable areas.

Regarding national resource allocation to disaster reduction, the country's Ministry of Economy, Finance and Budget is highly aware of the importance of risk assessment for each development project. In this context, the Ministry expressed the need for capacity building on disaster risk assessment for its staff.

Meanwhile, as the country's Poverty Reduction Strategy Paper (PRSP) will come to an end in late 2006, the National Government was requested by the World Bank to draft a document called "Madagascar Action Plan" (MAP) that will replace the PRSP and will cover the period 2007-2012. With assistance from UN/ISDR Africa, the country's National Disaster Management Agency has presented its action plan for disaster risk reduction for integration into the MAP. The action plan includes decentralization, public awareness and capacity building for various stakeholders and decision makers.

Journalists to help raise awareness on disaster reduction in Senegal

A training session on disaster reduction was held for the "Convention of Young Reporters in Senegal" on 9 and 10 March 2006, organized by the Senegalese Na-

tional Platform for Disaster Risk Reduction. The training aimed at forging partnership between the Department of Civil Protection and young reporters, and at enhancing the young reporters' knowledge of disaster risk reduction.

At the end of the training, the young reporters committed themselves to taking part in all disaster risk reduction activities such as public awareness raising, disaster risk reduction policy/strategy development and programmes. A plan of action on "Media and Disaster Risk Reduction" was also developed.

Africa's pace in disaster reduction "resolute"

It is to be noted that other activities are under way in other African countries. In fact, Africa's pace in disaster reduction seems to be more resolute and faster than that of other regions of the world.

Mainstreaming disaster reduction into school curricula will soon be a reality in Cape Verde, Uganda, the Seychelles and Madagascar, and African education ministries are now eager to engage in this particular agenda. Also African academics' involvement in disaster reduction has kicked off with a University Network on DR in Africa.

Introducing insurance for DR has become a reality in Malawi, and the Seychelles is following suit. One more country - Senegal - has mainstreamed DR into its Poverty Reduction Strategy Paper.

More national platforms for disaster risk reduction have been established, increasing their total number to 15; and many more are in the pipeline. An African Regional Centre for Disaster Risk Management will be established in Egypt. The "First African Ministerial Conference on Disaster Risk Reduction" was held in December 2005, and plans are under way to lobby African finance ministries for permanent resource allocation to disaster risk reduction.

Last but not least, disaster risk reduction is poised to be on the agenda of the next African Union Summit of Heads of State and Government in June-July 2006. ■

Recovery and reconstruction after the Great Hanshin-Awaji earthquake in Japan

Lessons learned from the experience of Kobe

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Introduction

More than 11 years have passed since the Great Hanshin-Awaji Earthquake occurred early in the morning of 17 January 1995. That massive vertical-thrust earthquake (M7.3, depth 16km) robbed us of many precious lives and destroyed urban infrastructure in a moment. Not only did houses and other buildings collapse but fires broke out in many places. The catastrophe left more than 6,433 dead (including my own grandmother) and brought down 249,180 buildings (including the house I was born in).

At that time, I was a Hyogo Prefectural Government official in charge of public works. As such, I was immediately involved in rehabilitation. Soon, I moved to the public works reconstruction headquarters, where we formulated a Priority Three-year Infrastructure Reconstruction Plan as part of the 10-year Phoenix Plan or Great Hanshin-Awaji Earthquake Reconstruction Plan, aiming at “creative reconstruction”, or “Building Back Better than Before for the 21st Century”, with local leadership.

In January 2005, a World Conference on Disaster Re-

Restoring of the highway which collapsed in the Great Hanshin-Awaji earthquake: images before and after the reconstruction



SOURCE: PHOTOS BY HANSHIN EXPRESSWAY COMPANY LIMITED

duction (WCDR) was held in Kobe. It adopted the Hyogo Framework for Action (HFA), which generated the International Recovery Platform (IRP). Together with municipal governments, citizens, companies, NGOs and other parties, the Hyogo Prefectural Government completed a Ten-year Reconstruction Overall Verification and Recommendation.

This report includes lessons learned from the disaster, countermeasures taken, whether successful or not, and recommendations for the future based mainly on the experience of the local government (Hyogo Prefectural Government).

Restoration and reconstruction

Despite the difficult conditions, including severed traffic networks and paralysed urban functions, restoration has been rapid, thanks to the dedicated efforts of those involved and great support from people both inside and outside Japan. Only six days after the earthquake, a provisional supply of electricity was restored. Water and gas were reconnected within three months. Japanese Railways had reopened all its lines by April 1995. Private railways, which had suffered tremendous damage, resumed normal service by August. The Hanshin Expressway formally reopened all of its lines at the end of September 1996. More than 90% of damaged houses and buildings were cleared within one year of the earthquake. The 14 million tons of rubble this produced was all processed by April 1998, with some of it used for land reclamation. All residents of the 48,300 emergency housing units were in permanent housing by January 2000.

Lessons from the earthquake and the reconstruction activities

From the initial response phase immediately after the earthquake to the fully fledged restoration phase, measures were taken in a range of fields, and much was done to reach the goal of the Phoenix Plan: “creative reconstruction”. However, it has become clear that many tasks remain, not only in the stricken region but in Japanese society as a whole.

This report provides examples of lessons learned and action taken by local governments with great support from the national government and related organizations. It looks at: 1) newly created systems and mechanisms; 2) exceptional operation or expansion of existing systems and projects; 3) pioneering initiatives.

1) Delay in the initial response by governments

<Lesson>

Because the earthquake hit the capital and damaged local government disaster management headquarters, their initial response was very slow. Not only the headquarters but almost all the traffic and telecommunications systems (even satellite telecommunications) were destroyed. It took three days for the national government to grasp the extent of the damage.

<Countermeasures>

The national government improved risk management by establishing a Deputy Chief Cabinet Secretary for Crisis Management, a Cabinet Information Collection Center and more. It also developed an Early Evaluation System (EES) to estimate damage quickly, and an Emergency Measure Support System (EMS) to enable related agencies to share information and help implement emergency government measures.

At the local level (Hyogo Prefectural Government), a practical disaster management system was set up. The Disaster Management Center, the first such government building in Japan, opened in 2000 with the “Hyogo Phoenix Disaster Management System” as its core facility. The System uses Internet technology to provide information – including estimates of damage, relief support needs and relief stockpiles in the area – and enables the government to collect, process and provide relevant information smoothly in the event of a disaster.

<Recommendations>

A system should be set up by which information can be collected, transmitted and shared quickly and accurately among disaster reduction agencies, the public administration and private citizens in the event of a disaster.

2) Coordination among organizations

<Lesson>

Local governments could not get detailed damage information and could not request immediate help from the national government or other agencies such as the Self-Defence Force, even though the damage was too great for the local government to cope with.

Severely damaged hospitals were too busy coping with casualties to cooperate with other medical agencies.

<Countermeasures>

Disaster-related organizations have built a nationwide disaster emergency response system. One component consists of national agencies like the National Police Agency, the Fire and Disaster Management Agency, the Coast Guard and the Self-Defence Force. The second is the Inter-Prefecture Mutual Support Agreement. The third is medical agency cooperation. The Hyogo Prefectural Government set up the first local government emergency medical centre in Japan.

<Recommendations>

Large-scale disasters such as earthquakes and tsunamis are expected to hit Japan in the near future. A system by which information can be collected, transmitted, and shared quickly and accurately across prefectural boundaries among disaster reduction agencies, the public administration and private citizens therefore needs to be established.

3) Lack of preparedness

<Lesson>

More than 80% of the victims were killed by collapsing buildings. Most damaged buildings did not comply with the building code, revised in 1981, when they were already old.

Immediately after the earthquake, fire broke out and spread among those old wooden houses in a densely built-up area, burning more than 7,400 houses. (The figure above shows the relationship between the damage level and the date of construction.)

<Countermeasures>

The national government's 1995 "Seismic Building

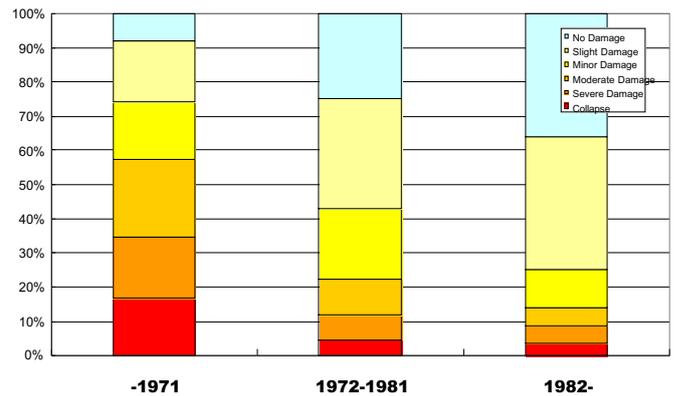


Fig. 2 – Relation between the damage level of buildings and the date of construction

Retrofitting Act" promoted the seismic retrofitting of vulnerable buildings. Local government also subsidized retrofitting.

National and local government shoulders two thirds of the cost of seismic diagnosis of buildings. For retrofitting large buildings, 13% (15% in dense residential areas) is shouldered by governments. Some local governments provide additional support.

<Recommendations>

In spite of that, in 2005, 25% of buildings in Japan, including public buildings, still needed reinforcement against earthquakes. More therefore needs to be done to improve the earthquake resistance of housing and public facilities in a methodical manner, based on a reliable inspection system.

4) Importance of community and volunteers

<Lesson>

About 80% of some 35,000 trapped persons were rescued from the rubble of collapsed buildings by people in the local community. This shows the effectiveness of voluntary fire extinguishing and rescue/aid activities by local citizens during the immediate aftermath of a large-scale disaster.

After the earthquake, a total of 1.38 million volunteers rushed into the affected areas from all over Japan and overseas. These volunteers took part in a wide range of relief and support activities, offering great help in the time of need, especially as regards medicine, building work, welfare and logistics, even though there was no

special volunteer coordination system.

<Countermeasures>

To support volunteer activities, the government designated January 17 "Disaster Management and Volunteer Day", and enacted a law to promote specific non-profit activities in March 1998. Furthermore, the Hyogo Prefecture has instituted a subsidy programme for reconstruction volunteer activities.

The Hyogo Prefecture has supported volunteer disaster response groups through training to nurture leaders, and by providing goods and equipment. As a result, the percentage of households participating in volunteer disaster response groups increased from 27.4% in 1995 to 94.7% in 2005.

<Recommendations>

Create mechanisms that encourage the activities of the non-profit organizations (NPOs) and NGOs involving community bodies, which have broadened their remit in response to the earthquake.

5) Helping affected people become self-sufficient

<Lesson>

Some of the damaged area had a rapidly aging population. Of those who died, 44% were over 65 years old. The earthquake also hit the small-scale industry area. In addition, dispersal of the community weakened the local mutual aid system, which increased the need for special support for vulnerable people.

To allocate new temporary houses, a lottery system was introduced. This completely shattered the old community, and led to more than 200 lonely deaths without family care among elderly people.

<Countermeasures>

New compensation systems were introduced. Furthermore, 16 items of special legislation were enacted, including revisions to local tax law, exceptional provisions under the national tax law, and special measures for the reconstruction of urban areas stricken by disaster. Measures were taken to reduce national and local taxes, including income tax, residency tax and property tax, insurance payments and premiums, and to relax construction restrictions in urban

areas.

One of the most effective and flexible examples of a new support framework was the "Great Hanshin-Awaji Earthquake Reconstruction Foundation".

A fund of 900 billion yen was established in April 1995, and, over ten years, projects worth 354 billion yen were developed:

- Livelihood Restoration Fund: loans and interest support for funding the rebuilding and purchasing of homes;
- rent subsidies for private housing;
- assistance for voluntary activities;
- assistance to revitalize shopping arcades and community businesses;
- assistance for reconstruction and community-building;
- interest support, etc., for housing construction in areas designated for the Restoration and the Urban Environmental Improvement Project;
- a Socioeconomic Rehabilitation Aid System (April 1997) to help victims to rebuild independent livelihoods.

