

The DIPECHO programme:

Reducing the impact
of disasters



DISASTER PREPAREDNESS: SAVING LIVES BY HELPING PEOPLE TO HELP THEMSELVES

Over 300 million people are affected by natural disasters every year. Developing countries bear the bulk of the burden in terms of lives and livelihoods lost. In economic terms, disasters reduce the output of the poorest nations by around 13%, depriving them of resources needed to escape poverty.

The European Commission's humanitarian aid department (ECHO) was set up in 1992 to provide rapid and effective support to the victims of crises outside the European Union. Recognising the importance of pre-emptive measures, ECHO launched its disaster preparedness programme, DIPECHO, in 1996.

Between 1996 and 2004, DIPECHO provided more than €78 million for 319 projects worldwide. These demonstrate that simple and inexpensive preparatory measures, particularly those implemented by communities themselves, are extremely effective in limiting damage and saving lives when disaster strikes. Typically, DIPECHO-funded projects cover training, capacity-building, awareness-raising, early-warning, and planning and forecasting measures. In 2003 ECHO provided €12 million in support for projects in the Andean Community, Central Asia, South Asia and the Caribbean.

DIPECHO projects are designed as pilot strategies for their region. Their impact is multiplied when the strategies are systematically integrated into long term development projects, whether by the development services of the European Commission, national governments or other development partners.

ECHO also strives to integrate disaster preparedness and mitigation measures into its main humanitarian operations. For example, when responding to the cyclone that hit Fiji in 2003, ECHO not only funded urgent disaster relief, but also a component to increase the national Red Cross Society's capability to deal with future disasters.

Natural hazards cross borders and so should risk reduction strategies. Exchange of knowledge and expertise on a regional level optimises national prevention strategies and enhances the response capacity of the most vulnerable, thereby reducing fatalities and economic losses. ECHO therefore advocates close coordination between all actors intervening in disaster-prone regions: communities at risk, local authorities, humanitarian and development agencies, donors and national governments.

Ultimately, DIPECHO's primary goal is to ensure the integration of disaster reduction measures into wider national policies: from education to building codes to health. Children can learn at school how to reduce the risk of drowning during the rainy season, proper construction norms effectively applied ensure earthquake-resistant houses, hospitals and bridges.

ECHO strongly supports international efforts, coordinated by the United Nations, to ensure the adoption of disaster risk reduction programmes worldwide.

The projects featured in this brochure have made a real difference to people's lives. The challenge ahead is to ensure that risk reduction becomes an integral part of sustainable development policy. All parties concerned – governments, communities, partners and donors – have an interest in working together to achieve this common goal.

Helping the vulnerable prepare for natural disasters



El Reventador erupts in northern Ecuador, November 2002

ECHO's disaster preparedness programme (DIPECHO) targets vulnerable communities living in the main disaster-prone regions of the world. As it is very difficult to prevent or influence natural hazards, the programme concentrates on reducing the vulnerability of the population. When a serious disaster strikes in a developing country, the government may not have the resources to

provide the necessary rescue services. Emergency aid can take hours, or even days to arrive, so it is crucial for the people to be prepared. Indeed, the most effective life-saving efforts are usually carried out by the affected populations themselves both during and after a disaster.

Natural hazards such as earthquakes, cyclones, floods, storms and volcanic eruptions can threaten anyone in their path. However the poorest communities are usually hurt most, because they tend to live in greater density in badly-built housing on land at risk. An estimated 97% of natural disaster-related deaths occur in developing countries. In addition, the economic loss suffered by developing countries after natural catastrophes (as a percentage of GDP) far exceeds that in developed countries.

Large amounts of money are spent on humanitarian aid to cope with disasters across the world. The European