A National Assurance Programme for Victims of National Disasters was proposed and, gaining the support of over 25 million people, the Act Concerning Support for Reconstructing Livelihoods of Disaster Victims was passed (May 1998), which led to the creation of the Victims Self-help Assistance Fund system (July 1998) and the Residential Stability Assistance system (March 2004).

An independent prefectural supplementary system to support housing reconstruction was set up in April 2004. Communal spaces were provided for vulnerable people. Local emergency housing, to which living support advisers (LSAs) were assigned, was built for elderly people and the disabled. Social centers were also built, and lifestyle assistance advisers deployed.

<Recommendations>

With regard to supporting the rebuilding of homes, there is a limit to what can be achieved solely through independent efforts such as earthquake insurance plus public assistance, so we need to create a system which integrates self-support, mutual support and public

support, one example being benefit systems based on mutual assistance by home owners.

Systems for helping elderly disaster victims live independently, designed for the super-ageing society of the future, need to be established. This could be done by setting up new local health care systems and systems to facilitate mutual support among regional residents.

6) The importance of urban planning

<Lesson>

We have learned a lot about urban planning:

- Live in harmony with nature.
 - The damage to buildings was connected to properties of the ground, such as the existence of active faults. Damage was also evident to buildings which stood on steep slopes in the foothills.
 - In order to ensure safe living in cities, there is a need to formulate plans for land use in harmony with nature.
- Importance of water and greenery.
 - Trees lining roads and hedges around private homes contributed to containing the spread of fires.
 - Rivers, water for agriculture, and the sea were useful in both extinguishing fires and supporting daily life. It is important, therefore, that the development of networks of water and greenery as infrastructure should be promoted.
- Disperse or decentralize urban functions.
 - Because the disaster affected the downtown area where government, culture, business and other functions were concentrated, the earthquake shut down the entire city.
 - Given this, it is important to build an urban structure in which functions are appropriately dispersed.
- Balanced transport system.
 - The cutting off of east-west transport routes by the earthquake brought urban functions to a virtual halt. Consequently, there is a need to construct a transport system in which accesses are balanced and a wide variety of alternative routes exist.
- Importance of urban infrastructure.
 - Numerous fires broke out in densely populated areas with mixed residential and industrial use. As these fires spread, widespread destruction was

caused to entire districts. It is therefore important to rearrange urban space, creating basic public facilities such as roads, parks and public squares.

- Build to withstand earthquakes and resist fires.
 - Many people lost their lives when old houses collapsed. It is therefore important that buildings be constructed to withstand earthquakes and resist fires.
- Importance of lifelines.
 - It is important to develop a failsafe approach which ensures that the entire system will not be paralyzed in the event of a disaster.

<Countermeasures>

Along with the Hyogo Phoenix Plan, “new metropolitan cores” such as Kobe New Eastern City Center (HAT-KOBE) and Awaji Garden City have been developed.

As for the reconstruction of the affected downtown areas, 20 land readjustment projects and 15 urban redevelopment projects are proceeding with community and government hand in hand. Their swift completion is expected to regenerate urban areas and revitalizing communities. Although it is necessary to launch a well planned urban reconstruction policy as early as possible, the full agreement of local residents is also needed. For this reason, a two-step system of decision-making on urban planning was set up, with the first stage consisting of decisions on the overall framework and the second on roads, parks and other elements intimately connected with people’s daily lives.

A comprehensive transport system has been developed. The opening of the Akashi Kaikyo Bridge (April 1998), the world’s longest suspension bridge, together with several relevant expressways and more, has helped to develop a high-standard road network possessing both speed and interchangeability.

The Port of Kobe has seen the development of Japan’s first container terminal with a deep-water (15m) berth.

A Rokko Mountain Range Green Belt Development project to build a continuous belt of forest to protect against landslides along the mountain slopes adjacent to urban areas is now under way.

<Recommendations>

Some urban reconstruction is still on going and its swift completion is expected to regenerate urban areas and revitalizing communities.

Tell the world and the next generation

The experience of the earthquake, and the lessons learned from it, should never be forgotten. They should be made known widely, both within Japan and overseas.

The Asian Disaster Reduction Center (ADRC)

In July 1998, the Hyogo Prefectural Government invited the Asian Disaster Reduction Center in Kobe with the support of the national government, to contribute to international disaster risk reduction through information-sharing and capacity-building activities. This was regarded as one of the ten success stories of the United Nations International Decade for Natural Disaster Reduction (IDNDR, formerly ISDR activities), in which Japan's disaster management experience was shared with other Asian countries¹.

The Great Hanshin-Awaji Earthquake Memorial, Disaster Reduction and Human Renovation Institution (DRI)

Many memorial monuments and some memorial facilities have been built in the affected area. The main facility is the Great Hanshin-Awaji Earthquake Memorial, Disaster Reduction and Human Renovation Institution, established in 2002 by the Hyogo Prefectural Government with the support of the national government to disseminate lessons from the disaster.

The DRI houses international disaster-related organizations such as the ADRC (Asian Disaster Reduction Center), UN/OCHA (United Nations Office for the Coordination of Humanitarian Affairs) in Kobe, the UNCRD (Centre for Regional Development) and the EDM (Earth-



The Great Hanshin-Awaji Earthquake Memorial, Disaster Reduction and Human Renovation Institution

quake Disaster Mitigation Research Center).

The World Conference on Disaster Reduction and the establishment of the IRP

Fifteen international disaster-reduction organizations, besides the DRI, opened in the Kobe New Eastern City Center after the great earthquake.

A World Conference on Disaster Reduction was held in Kobe in January 2005. It triggered the establishment of the IRP, which is also located in the DRI building.

Eleven years after the great disaster, the seriously damaged Hyogo Prefectural Government has achieved creative reconstruction, building back better than before. Moreover, it is keen to contribute to worldwide disaster risk reduction through the activities of those institutions, based on the lessons learned from its harsh experience. ■

Bibliography

- Phoenix Hyogo, *Ten Years of Creative Reconstruction*, Hyogo Prefecture/ Kobe City, March 2005.
Hyogo Prefectural Government, *The Report of the 10-Year Reconstruction Overall Verification and Recommendations*, Office of the 10th Year Restoration Committee Disaster Management in Japan Cabinet Office, Government of Japan, January 2005.

¹ Please visit <http://www.adrc.or.jp/>.

Women, disaster risk reduction and sustainable development

A gender perspective

Helena Molin Valdés,
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A gender approach in disaster reduction is built on the understanding that both women and men are part of the same society, which as we know, does not mean we have the same rights, education and options to manage - nor in "normal" times, neither when a disaster strikes. Examples from recent tsunami-stricken South Asia, Central America, India and the Pacific, show that women can act as agents of change. Several studies do confirm, however, that women are most of the time much worse affected than men when a disaster strike and less benefited when recovery begins. We therefore need to address the specific concerns of women already when designing disaster reduction policies and measures.

The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters, adopted by 168 Governments in January 2005, at the World Conference on Disaster Reduction in Japan, provides a clear commitment that can guide policy makers and the community at large to engage more systematically in reducing risk to disasters. The expected outcome is to substantially reduce the losses from disasters, through the achievement of three strategic goals and five priorities for action. The Hyogo Framework for Action puts disaster risk reduction into the context of sustainable development planning, programming and poverty reduction strategies, as well as an opportunity to be addressed in emergency preparedness and recovery programmes. It states, as part of the



cross-cutting principles, that:

- A gender perspective should be integrated into all disaster risk management policies, plans and decision-making processes, including those related to risk assessment, early warning, information management, and education and training;²
- Both communities and local authorities should be empowered to manage and reduce disaster risk

¹ The ISDR Secretariat (UN/ISDR) collaborated with the United Nations Division for the Advancement of Women in the organization of an expert meeting on *Environmental Management and the Mitigation of Natural Disasters: a Gender Perspective* held in Ankara, Turkey, 6 - 9 November 2001, including the holding of an on-line debate, moderated by Elaine Enarson, expert in gender and disasters. Many of the experiences reflected in this article are based on these discussions and from continued dialogue at the Commission on the Status of Women of the UN (2004 and 2005) and within the Gender-and-Disaster-Network, <http://www.gdnonline.org/>.

² As reaffirmed at the twenty-third special session of the General Assembly on the topic: "Women 2000: Gender Equality, Development and Peace for the Twenty-first Century".

by having access to the necessary information, resources and authority to implement actions for disaster risk reduction.

Disaster reduction policies and measures need to be implemented with a twofold aim: to enable societies to be resilient to natural hazards, while ensuring that development efforts decrease the vulnerability to these hazards. Sustainable development is not possible without taking into account multi-hazard risk assessments in planning daily life, and as such is an issue that impacts on the lives of both women and men. Given that the magnitude of a disaster are partially influenced by the political, economic and socio-cultural contexts, mainstreaming gender into disaster reduction policies and measures translates into identifying the ways in which women and men are positioned in society. This enables the mapping of not only the ways in which the lives of women and men may be negatively impacted, but also the ways in which they can contribute to disaster reduction efforts.

In other words, cultural patterns that structure the lives of women and men must also be clearly understood. Women's and men's differing needs, roles, and social power in different social and cultural contexts need to be taken into account. Men are usually seen as primary income generators while women's economic activities, often the mainstay of the household economy, are less visible. Women carry the primary responsibility for the care of children, the elderly, the disabled and the ill whose mobility and survival in disasters may be limited. Gender-specific dependencies and vulnerabilities based on reproductive differences are relevant in disasters, as is the respective ability of women and men to participate fully in household, community and national decision-making about hazard and risk.

Disasters: increased impact

During the past decade natural hazards, such as earthquakes, landslides, droughts, floods, tropical storms,

wild fires and volcanic eruptions, resulted in significant losses in human life and livelihoods, the destruction of economic and social infrastructure, as well as environmental damages. Anecdotal evidence suggests that women are typically the most affected by disasters, which was certainly the case during the tsunami.³ Men lose their lives more often than women due, in part, to their use of hazardous machinery in emergency relief efforts and during the rebuilding phase. In contrast, women were highly over-represented among the 120,000 killed in the 1991 cyclone in Bangladesh, and in more recent events, because cultural norms constrained their access to emergency warnings and cyclone shelters.

A study carried out by the *WHO Collaborating Centre for Research on Epidemiology of Disasters (CRED)* in Tamil Nadu, India, during 2005-2006, found that young children, the elderly and women between 15 and 50 years of age had the highest risk of death during the tsunami. "Swimming ability appeared to be a significant protective factor against mortality and it is likely that more women would have survived the tsunami if they had known how to swim. As expected, individuals from fishing families and from households located less than 200 meters to the sea had a much higher mortality risk than others. Although the two factors were closely linked, the most influential risk factor was the proximity of an individual's dwelling to the sea."⁴ The results of this study suggest that the vulnerability of coastal populations could be reduced in a number of ways. Promoting and providing swimming lessons amongst women and girls is likely to reduce their risk in flooding disasters. Whilst the relocation of entire fishing communities away from the coast may not be feasible, improvements in local housing and other infrastructure could strengthen the resiliency of such populations in the future, as could the investment in multi-purpose emergency shelters. Early warning systems are likely to be beneficial, however, careful consideration of message dissemination methods is required to ensure their effectiveness. These should be developed with a gender sensitive approach in conjunction with community disaster preparedness and awareness programmes.

³ No systematic sex disaggregated data are available.

⁴ D. Guha-Sapir, L.V. Parry, O. Degomme (Belgium) and P.C. Joshi, J.P. Saulina Arnold (India), *Risk Factors for Mortality and Injury: Post-tsunami Epidemiological Findings from Tamil Nadu, CRED, 2006*. (Study funded by ISDR Secretariat).

Gender relation structures are part of the social and cultural context that shape a community's ability to anticipate, prepare for, survive, cope with, and recover from disasters. The loss of women's home-based workspace, supplies, and equipment can have serious repercussions for the household economy. However, these losses are rarely documented. "The women who lost all their belongings and their life-long savings in India, after the recurrent floods during the monsoons, have not been able to compensate their losses decades later", says Madhavi Ariyabandu, Programme Manager for Disaster Mitigation of the NGO, ITDG-South Asia, based in Sri Lanka. "This situation has threatened their security within the family relationship. Children (both girls and boys) drop out of school. Young girls whose families lost their savings and jewellery during the floods, which were to provide their dowry in marriage, either lost the opportunity, or had to delay getting married. This has serious implications for their social status, psychology and survival."

In both rural and urban households hit by Hurricane Mitch in Central America in 1998, significant increases were reported in rates of female-led households, which doubled by some accounts. A year after the devastating storm, Honduran relief workers reported that half the sheltered households were headed solely by women; in Nicaragua, 40% of household were run by women⁵.

Women: agents of change

Nevertheless, women are not only victims; they are also agents of change. Further, women and men, working together, can identify those hazards that threaten their homes and livelihoods and work together to build safer communities. Some examples illustrate how this can be done.

Gender-sensitive risk assessment model in the Caribbean⁶

Women's Community Based Organizations in the

Dominican Republic and St. Lucia participated in an exploratory project to map risk in their communities, including the daily disasters that affect low-income women's lives and the hurricanes, landslides, and fires to which they are exposed. With training in basic research methods, the community women conducted interviews, recorded life histories, developed photo essays and drew risk maps to assess their own strengths and the dangers they face. This information was then compiled into Community Vulnerability Profiles to be used by community leaders and shared with local emergency managers. A set of practical guidelines was developed to help women's and other community groups conduct research to assess risk.

Reducing women's risk, capitalizing on window of opportunity after Hurricane Mitch

Several studies show that increased violence against women is often a secondary effect of post disaster stress all over the world. The Honduran NGO Puntos de Encuentro conducted a major household survey, participated in a social audit, launched public education campaigns, and developed workshops on women and reconstruction after Hurricane Mitch in Nicaragua. To mitigate possible violence against women in the aftermath, Puntos de Encuentro integrated antiviolence education directly into post disaster recovery work. Working through various media outlets, they developed a community education campaign with a key message: "Violence against women is one disaster that men can prevent." "This workshop not only enabled participants to work through the emotional difficulty of post-traumatic stress but also helped them understand the need for transforming gender roles in their community", one observer recalled. Puntos de Encuentro's work has been used as a model for capitalizing on the window of opportunity to challenge structural inequalities that undermine community solidarity in the face of disaster⁷.

Reducing social vulnerabilities: skills training and loans for women following disasters

Increased opportunities for non-traditional skills build-

⁵ P. Delaney and E. Shrader, *Gender and Post-Disaster Reconstruction: The Case of Hurricane Mitch in Honduras and Nicaragua*, LCSPG/LAC Gender Team, The World Bank, 2000.

⁶ E. Enarson with L. Meyreles, B. Hearn Morrow, A. Mullings and J. Soares, *Working with Women at Risk: Practical Guidelines for Assessing Local Disaster Risk*, International Hurricane Centre, Florida International University, 2003. (Available at: <http://www.fiu.edu/~lsbr>)

⁷ P. Delaney and E. Shrader, op. cit.

ing and employment are often reported in the wake of major disasters. In India, women received skills training in safe housing construction techniques after the Latur and Gujarat earthquakes, working through community-based women's groups, mitigation agencies, and government recovery programmes. They also helped redesign new homes that were better suited to provide both a working space and a residence.

In Unawatuna, southern Sri Lanka, most community members depend on tourism for their livelihoods⁸. The tsunami in December 2004 destroyed all property along the coast, eliminating residents' primary source of income. Hotel and restaurant owners challenged the government by obtaining loans and rebuilding against new restrictions. Since the tsunami, women organized into credit collectives, participated in business management trainings and began taking out loans to start or rebuild their businesses. A local NGO provided the financial support but the women decided who should take the first loans based on stated need. Groups consisted of women who managed hotels, ran fruit stands and sold clothing and handicrafts on the beach. When the group decided who should receive the first batch of loan money, one empowered female hotel owner, Priyanka, said the criteria should be based on what people say they need. Collectively, the women then decided that priority should be given to women who want to start businesses for the first time.

Early warnings and getting the message across—overcoming the barriers

Gender sensitive messages—and means of dissemination—are key elements to life-saving early warning to get across and to be “people-centred”. Cheryl Anderson, University of Hawaii, gives an example from Hawaii, where women participated as community educators: “During the 1997-98 El Niño event there were three locations out of seven in our study that had a few women who participated on the ENSO (Pacific El Niño Southern Oscillation) task forces to mitigate drought. These women were responsible for developing public education and awareness programmes in which information was spread from village-to-village and public

service announcements were broadcast on radios and television. In addition, a campaign to treat water before drinking helped reduce the recorded incidence of diarrhoeal disease.”

Understanding the scope of disaster and risk reduction

The United Nations adopted an International Strategy for Disaster Reduction (ISDR) in 2000, as a partnership with Governments, UN Agencies, regional bodies, civil society and communities, to further pursue increased awareness and public commitment to vulnerability and risk reduction, expanded partnership and networking, as well as research and implementation on hazards, risk and specific disaster reduction measures. Disaster reduction, as envisioned within the ISDR framework, aims to build disaster resilient societies and communities to withstand natural hazards and related technological and environmental disasters, and reduce environmental, human, economic and social losses.

It is important to stress that gender equality in disaster reduction policies and measures requires promoting women to have an increasing role in leadership, management and decision-making, as well as recognising women's position in their community and the larger society. Since disaster reduction activities are part of development, they are linked to promoting the general welfare of societies, without increasing the risk to hazards.

The initially cited *Hyogo Framework for Action*, represents a solid commitment and basis benchmark for how to move forward to substantially reduce disaster losses. Its principles, three strategic goals, five priority areas of action with key activities and decisions on follow-up and implementation arrangements, indicate the way forward for States, regional and international organizations, promoted and facilitated by the ISDR system. Systematic reports on progress will be prepared by the ISDR secretariat. Let us make sure that these actions and reports are gender sensitive! ■

⁸ Adapted from: Six Village Profiles: *Women's Journey from the Tsunami to the Future* compiled by the NGO Swayam Shiksam Prayong (SSP), India, in support of the Gender and Disaster Sourcebook, December 2005.

For more information contact the ISDR Secretariat isdr@un.org or visit ISDR website: <http://www.unisdr.org>.

See the flagship publication: "Living with Risk: A global

review of disaster reduction initiatives (2004)" at the ISDR website.

For the Gender and Disasters Network see: <http://www.gdnonline.org>.

GENDER EQUALITY IN DISASTERS SIX PRINCIPLES FOR ENGENDERED RELIEF AND RECONSTRUCTION

1. THINK BIG. Gender equality and risk reduction principles must guide all aspects of disaster mitigation, response and reconstruction. The "window of opportunity" for change and political organization closes very quickly. Plan now to:

- respond in ways that empower women and local communities
- rebuild in ways that address the root causes of vulnerability, including gender and social inequalities
- create meaningful opportunities for women's participation and leadership
- fully engage local women in hazard mitigation and vulnerability assessment projects
- ensure that women benefit from economic recovery and income support programmes, e.g. access, fair wages, non-traditional skills training, child care/social support
- give priority to social services, children's support systems, women's centres, women's "corners" in camps and other safe spaces
- take practical steps to empower women, among others:
 - consult fully with women in design and operation of emergency shelter
 - deed newly constructed houses in both names
 - include women in housing design as well as construction
 - promote land rights for women
 - provide income-generation projects that build non-traditional skills
 - fund women's groups to monitor disaster recovery projects

2. GET THE FACTS. Gender analysis is not optional or divisive but imperative to direct aid and plan for full and equitable recovery. Nothing in disaster work is "gender neutral." Plan now to:

- collect and solicit gender-specific data
- train and employ women in community-based assessment and follow-up research
- tap women's knowledge of environmental resources and community complexity
- identify and assess sex-specific needs, e.g. for home-based women workers, men's mental health, displaced and migrating women vs. men
- track the (explicit/implicit) gender budgeting of relief and response funds
- track the distribution of goods, services, opportunities to women and men
- assess the short- and long-term impacts on women/men of all disaster initiatives
- monitor change over time and in different contexts

3. WORK WITH GRASSROOTS WOMEN. Women's community organizations have insight, information, experience, networks, and resources vital to increasing disaster resilience. Work with and develop the capacities of existing women's groups such as:

- women's groups experienced in disasters
- women and development NGOs; women's environmental action groups



- advocacy groups with a focus on girls and women, e.g. peace activists
- women's neighborhood groups
- faith-based and service organizations
- professional women, e.g. educators, scientists, emergency managers

4. RESIST STEREOTYPES. Base all initiatives on knowledge of difference and specific cultural, economic, political, and sexual contexts, not on false generalities:

- women survivors are vital first responders and rebuilders, not passive victims
- mothers, grandmothers and other women are vital to children's survival and recovery but women's needs may differ from children's
- not all women are mothers or live with men
- women-led households are not necessarily the poorest or most vulnerable
- women are not economic dependents but producers, community workers, earners
- gender norms put boys and men at risk too, e.g. mental health, risk-taking, accident
- targeting women for services is not always effective or desirable but can produce backlash or violence
- marginalized women (e.g. undocumented, HIV/AIDS, low caste, indigenous, sex workers) have unique perspectives and capacities
- no "one-size" fits all: culturally specific needs and desires must be respected, e.g. women's traditional religious practices, clothing, personal hygiene, privacy norms

5. TAKE A HUMAN RIGHTS APPROACH. Democratic and participatory initiatives serve women and girls them best. Women and men alike must be assured of the conditions of life needed to enjoy their fundamental human rights, as well as simply survive. Girls and women in crisis are at increased risk of:

- sexual harassment and rape
- abuse by intimate partners, e.g. in the months and year following a major disaster
- exploitation by traffickers, e.g. into domestic, agricultural and sex work
- erosion or loss of existing land rights
- early/forced marriage
- forced migration
- reduced or lost access to reproductive health care services
- male control over economic recovery resources

6. RESPECT AND DEVELOP THE CAPACITIES OF WOMEN. Avoid overburdening women with already heavy work loads and family responsibilities likely to increase.

- identify and support women's contributions to informal early warning systems, school and home preparedness, community solidarity, socioemotional recovery, extended family care
- materially compensate the time, energy and skill of grassroots women who are able and willing to partner with disaster organizations
- provide child care, transportation and other support as needed to enable women's full and equal participation in planning a more disaster resilient future

Source:

Elaine Enarson, 2005. Gender and Disasters Network

<http://www.gdnonline.org/resources/genderbroadsheet.doc>

Community disaster education and preparation

The work of National Red Cross and Red Crescent Societies

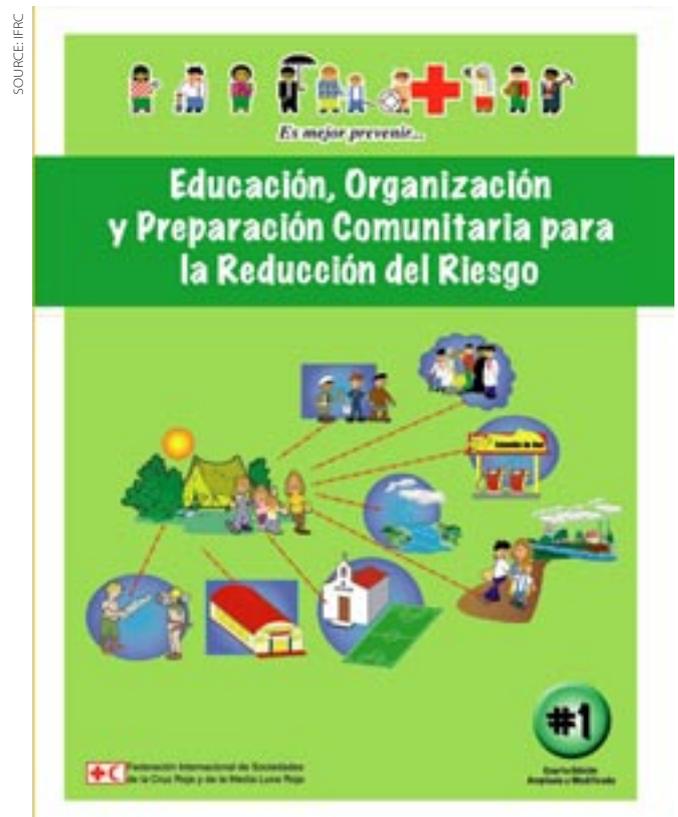
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Introduction

For more than fifteen years, the National Red Cross and Red Crescent societies have pioneered the participative activities of *Community Disaster Education and Preparation*. This has been done with the firm resolve of reducing the number of deaths as a result of destructive natural phenomena and also of reducing levels of vulnerability experienced by people affected by disasters. On this premise, the work undertaken by the network of volunteers in each country helps to strengthen the capabilities of National Red Cross and Red Crescent Societies throughout the world.

The result of our experience in the field has also meant that we have been able to develop strategies and procedures that grow as we learn. Getting fully to grips with the most affected communities and processes has benefited specific risk reduction actions. While it is certain that the principle of working with communities focuses on ensuring the greatest possible community participation in situations of vulnerability and ensuring that communities are the main actors responsible for risk and analysis and decision making when it comes to reducing risk, it is also certain that nothing happens very quickly and a medium to long-term strategy is required. In the Americas, for example, the lessons we have learned during more than 10 years working with communities confirms the importance of extending and linking disaster preparation and disaster response actions with health, development and institutional reinforcement activities.

The result of various analyses and studies carried out at the beginning of the millennium ended with an



Cover of the IFRC Training Module No. 1 for Central America (October 2004)

undertaking by National Societies in America to implement the 2003-2007 strategic framework which, within the field of disasters, places special emphasis on the need to go beyond the continuum view of disaster and take vulnerability as a starting point for better-rounded development and hence risk reduction.

As I will describe in greater detail below with reference to Central America, community education activities for disaster, combined with institutional reinforcement ac-

tions by the Red Cross itself and local institutions have helped save lives and reduce the risk of disasters, and also to coordinate efforts for preparedness and response in the face of possible catastrophe.

Creation of a regional reference centre for community disaster education

In the region of Mexico and Central America, the Red Cross runs more than seven National Red Cross Societies. These comprise approximately one thousand offices distributed throughout the seven countries, which report to a central office in each country. These offices, known as section or departmental branches, are organized over different levels. In some cases, these offices can call on all the infrastructure they need to cover the humanitarian needs of the area where they work. In other cases, they have average, minimum or very meagre resources. In all our branches, the common denominator nevertheless remains the same: volunteers committed to the humanitarian tasks of the International Red Cross Movement who work on a daily basis with communities that live in conditions of great vulnerability.

Support for the reinforcement of programmes that each National Society undertakes is received through the Regional Delegation of the International Red Cross and Red Crescent Federation that operates out of the city of Panama and national donor Red Cross Societies. From Panama, we promote coordination, regional coherence, assimilation of good practices and support for projects that promote the reduction of vulnerability in the broadest sense of the word.

As an outcome of one of the evaluations we carried out on community disaster programmes undertaken in 2002, the following points were adopted as strategic recommendations for improving our approach to disaster risk reduction in Central America. We should:

1. Synchronise disaster system mechanisms more effectively
2. Take community knowledge and skill into consideration
3. Reinforce community response capabilities
4. Extend coordination with local authorities

5. Promote shared training procedures and materials

These recommendations were ratified at continental level within the action framework for the 2003-2007 period as a result of the Inter-American Red Cross Conference held in Santiago de Chile in 2003.

To follow through the points noted above, the International Red Cross Federation set in motion various strategic actions through its Panama office to achieve the Santiago de Chile undertaking and the recommendations of the evaluation carried out on the community disaster education programme. After analysing the institutional capability of Red Cross organizations in the region, the community disaster education programme aims to offer higher quality services by focussing on ensuring a common procedure with training materials and processes aimed at four main areas:

- Programmes aimed at education establishments
- Programmes aimed at families
- Programmes aimed at community members
- Programmes aimed at small enterprises

The implementation of these action lines, added to the undertakings adopted by the National Societies in Santiago de Chile, required the regional Red Cross organizations to implement a different service model that will allow us to achieve our goals within specific areas in the fastest, most appropriate manner possible. For this purpose, we set up the Regional Reference Centre for Community Disaster Education, which has been in operation since October 2003 in San José (Costa Rica) within the premises of the country's National Society. Throughout 2004, our strategy was to consolidate the setting up of the Centre and to develop educational material, which was produced with the technical support of the Regional Delegation and the contribution of various experts from National Societies in the region. Our brief for 2005 was to ensure greater leadership of this Centre at regional level, with regard to offering community disaster education services to the National Societies. Our aim for 2006, in the meantime, is to consolidate the use of all training materials produced, complete the preparation of a handbook for risk reduction in small enterprises and gather the lessons we have learned in community work.

As a result of the process undertaken from October 2003 to May 2006, the efforts of this regional centre, achieved with the technical support of the International Federation have allowed:

1. The setting up of a solid base of Red Cross facilitators in each of the Central American countries for each of the modules developed (12 in total).
2. To promote the exchange of experiences and best practices between community participation procedure practitioners for the reduction of vulnerability and also assistance to ensure appropriate implementation of the participative procedure that the International Federation promotes in each module.
3. The development of a regional mechanism for applying community experiences systematically and also the development of interactive modules for members of the public with access to virtual technology.
4. Examination of existing knowledge in the region on best practices in the application of the vulnerability and capability analysis procedure within the field of risk reduction.
5. Extension of the group of strategic members that each of the National Societies may count on to undertake more well-rounded actions for risk reduction.
6. Undertaking of disaster mitigation and preparation, early warning and community disaster organization actions.

The training processes are underpinned across the board by our special interest in guaranteeing the development and implementation of a participative procedural approach that is broadly analytical and our interest in working directly with the communities since the communities themselves must assume responsibility for the decisions they adopt as a result of the assessments.

The focus of the service within the six countries is also to ensure that community disaster education and preparation programmes consider six horizontal components, all of which include a general focus:

- a) Early alert
- b) Identification of risk reduction microprojects
- c) Vulnerability and capability assessment (VCA)
- d) Means of subsistence
- e) Community response and emergency plans

- f) Community first response and risk reduction brigades

The results achieved within the above six sections reveal a need to invest more time in learning about the approach as far as means of subsistence is concerned. By its very nature, this topic is still new within the action framework of National Red Cross Societies within Central America.

Just two years after the beginning of the project, more than 700 volunteers have been trained in participative procedures and in the use of the materials developed. Approximately 44 communities have benefited directly from the process, which involves a vulnerability and capability assessment (VCA) together with community disaster preparation. We have also, however, been able to offer indirect benefits to those communities that already had projects in operation. This was the case with El Salvador, whose community programme reaches more than 51 communities. The programme adopts part of the VCA process to help with the process of equipping communities to deal with disasters more effectively. These 51 communities have now been equipped with new analysis tools for risk reduction.

The community work process involves volunteers going out to local areas, followed by an appropriate analysis of risk with a participative focus. This is then used as a basis for developing a capability analysis of actions that communities can undertake using their own resources and methods to reduce their levels of vulnerability. An institutional analysis may also be carried out to implement local reinforcement and capability mechanisms with the aim of supporting communities more effectively.

Consolidating the community education programme throughout the region

As in the case discussed above, we are attempting to ensure widespread dissemination of participative procedures, tools and processes in all countries throughout the region. Our aim in this is to improve the impact of our work on the community. As part of this regional effort to harmonise the use of training materials, working procedures and mechanisms for applying participative

community processes systematically, the International Federation, together with the Regional Reference Centre for Community Disaster Education, promoted the development of training courses for National Society facilitators who are able to support national training processes on a regional level. Each of the Central American Red Cross organizations then organized training courses that, unlike the regional organizations, included the presence of various actors from the Red Cross and also from the national emergency systems and the various ministries and organizations that work at community level.

Rolling out the project to the communities involved numerous challenges for the National Societies. In the specific case of Costa Rica, the National Red Cross Society signed an agreement with the Ministry of Education, undertaking to train approximately 3000 educational establishments per year within the country, using the "Protected School" module, which allows the educational establishments to establish their levels of vulnerability more effectively and also by developing mechanisms that allow solutions to be sought to problems identified. For the National Society, this meant increasing its ability to deliver the service by increasing the initial number of 5-10 branches to 52 throughout the country. We hope that the number of branches will grow as trained, specialised people are taken on.

The Red Cross in Honduras continued its project (now in place for more than four years) designed to reduce vulnerability at household level. The project uses a new version of a "Preventive Family" module that now includes a more extensive vulnerability and capability assessment in the home and also covers conversion measures to reduce vulnerability, knowledge of risks faced by the family and ability to prepare the members of each family.

In Nicaragua, the Red Cross applied the VCA procedure to more than 30 communities on the North Atlantic Coast, the South Atlantic Coast and in the Pacific region of the country. It then identified small mitigation projects that the Red Cross was able to carry out with the support of the communities themselves, the local authorities and other organizations.

Such was the general eagerness to institutionalise the use of this procedure and the training materials, the Red Cross in Panama was able to call on the aid of private enterprises and other donors to reach more than 200 communities with the aid of various modules produced to tackle vulnerability within its educational establishments (schools and colleges). With the aid of the International Federation, the Regional Reference Centre managed to train National Society volunteers in record time so that the Red Cross in Panama was able to achieve its aim of reducing vulnerability. The case of Panama is a good example that shows us how, by harmonising common training tools and procedures, the support of sister National Red Cross Societies promotes a significant interchange of knowledge and experience to achieve one common goal: saving lives.

Community first aid activities continued to be the basic axis for the transfer of knowledge at community level. First aid is therefore complementary to the normal tasks of risk reduction and reinforcing the ability of communities to respond and recover in the event of disaster.

This entire process of consultation, communication, field practice, taking on board of lessons learned and training material development, means that the modules developed¹ for the project, i.e. the basic programme modules, are able to benefit from new vulnerability assessment and risk analysis resources.

Our support for a new project backed by the ProVention Consortium² allowed us to develop more specialised training materials that are complementary to the project even though they do not form part of the project itself. These new materials extend the quality of our risk reduction actions.

Last but not least, in 2007 we hope to evaluate the results we have achieved over recent years: the progress, achievements, difficulties and shortcomings in risk reduction actions. This will allow us to improve our current strategy and include areas that require even greater attention, such as risk reduction in urban areas and major cities. The lessons we have learned in this area will serve as a basis for future actions in the field of mitigation and preparation. ■

¹ a) Education, Organization and Community Preparedness for Risk Reduction; b) The Prepared Family; c) Community First Aid; d) Protected School.

² More information at: <http://www.proventionconsortium.org>.

Disaster risk reduction: experiences from Asia and Central America

@local.glob offers a space for key actors in the local world to present the most successful experiences of development in their territories. According to the definition of *best practices for the development and improvement of living conditions adopted by the United Nations*¹, “successful experiences” and “good practices in local development” are considered to be initiatives that help to improve the living conditions of the inhabitants of a particular territory and support local development and decentralization processes, strengthening the capacity and recognition of local actors and their communities.

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Introduction

In previous issues of this journal, we discussed the role of the environment in a context of local development strategies. Taking into account other studies in this field, it was stressed that local development strategies, contrary to the type of development that was pursued until the end of the 1970s, allow for ecological limitations on economic growth and development, the risk of degrading nature and limited natural resources. Implementation of local development, however, has required a radical change that has led to improving and taking into account the environment from a double perspective: as a factor of development and as a key element for the sustainability of that development.

As a factor of development, the environment should not be considered solely as something to be conserved. A passive attitude of conservation, defence or protection towards the environment must be complemented by an active attitude that considers environmental quality as one of the reasons for development and a strategic opportunity to promote new enterprises—from rural and environmental tourism to business initiatives for recycling and treating waste—as local producers of income, employment and business structures. This will help avoid the risk that public activities, such as ecological protection of areas and natural spaces, end up making them sanctuaries for all species of fauna and flora except one: the human being, who will be forced to leave flee because of the impossibility of carrying out activities that produce the economic income required for his subsistence.

Sustainability has been one of the great contributions to development theory and practice during recent decades. This concept has made us aware that production can also lead to degradation. No economic system crosses the “ecological boundary” without deteriorating the quality of life and leading to a certain danger of self-destruction.

The focus of the following pages is disaster produced by natural threats and its interrelationship with development strategies. *[Please continue to page 38]*

¹ Source: UN-HABITAT Best Practices and Local Leadership Programme.

Indonesia: Strengthening communities through post-disaster reconstruction

Maximizing the benefits to local labour in the Aceh construction boom

KEY INFORMATION

Geographical location	Banda Aceh and Aceh Besar Nanggroe Aceh Darussalam Indonesia
Dates	Beginning of activities: February 2005 Scheduled completion: December 2006
Scope	<ul style="list-style-type: none"> • Economic Development and Employment Generation • Local Development Financing • Gender Equality • Infrastructure
Implementing organization	International Labour Organization
Financing and/or cooperating organizations	<p>Donors:</p> <ul style="list-style-type: none"> • Government of Netherlands, New Zealand, Australia, Finland, Ireland, the Netherlands, New Zealand, and the United States • United Nations Development Programme <p>Partner Organizations:</p> <ul style="list-style-type: none"> • Local Government Manpower Offices
Head and contacts	Parissara Liewkeat, Programme Manager, ILO Aceh Peter Rademaker, Deputy Director, ILO Jakarta Office
Total budget	US\$ 7 million for the period

Sources of information on the experience: International Labour Organization (ILO/CRISIS)

INITIAL SITUATION, TARGET GROUP AND PRIORITIES

Men and women living in the town of Banda Aceh and the surrounding district of Aceh Besar were severely affected by the tsunami of December 2004 and therefore became the primary target beneficiaries of the ILO Aceh Programmes. Right after the tsunami, they needed food, shelter, cash and access to income-generating activities. Their communities and support network had vanished overnight, and the local government agencies to support them had neither the means nor the technical capacity. Those organizations, too, had lost the staff that formed the core of their technical capacity.

The ILO services focused on placing the Acehnese into jobs in the reconstruction sector, i.e. with reconstruction agencies and construction work. This evolved from “cash-for-work” for clearing rubble to more comprehensive employment services that mediated between job-seekers and organizations needing labour for reconstruction. Since many Acehnese people lacked the skills required for the jobs, ILO provided skills assessment, short-cycle skills upgrading and training, and post-training and on-the-job support. People interested in self-employment and setting up small enterprises were given entrepreneurship training and follow-up support, including access to financial services. From labour force surveys and job-seeker registration, it became clear that

young people and women lacked marketable skills and faced social barriers to labour market access, so the ILO, together with its partner organizations, launched specific training and support programmes for them. Beneficiary selection methods have evolved from open registration, community nomination, to trade-group labour mobilization.

OBJECTIVES AND STRATEGY OF THE INITIATIVE

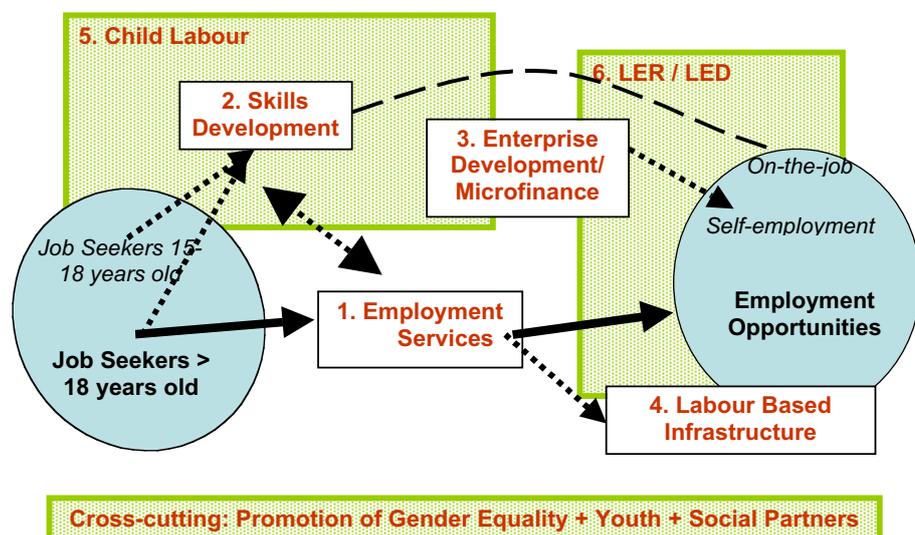
To contribute to the sustainable economic reconstruction of Aceh, the ILO Aceh Programme strives to maximize gainful employment and employability among the Acehnese, to strengthen and rebuild local institutions, and to empower the socially and economically disadvantaged. Each of the programme's six components - prevention of child labour, local economic recovery and development, employment services, vocational training, labour-based rural infrastructure rehabilitation, and enterprise development - has its own specific target group, institutional intermediaries, partners and delivery mechanisms, all managed through a central management unit. The ILO's work has aimed from day one to sustain results by working through provincial and district manpower, labour, education and public works offices, trade unions and cooperatives, employers' organizations, business chambers, etc. A strong effort was made to ensure equal access by both men and women. All components implemented a range of

pilot initiatives in the first year, which generated immediate local employment while serving as on-the-job training opportunities for staff of partner organizations. This also allowed the ILO to adapt regularly to a very dynamic environment.

MOBILIZATION OF RESOURCES

Funding for the ILO Aceh Programme started through the UN Flash Appeal and developed through specific proposals to donors. Within the United Nations, the UNDP has been a major partner, as has the OCHA (United Nations Office for the Coordination of Humanitarian Affairs). Bilateral donors have included the Governments of Australia, Canada, Finland, Ireland, the Netherlands, New Zealand, and the United States. Private-sector funding came from ADECCO and MIGROS. A range of trade union bodies, including the British Trade Union Confederation, the ILO Staff Union and the International Confederation of Free Trade Unions, are also contributing. All funding has the goals of getting people back to work, building institutional capacity and ensuring maximum employment for the Acehnese, but each different project proposal has its own particular focus, time frame and budget structure. Overall management is entrusted to a Programme Management Unit, which is responsible for managing and integrating the work of all components. The ILO Aceh Programme has seven international staff and 30 Indonesian staff, of whom five are non-Acehnese.

Activities are designed and run together with local organizations in both the government and non-government sectors. Training of trainers targets skilled workers in Aceh as much as possible. In construction skills training, use of non-Acehnese trainers was necessary as there was a shortage of construction skills trainers in government training institutions and the private training sector. The ILO has the immense advantage of being able to draw upon its international expertise in post-crisis and post-



disaster work. Existing ILO training and/or operations manuals such as the Emergency Public Employment Services Guidelines, the Operational Guide on Local Economic Development in Post-Crisis Situations, the Start and Improve Your Business Trainers' Manual, and the Competency-based Trainers' Manual were quickly adapted and translated into Bahasa Indonesia, and have guided the work. It has become evident that some of this material needs further refining, which is now being done with local partners.

PROCESS VARIABLES: METHODOLOGY ADOPTED AND PROBLEMS ENCOUNTERED

From February to July 2005, each component responded to the emergency situation and the start of early recovery, with availability of funding dictating the pace and scope of the work more than other capacity constraints. This phase included a vast campaign to set up employment services with thousands of people registering as job-seekers. The ILO assessed their skills, referred them for training, and matched them with vacancies from the many agencies involved in rehabilitation. As expected, the transition period of September 2005 – February 2006 proved to be difficult. The programme was made more integrated by adopting common geographical areas of work and mutual referrals of beneficiaries. As the context changed rapidly, the weakness of the institutional capacity of some key partners became obvious and led to delays. Miscommunication with partner organizations about respective strategies and funding principles strained institutional relationships, with some expressing scepticism about ILO's contribution. This was linked to the strong growth of the ILO team, with many people working with ILO for the first time and needing to come together as a team on strategy and way of working.

A series of internal, external and situational assessments took place at the end of 2005 to identify the strengths and weaknesses of the ILO programme. It was obvious that the most successful interventions so far, i.e. the local economic recovery in communities, concrete-block-making women's enterprises, the Start and Improve Your Business training programme for young people, and English language training, were

those that involved staff of local partners, be they government or private sector counterparts, throughout the process. More problems were found in areas such as employment services and skills training, which were implemented directly by the ILO for lack of institutional partners.

After the evaluations, the ILO revised its operational approach to providing employment services and vocational training. A new 'key client' approach was developed that involved a reduction in the generic provision of ILO assistance to all-comers, and a more concentrated, tailored provision of ILO assistance to fewer organizations. The objective is to secure greater impact from existing resources by providing a better service to those large organizations that are critical to the success of the reconstruction effort.

'Key clients' in this context are selected large organizations in the construction sector (housing and infrastructure) with significant operations in the ILO's focus districts of Banda Aceh and Aceh Besar. Potential clients are identified by the ILO's technical team. Discussions are then held with these organizations to ascertain their interest in a closer relationship with the ILO, and if this is positive, individually structured agreements are reached. It is expected that the ILO's key clients will change as construction schedules and recruiting requirements change. The priorities are to:

1. Provide a more intensive, tailored service to source and place labour for key clients.
 - a. Employment services' resource allocation will shift towards key clients and away from the generic provision of employment services to all organizations.
 - b. Priority access to the ILO's engineering graduate intern scheme.
2. Provide specific, targeted short-course vocational training to workers or employees of key clients (including those sourced by the ILO's employment services component), with a view to contributing to greater quality and efficiency of construction.
3. Increasingly over time, deploy the expertise of other ILO components such as enterprise development

and local economic development to help key clients rebuild the local economy.

The number of clients at any one time will be limited, commensurate with the ILO's available resources. In addition, the resources available to the ILO's employment services component allow greater reach in terms of key clients than is possible for other components.

OUTCOMES

The ILO has laid the foundations for achieving the three goals of getting people to work, strengthening institutions, and empowering the socially and economically vulnerable. To date, the ILO services have reached about 30,000 individuals, mostly in the districts of Aceh Besar and Banda Aceh. Ten women-run community businesses are absorbing the demand for construction materials; 94 organizations have received employment services from the ILO. The Manpower Office received technical assistance from the ILO. It has issued and actively advocated the Ten Priority Guidelines on Employers' Responsibilities in the Reconstruction of Aceh to ensure compliance with national labour laws and protection of Acehnese workers. Two technical communities of Start and Improve Your Business trainers, a concrete-block-making course and business development support for women are actively providing outreach services in Aceh with funding from the ILO and other sources. The Kecamatan Development Programme's manual is being refined with added emphasis on employment and economic recovery. The local resource-based rural infrastructure rehabilitation programme is about to expand its work from 20 kilometres in two districts to 220 kilometres in five districts. A micro-lease programme is about to be launched at a newly set-up Islamic cooperative branch of the BQB in Meuraxa.

There is also increased local capacity as regards the Start and Improve Your Business training programme for young people and women, women's concrete-block-making enterprises, trainers' associations, a local resource-based approach to rural road rehabilitation, business recovery using local economic advantage appraisal methods, and creating new microfinance

products while enhancing local banks' capacity. The demand for services from partner organizations and a positive response from donors indicate the success of these initiatives.

The employment services and vocational training components, both of which have institutional capacity building as their core objective, were tested by the reconstruction labour market challenges. Their achievements will take time, given that local labour offices lost many staff to the tsunami and institutional restructuring. At present, both are refining tools and models to fit the conditions of Aceh, using the 'key client' approach.

The challenge of fitting women into the construction-dominated labour market is real. But early efforts to build networks, boost capabilities and set up businesses are paying dividends. The implementation of the 'key client' approach has enabled the ILO to advocate support for women's employment in the reconstruction boom; many organizations are sympathetic but lack the expertise to act. Some of the clients are now exploring ways to make their contractors purchase building materials from women's groups. Putting women into core construction work remains difficult. Having to shoulder family responsibilities and lacking skills, many women are not likely to find gainful employment in hardcore construction work. Contractors are willing to hire them, but time and skills limitations will make them vulnerable to low-paid work. The ILO and a handful of partner organizations have persistently demanded policy attention and allocation of resources to gender-specific action in the reconstruction effort. In March 2006, the BRR (the government agency responsible for the reconstruction of Aceh) appointed a gender adviser to its Director.

SUSTAINABILITY

The ILO Aceh Programme was designed as a medium-term development programme. The first 18 months were 'direct action' to recover lost livelihoods and build employment promotion tools and approaches that suited the Acehnese. The subsequent 2-3 years will be a capacity-development phase in which the ILO will concentrate

its technical assistance on selected local organizations, particularly the manpower offices, the public works offices, the national education offices, the planning offices, and worker and employer organizations. Once there is sufficient institutional capacity within each of these organizations, there may be a demand for continued but less intensive ILO support for policy development and monitoring.

The promotion of maximum employment for the Acehnese during the first year of the reconstruction period is a difficult task when local manpower offices have weak capacity and the Acehnese labour force is relatively inexperienced. The Cash for Work Programme has distorted the market's wage-setting mechanism, resulting in Acehnese demanding wages much higher than non-Acehnese workers. The ILO has focused on developing tools for skills training and enterprise development and demonstrating approaches to the manpower offices and other relevant government organizations during the first year of its operation. These targeted organizations have indicated interest in strengthening their own ability to use the tools and operationalize the programme. The ILO is currently mobilizing resources for the second generation of project proposals, dedicated to institutional capacity-building and supporting local organizations in implementing tools and programmes that have been conceived during the first year of post-tsunami recovery.

LESSONS LEARNED

The tsunami of 26 December 2006 destroyed not only the lives of people but also the capacity of local communities and institutions. Communities lost their leaders and networks. Local institutions lost their technical personnel. Programmes and activities in emergency periods have to be delivered immediately, i.e. without the active involvement of local institutions. This strategy allowed the ILO to extend its services to about 30,000 individuals during its first 12-18 months in Aceh. But while people are getting back on their feet and finding jobs, restoring a strong economy for the people of Aceh remains to be done. It requires investment in institution-building, governance of the labour market, and local knowledge and expertise. The ILO's second-gen-

eration tsunami-response projects do all this. They will align the ILO's programme with those of local governmental agencies, and will develop innovative employment-related programmes within those agencies. The output-oriented programme-implementation approach will be replaced with a knowledge-based process-management approach. One of the most important projects currently looking for resources is on labour market information systems and analysis. The reconstruction of Aceh and Nias as a whole has not been based on sound labour market analysis. The overwhelming devastation caused by the tsunami unfortunately created the false idea that employment strategy development and labour market governance were of lower priority than projects with tangible output such as debris-removal, training and injecting cash into the local economy.

TRANSFERABILITY

The ILO Aceh Programme has provided a unique opportunity to bring to bear the full range of ILO tools and approaches relevant to a post-disaster situation. The recovery of livelihoods and jobs has been central to the UN strategy and therefore placed the ILO in a good position to make its contribution.

There have been numerous opportunities to learn from the work in Aceh in terms of refining tools, aligning approaches better, etc. The challenge is to make sure such learning indeed occurs at the institutional level within the ILO. Efforts to do this are under way.

The Aceh programme has also clarified further the ILO's role in the larger UN response to crisis and disaster. Although overlaps in mandate and competition still occur, the joint work on livelihood recovery has allowed the ILO to become better positioned and better prepared for future situations.

Of course, Aceh is a very specific case. First of all, the scale both of the destruction and then of the international response was unparalleled. But also, Indonesia has strong institutions and a strong government that certainly suffered from the disaster but was quick to rebound. Work in Aceh also saw the peace process take off. ■

Nicaragua: Local disaster prevention and mitigation strategies

Strengthening municipal authorities for land management in Matagalpa

KEY INFORMATION

Geographical location	City of Matagalpa and Rio Grande de Matagalpa river basin Nicaragua
Timeframe	Project pilot stage: May 2002 to June 2003 Stage I: July 2003 to December 2005 Transition stage to stage II: January to June 2006 Stage II planned for the period 2006 - 2009
Activity sectors	<ul style="list-style-type: none"> • Land planning • Technology and telecommunications (geoinformation technologies) • Soil and environmental use management • Decentralised cooperation
Executing agency	United Nations Office for Project Services (UNOPS) upon the request of the International Strategy for Disaster Reduction (ISDR) with the technical support of the UNOSAT Project
Financing and/or cooperating organizations	<p>Donors:</p> <ul style="list-style-type: none"> • State of Geneva / DAEL – Land Planning Department <p>National organization are project members:</p> <ul style="list-style-type: none"> • Matagalpa Municipal Council (ALMAT) • Matagalpa Regional University Centre (CURMAT/UNAN – ODESAR, UNAG and ADHS – POPOL VUH)
Head and contacts	<p>Suzanne Lerch (State of Geneva / DAEL – Department of Urban and Land Planning) Tel.: 022 327 45 24 / Email: suzanne.lerch@etat.ge.ch</p> <p>Alain Retière (UNOSAT) Tel.: 022 917 85 19 / Email: alain.retiere@unosat.org</p>
Total budget	USD 602,605 (Stage I and transition)

Sources of information on the experience: United Nations Office for Project Services (UNOPS)

INITIAL SITUATION, TARGET GROUP AND PRIORITIES

The project “Strengthening municipal authorities for land management in Matagalpa and the Rio Grande de Matagalpa Basin” arose out of new awareness in the wake of Hurricane Mitch in 1998 which revealed the fragility of this Central America area and the need

to prevent and reduce the risk of destructive events at government and local community levels. In 1999, upon the request of the International Labour Organization (ILO), working in conjunction with the International Strategy for Disaster Reduction (ISDR), the Geneva State Land Planning Department (DAEL), the United Nations Office for Project Services (UNOPS) and the UNOSAT Programme (provider of satellite images and

geographical information services), a team of specialists based in Geneva was deployed to draw up and implement a support programme for affected Central American municipalities. The original feature of this programme was its emphasis on decentralised cooperation.

The technical, organizational and managerial resources of the municipal authorities in Nicaragua, in particular, proved unable to cope with the disaster and the country suffered more severe damage than others. Due to this need, the Matagalpa Municipal Council expressed a will to plan for the future by introducing *“mechanisms that involve the participative implementation of planning processes which incorporate the variables of natural disaster mitigation, prevention and preparation”*.¹ The project, designed in 2000, entered its pilot stage in 2002 and is currently phasing in the second stage. This paper sets out the results of the first stage, which concluded in 2005.

OBJECTIVES AND STRATEGIES OF THE INITIATIVE

The project aims to contribute to the following **development goal**:

To reduce the vulnerability of the area by building the capacity of the Matagalpa Municipal Authorities and local project partner organizations to cope with natural disasters and organize their prevention through local development strategies.

Three specific objectives may be identified within the framework of this overall goal:

1. Facilitate access to geographical information and skilled technical resources for land management in the Municipality of Matagalpa and Rio Grande basin area by setting up the **Matagalpa Geographical Information Centre (CIGMAT)**;

The environmental, political and socio-economic context in North Eastern Nicaragua

At the end of the 19th century, the region was typically forested and inhabited exclusively by natives of the area. As the region opened up to colonisation, the incoming European families began to grow coffee and this is still the most important economic activity in this region of the country. The city of Matagalpa grew up and prospered as the main Atlantic coastal port, trading agricultural consumables and equipment for tropical products. The area was hard hit during the civil war, firstly due to the repressive *Somocista* regime and later due to the struggles between counter-revolutionaries and the *Sandinista* regime. Once the conflict was over, this area was regularly affected by seasonal floods as a result of the hurricanes that grow up off the Atlantic coast of Nicaragua. Matagalpa is surrounded by high mountains and crossed from North to South by the Rio Grande de Matagalpa: its main risks and vulnerabilities are determined by two elements: a river that easily bursts its banks in the flood season, and the danger of landslides caused mainly by uncontrolled residential growth in inappropriate areas.

Another feature of the region is the fact that it has become the main reception area for population overflow from Pacific region. Extensive agriculture is the most common productive practice but this is carried out in a disorganized manner that puts pressure on areas set aside for forestry and thus seriously affects human employment.

The frequency and severity of climate phenomena in this fragile area, which is also affected by economic and social crisis, has led to very severe environmental repercussions. The populated centres in the region pose the challenge of ensuring better quality of life with essential services: water, light, transport, waste disposal, housing and employment.

Political debate in the area is very remote from regional development strategies. The political parties and many of the various candidates competing for popular election seats at local and national level are fuelled by consumerism and a short-term view. At local level, it is very common to find institutionally weak authorities remote from political power, with few resources and few capabilities. Despite this, the importance of promoting land management by town councils is becoming increasingly recognised by various international organizations as crucial to ensuring governability, disaster prevention, sustainable development and the protection of investments.

¹ Municipality of Matagalpa, *Nicaragua bella y vulnerable*, Municipality of Matagalpa, Nicaragua, 2002.

2. To support local authorities in their task of **planning land management** and in particular the Municipality of Matagalpa, which is considered the leading institution in the Rio Grande basin.

3. To strengthen coordination mechanisms at local, micro regional (departmental), regional (basin) and international level, by **making room for critical dialogue between Central and North/South America to foster cooperation.**

In March 2003, the national partners, DAEL and UNOPS discussed operational tools and procedures for beginning Stage 1 of the project. These included: co-ordination, management and monitoring mechanisms; consolidation of the CIGMAT technical and management team; development of a sustainability strategy; drawing up of an operational plan for the production of an urban development plan for the city of Matagalpa and the consolidation of a Municipal technical urban planning team, as major goals to be achieved during the three years of project implementation.

In May 2003, within the framework of the regional decentralised cooperation programme (RLA/99R71): "People helping people", a cooperative agreement was signed between the Canton of Geneva, the Council of Matagalpa and UNOPS/ISDR for the implementation of the Project *Strengthening municipal authorities for land management in Matagalpa and the Rio Grande de Matagalpa Basin.*

MOBILIZATION OF RESOURCES

The Guatemala headquarter of UNOPS was identified as the body responsible for implementing the project, in terms of administration, and also technical support through UNOSAT and in conjunction with UNOPS Geneva, DAEL and national and local organizations. In 2003, once the finance had been approved and the pilot stage completed, UNOPS signed **two executive agreements** for the implementation of services. The first was signed **with the Independent University of Nicaragua Regional University Centre (CURMAT - UNAN)**, and served as a basis for the organization and structuring of the Matagalpa Geographical Infor-

mation Centre (CIGMAT). The second was signed **with the Matagalpa Municipal Council (ALMAT)**, for the setting up of a Land Planning Office and the drawing up of an Urban Development Plan for the city of Matagalpa.

As part of the agreement signed with UNAN, UNOPS provided a total of USD 181,271 to facilitate operation activities required for the CIGMAT part of the project.

For the Matagalpa Municipal Council (ALMAT) part of the project, UNOPS provided a total of USD 145,583 for the implementation of Matagalpa city Urban Plan activities. This investment covered the purchase of equipment and vehicles for the Land Planning Office (OPT) and the cost of technical staff. In accordance with the terms approved by the DAEL/Canton of Geneva in 2005, the agreement with ALMAT was extended to March 2006, with the aim of concluding the activities of the Urban Development Plan Promotion and Socialisation Plan. Including this extra funding, it is estimated that the total investment in this component will be USD 151,729.

To sum up, the total investment in both project components, including rescheduling of the outstanding balance in 2006, will amount to a sum of USD 356,227.

The third part of the project relates to the technical and administrative assistance services provided through UNOPS and UNOSAT, the funding for which amounts to a sum of USD 141,389. As part of this investment, a total of USD 86,738 was earmarked for UNOSAT products and services supplied to the newly set up association CIGMAT during the three years of the project, and these sums currently form part of its assets.

PROCESS VARIABLES: METHODOLOGY ADOPTED AND PROBLEMS ENCOUNTERED

In general, the project went ahead without any major incidents or drawbacks.

UNOPS conducted frequent monitoring and carried out various field visits with the aim of assessing

progress in activities for each part of the project. These monitoring visits allowed them to tackle and resolve various problems encountered during implementation through appropriate discussion and analysis with the project partners. Tripartite meetings were held once a year between DAEL, UNOPS/UNOSAT and project social organizations with the aim of analysing the general progress of the various parts of the project; reviewing and approving project plans and annual budget and also to guide debate and reflect on the sustainability of CIGMAT.

The legal recognition of CIGMAT was an extensive process that took longer than planned, since advance approval was required by the National Assembly under national law. The change in the municipal government in 2005 and the intervention of the mayor were a positive help in speeding up formalities with the Legislative Assembly.

Lastly, the CIGMAT partner organizations expressed their concern over demands for services and/or requirements by potential clients of the centre that it has not been possible to satisfy and also the UNOSAT response time. If new challenges are to be met, it is a priority to improve the relationship between these two technical units. UNOSAT, for its part, has indicated that certain limitations are affected by satellite programming and atmospheric conditions in the region, which are factors outside its control. The new orthorectified SPOT 5XS 2005 images will nevertheless allow CIGMAT to benefit from more extensive geographical coverage and state-of-the-art resources to meet future demands.

OUTCOMES

The results achieved for each specific objective are detailed below:

Objective 1. Facilitate access to geographical information and skilled technical resources for land management in the Municipality of Matagalpa and the Basin.

Result 1.1. Regional information centre organized, operational and properly equipped, with staff trained in management of the geographical information system

and centre management.

CIGMAT was awarded legal status in August 2005 (public corporation), i.e. two years after the local legal formalities were started. Despite this, CIGMAT has been technically organized and structured as a service organization delivering geographical information since July 2003, when the staff were formally recruited (technical, managerial and administrative).

During its first three years of life, beginning with the satellite images supplied by UNOSAT, CIGMAT has delivered:

- Various products to the municipality and basin geographical information centre: the first tourist plan of the area, coffee route map, digitalisation of the topography of local towns, rivers and roads, cartography of areas at risk of and affected by flood, soil use maps, gradient and hydrography maps, and other thematic maps;
- Educational activities and contact with various organizations that could become direct users of the services or strategic allies;
- Participation in regional events on topics related to environmental information management.

Objective 2. To support local government in their task of planning land management.

Result 2.1. Matagalpa Municipality Land Planning Technical Unit set up and operational.

The first stage of the project included technical and financial assistance to the Municipality of Matagalpa to ensure that the council was able to call on a unit and qualified technical team to support its land management plans and programmes. In August 2003, the technical team that set up the Land planning Office (OPT) for the municipal council was recruited to make the office operational.

The OPT made major contributions to the council in accordance with requirements identified as priorities:

- Development of terms of reference for the City of

Matagalpa Drainage Plan Project;

- Outlining of risk situations to the El Clavaria Barrio Residents for awareness-raising and possible relocation to more suitable areas;
- Diagnosis of family homes affected by the tropical storm;
- Review of terms of reference for the location of a new municipal dump
- Help the land registry map and record points located in the sand dunes;
- Solid waste diagnosis and route maps, map of neighbourhood boundaries, run-off, hydrography and municipal services;
- Review of project profile and design of the Environmental Research and Management Centre;
- Evaluation of damage caused by rain in the neighbourhoods of Apante, Otoniel Arauz, Lucidia Mantilla, Manuel Piqueras and Sandino Sur;
- Coordination with the National Institute of Urban and Rural Housing (INVUR) to draw up a housing project;
- Technical recommendations to consultants of GONSAM, S. A. on the Risk Analysis Study and Development of a Municipal Plan for natural disaster prevention and mitigation;
- Participation in the development of the technical working proposal being developed by AMAT in the Río Grande de Matagalpa sector, Managua tributary.

Result 2.2. Urban Master Plan for the city of Matagalpa, drawn up with public participation and the technical support of Decentralised Cooperation.

The aim of the urban development plan is to identify sensitive areas and reduce vulnerabilities. CIGMAT has provided basic geographical information together with a study of the geological and physical features of the region. The OPT used this information to draw up a full diagnosis of the area using a participative method that involved social leaders and the main social organizations in each of the urban neighbourhoods and the most important outlying neighbourhoods committed to the future growth of the city. Some 72 municipal executives supported the OPT technical team in the identification and evaluation of land conflicts, risks and potentials.

Objective 3. To strengthen coordination mechanisms at local, micro regional (departmental), regional (basin) and international level, by making room for critical dialogue between Central and North/South America to foster cooperation.

Result 3.1. The project experiences were shared and disseminated at national and international level, as a contribution to the debate on the application of digitalised geographical information in area management and also to feed back to the process promoted in Matagalpa.

Result 3.2. Critical North/South dialogue on Decentralised Cooperation organized and examples of operational coordination.

Specific advances have been made in reflection and critical dialogue on decentralised cooperation through:

- Special advice by colleagues from the Canton of Geneva government;
- Support missions on the topics of land regulation, institutional aspects of GISs, run-off drainage master plan;
- Remote support for the development of a tourist plan;
- Identification of new partners and participation of municipalities in Geneva and France (border) from 2006, for disseminating and discussing key aspects of the project with a greater number of potential decentralised cooperation actors, and also to diversify finance sources;
- To ensure the viability of the longer term projects by establishing strategic alliances with cooperative organizations operating at national level, (Swiss Agency for Development Cooperation SDC, Netherlands Development Cooperation Service and the European Union) and also enter into formal relationships with Nicaraguan government offices active in land management;

It may be concluded in general that the project satisfactorily complied with its aims with regard to the setting up and running of CIGMAT and OPT. It succeeded in strengthening local capacity for the management

of space technology to help the overall local development process. The municipality can also now call on an Urban Development Plan and Land Regulatory Plan to guide the actions of municipal governments over the next ten years.

SUSTAINABILITY

Project sustainability depends to a large extent on the development of the second stage, planned for 2006-2009. The new resources must pave the way for the decentralised and well-coordinated management of land resources under more harmonious development models, that promote the long term achievement of:

- An effective economy that actively contributes to the generation of employment and the increase of productive investment;
- Greater social equality so that social demands for essential services can be comfortably met;
- An effective and sustainable management of natural resources, with optimal use of farming, forestry and pasture systems, conservation of biodiversity and rational use of soil and water with the aim of improving food safety based on a local market;
- Horizontal integration of all local initiatives and projects to include climate change and geological risk protection factors.

Apart from the above, we must also remember that the sustainability of the initiative will depend on its ability to cater for the demand for services and the possibility of obtaining financial resources from other sources, whether governmental or non-governmental.

LESSONS LEARNED

Since the beginning of the project and during the various tripartite meetings, the representatives of project partner organizations have been advised of the need to include a greater number of members and take specific action to allow the community of CIGMAT service users to be extended in the short term. Now that the organization has legal status, it is hoped that during the next stage, the new association management will

be more open to the inclusion of other actors as part of the association and work actively to include other basin municipalities as project beneficiaries.

The ALMAT, for its part, is able to call on an important key land management tool, defined in the Urban Development Plan and the Regulatory Plan for the city of Matagalpa. ALMAT has nevertheless shown an interest in keeping the OPT as part of the organizational structure of the council so that the technical team can continue their efforts to promote the proper management of local resources and support the most vulnerable sectors living in high risk settlements.

TRANSFERABILITY

In September 2005, once the goals of the first stage of the project had been achieved to a large extent, the second stage was drawn up covering a broader geographical area, to enable other councils may benefit from the know-how and technical assistance of CIGMAT in land management and the introduction of disaster prevention regulations.

UNOSAT seeks to permanently extend the capabilities of the CIGMAT and ensure its sustainability. Together with partners such as the European Space Agency (ESA) and the European Council for Nuclear Research (CERN), UNOSAT promotes cooperative agreements with international scientific institutions, promotes the search for new customers for CIGMAT services and provides technical support for the permanent updating of its geographical database. This support is part of a global initiative that includes the implementation of projects similar to CIGMAT in countries such as Algeria and Korea.

The use of satellite images was until very recently a privilege enjoyed by a very small group of institutions in industrialised countries. Nowadays, through the support of European space agencies, the Global Monitoring for Environment and Security Initiative and UNOSAT, local communities that are a priority due to their vulnerability also have access to this service, which is essential for managing risk and designing sustainable development through land planning. ■

Good practices, good policies

Concrete experiences as a motor for change

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Earthquakes, hurricanes, tsunamis, volcanic eruptions, mudslides and droughts—all part of the daily life of our planet—repeatedly devastate communities around the globe, revealing our vulnerability and fragility before such phenomena. Unfortunately, this vulnerability results in hundreds of thousands of deaths, injured and missing, millions of internally displaced and destroyed economies and means of subsistence. During past few decades, more than 1.5 million persons have been killed as a result of those disasters. The United Nations has estimated that by 2050 catastrophes will lead to an annual average loss of 100,000 lives at a cost of more than 250,000 million euros.

The severity of these facts and estimates has awoken the international community to a growing awareness of the dimension and the consequences of this problem. Greater attention is being paid to the structural effects of risk on development and not just to the symptoms, as had been the case for a long time. There are now two objectives: reduction of the existing vulnerability, which is the result of the use of unsustainable development practices whose harmful effects have been accumulating over time, and the promotion of processes that prevent the creation of conditions that produce new risk scenarios in the future. These two objectives are aimed at decreasing the direct impact of disasters on development and the effects that they have on development systems in creating risk of disasters.

The United Nations made an important contribution to this change in perception and attitude about disasters by declaring the 1990s the International Decade



for Natural Disaster Reduction (IDNDR). At the end of that decade, the International Strategy for Disaster Reduction (ISDR) was established to meet the need for a permanent worldwide framework for coordinating and promoting a reduction of the risk of disasters. In unison, various organizations of the United Nations system—the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP) and the International Labour Organization (ILO)—established and promoted programmes and projects aimed at reducing risk in the world's most vulnerable countries. In January 2005, the Hyogo Framework for Action 2005–2015 was adopted at the United Nations World Conference on Disaster Reduc-

tion (WCDR) with the backing of many countries and was recently ratified by the General Assembly.

Given this, we should not be surprised that good practices for reacting to disasters and the interrelationship of disasters with development strategies have begun to appear in several parts of the world. The following good practices have become apparent: the efforts made by the inhabitants of Banda Aceh and Aceh Besar in Indonesia to deal with the terrible effects of the tsunami of December 2004 and those of the city of Matagalpa and the Río Grande de Matagalpa Basin in Nicaragua that came to light under the impact of Hurricane Mitch of 1998.

Banda Aceh and Aceh Besar (Indonesia)

The force of the facts has made us look beyond the idea of “unlimited growth” based on infinite expansion of production and inexhaustible natural resources and of “omnipotent growth”, alone capable of solving problems of employment, land use and distribution of wealth.

Nonetheless, economic growth continues to be a priority goal, making possible the generation of jobs and income and increasing the economic and financial basis for improved public services and social benefits producing a balance in the spatial and personal distribution of wealth (in accordance with the famous saying: “We must grow in order to share”). To the “ethical limits” sometimes placed on growth—the creation of wealth not as an end, but as an instrument for achieving greater welfare and equity—another must be added: “structural limits” defined by a new technological and economic framework that makes growth a necessary but insufficient condition for achieving certain goals (for example, the elimination of unemployment) whose achievement should inevitably be linked to complementary steps and deep changes in social attitudes and behaviour. Likewise, the notion of “ecological limits” (awareness that a drive to produce can also lead to degradation) implies a need to find a middle ground. No economic system crosses the “ecological boundary” without decreasing the quality of life and running a serious risk of self-destruction.

This increases the importance of microeconomics without cancelling the importance of macroeconomics and links the economy to other parameters such as the environment, technology and land use. This marks a trend towards decentralized production and decision making and the stimulation of the economy through public initiatives. This thinking has become part of what today is called integral development, including, in its own right, local development.

This was the focus used in the Indonesian districts of Banda Aceh and Aceh Besar that we are discussing here. After the disaster created by the devastating tsunami of December 2004, the ILO post-disaster reconstruction programme immediately adopted the objective of not only reconstructing infrastructure and housing but also of strengthening communities that lost their leaders and had seen their social networks weakened—and local institutions. A programme that is still in operation was created with six components managed by a central unit operating in close cooperation with provincial and regional labour, education and public works departments and with trade unions, co-operatives, employers’ organizations and chambers of commerce. As a result of this integral intervention and focus not only has immediate local employment been created in key sectors for the reconstruction of the area affected by the disaster (construction of houses and infrastructure, rehabilitation of buildings and manufacture of construction material) but also training programmes and business development have been created that is specifically oriented to the most vulnerable social and economic population groups, strengthening the participating organizations.

Another important reason for this strategy’s success has been the training and employment activities specifically aimed at women, who successfully joined the traditionally masculine construction labour market. This experience leads to a concept of development that takes into consideration the need for economic growth; but not at any price and fully aware of its limitations without holding it sacred. This supports the interrelationship between the economy, environment, technology and land, based emphatically on sustainable development and taking into account the importance of social development with the conviction that there cannot be

economic efficiency without social efficiency and creating mechanisms for decentralization, participation and negotiation, increasing the weight of the local public agencies and civil society.

It can be said that local development, namely integral development, is a long-term process with multiple goals. It is a complex process that, to express it in graphical terms that are easy to remember, should meet the “logic of three triangles” reflected in the following three interconnected points of sustainability.

ECONOMIC SUSTAINABILITY	ENVIRONMENTAL SUSTAINABILITY	SOCIAL SUSTAINABILITY
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Economic development Efficiency Competitiveness	Sustainable development Ecology Conservation	Social development Equity Cohesion

On this basis and returning to natural disasters, it must be stressed that their risk is a cumulative process combining natural and man-induced threats that create the conditions of vulnerability. Disasters are the result of a complex mix of activities linked to economic, social, cultural, environmental and political-administrative factors that are related to inadequate development processes, structural adjustment programmes and economic investment projects that do not take into account the social and environmental costs of their activities.

Although it is clear that the impact of disasters is greater in poor countries, especially those with a low index of human development, the responsibility for reducing and creating risk are the result of local and national phenomena as well as supranational and even global phenomena, such as economic globalization and policies to combat global warming, climate change, desertification and environmental degradation.

Matagalpa and the Río Grande de Matagalpa Basin (Nicaragua)

Full incorporation of local areas into development practices and theory has been one of the main changes

in economic thought and practice over the past few decades and is a key reason that development is today much more than economic development. This change is acquiring even more importance as the process of globalization advances and the conceptual, strategic and operational importance of local areas increases.

This novel prism for looking at the role of local areas has been accompanied by changes in the traditional attitude of regulating it strictly from the point of view of urban planning and allocation and rationalization of uses. The new richer and broader approach promotes the organization of local areas in which urban planning factors become important together with social, economic, geographic, environmental, demographic and institutional factors. The notion of territorial equilibrium has become a central concern. Equilibrium must be viewed as an idea and objective that force us to think in terms of integral land management.

From this new territorial perspective, local realities, experiences, community wisdom and scientific knowledge have shown us that most disasters can be avoided and are not natural; they are threats that can be avoided. Disasters cause physical and mental harm to the persons affected and damage the economies, means of subsistence, production of local inhabitants and families that often lose their breadwinners.

Are the factors of vulnerability that we ourselves produce together with the threats and lack of capacities and poor management of risk the causes of disasters? Often, inadequate development adds to dangers and creates new threats. People are not the problem: they are developing countries’ main resource and the best solution they have. It has been demonstrated that in emergency situations the local community and local inhabitants are the first line of defence and the basis for reconstruction.

The Nicaraguan good practice discussed here is based on strategic planning. The project “Strengthening of Matagalpa municipio and the Río Grande de Matagalpa Basin for land management” was a reaction to the awareness created by the effects of Hurricane Mitch in 1998 that brought to light the fragility of Central America and the need for governments and local

communities to prevent destructive events and reduce their risk. Aware of this vulnerability, the mayor of Matagalpa adopted the strategic objective of providing “mechanisms that lead to implementation of a participatory form of planning processes that incorporate the variables of mitigation, prevention and preparation for disasters of natural origin”. At the request of the International Strategy for Disaster Reduction (ISDR) Programme and with the technical support of the UNOSAT Project, the United Nations Office for Project Services (UNOPS) responded to this need and in May 2002 implemented a pilot project to reduce vulnerability and strengthen the capacity of the Municipio of Matagalpa and local partner organizations to deal with natural disasters and organize their prevention with local development strategies.

It was proposed to work with three lines of complementary action: first, to create a geographic information centre in the municipio using geographic information systems based on satellite images and technical support for land management; secondly, to support the local government of Matagalpa, considered the leading agency in the Río Grande Basin, in carrying out its responsibility for land use planning; and thirdly, to strengthen coordination mechanisms at the local, micro regional (departmental), regional (basin) and international levels, promoting venues for meaningful Central American and North/South dialogue on decentralized cooperation.

The results of this initiative are already available. During its three first years of operation, the Matagalpa Centre for Geographic Information (CIGMAT) has become the centre of reference for local geographic information, producing processed satellite images, the first local tourist plan, a map of coffee trade, digitalization of the topography of local municipios, rivers and roads, maps of areas at risk of flooding, soil use maps, maps of slopes and hydrology, thematic maps requested by local universities, churches, municipal delegations of the Ministry for Health, NGOs, farmers and businesses. In addition, the municipio has a very active territorial planning office that has participated in the preparation of an urban development plan for Matagalpa that will be used to guide sustainable development in the municipio over the next ten years.

Recourse to the preparation and implementation of a strategic plan has become common in the life of many cities. Strategic planning is a new form of governing urban agglomerations in a climate of consensus and collective participation of the economic and social agents that make it possible to go beyond lack of foresight, conceive a desirable future and define tangible means for achieving that. Basically, strategic planning seeks a double effect: on the one hand to determine the city's strategic objectives that make it possible to achieve a position of competitiveness and quality of life in the medium term and on the other hand to stimulate the merger of the strategies of the agents that have the capacity and the resources to make possible the desired city.

It is important to point out that strategic planning, while certainly a single concept, can be divided into two interrelated fields with different conceptual and operational natures: socio-economic strategic planning (production, technology, business structures) and physical and territorial strategic planning (spatial, urban planning, land use).

On the one hand, strategic planning is socio-economic, production, technology and business-oriented in nature. It provides a global vision of the city in a process of permanent change and establishes priorities and focuses efforts, organizes objectives and defines infrastructural development projects and the creation of income and employment, promotes public-private cooperation, creates a common strategic culture, reinforces in the community various leaders (institutional, social, economic, etc.) and leads to a programme of action.

On the other hand, the city is above all a physical reality, making it necessary to create the “city that we want” in “the area that we have”. In its real form, the model city requires coherent physical urban planning based on a reference model, capable of turning it into a reality and capable of guiding the city's urban and territorial development towards the goals chosen by its citizens. A policy is required that seeks responsible and rational urbanization that provides the urban system with a more sustainable basis and greater territorial balance, with coordinated and integral effects, the environment, local culture, technology, the social sphere, the economy and the intangibles that affect de-

velopment with the fundamental objective of maintaining and improving the quality of life of its inhabitants.

What we commonly refer to as strategic planning—socio-economic planning—and that is usually incorrectly called urban planning—must be understood and implemented as physical and territorial strategic planning; two faces of the same coin. The creation of spaces for coexistence and social cohesion, the provision of infrastructure for achieving a more organized, balanced and united city, sustainability and the urban environment as central points of the quality of life, the importance placed on culture and historical-artistic heritage or the creation of employment, socio-economic and business promotion and innovation must be given expression in the city's spatial reality and developed locally.

Socio-economic strategic planning does not have a precise basis in the domestic legislation of many countries. Quite to the contrary, it is often the successor to physical territorial strategic planning, which is obligatory in several countries for municipios from the perspective of their powerful urban planning abilities. While endemic financial shortcomings bear down with all their weight on local governments when it is time to back projects originating from socio-economic planning, territorial and urban planning generate notable income that argues for their implementation. This ambivalence must be intelligently overcome and capacity created to bring together both areas of planning, seeking synergies and finding in one of the areas the legal and financial support for those who suffer from the other in order to achieve integral and fully operational strategic planning.

Conclusions

The conclusions derived from these two case studies reinforce and back those made by Jaime Valdés in his excellent work published in this journal. States, the international community and key actors must do much more to promote and strengthen local capacities, the participation of all sectors and make possible the use of local resources, land and communities and base the reduction of the risk of disasters on their own reality, taking into account the environment, the natural habitat and people as the main resources for carrying out these processes.

Experience shows us that the key for preventing, mitigating and, in the best of cases, avoiding the impact of disasters is first of all to reduce their risk before they happen. In the event of the occurrence of a potentially destructive event, good preparation ensures rapid, effective and appropriate reconstruction.

Reconstruction can be viewed as a window of opportunity and one of the best moments to introduce the topic of reduction of the risk of disasters in planning for sustainable development and to promote proactive and permanent strategies that make it possible to make societies safer. Reduction of the risk of disasters should be focused on the strengthening of the capacity of key local development actors and the affected communities and towards improving the quality of life, reducing poverty, creating sources of rewarding employment and sustainable economic development, as well as guaranteeing the greatest degree of security for property, the means of subsistence and, especially, the life of persons in the future. ■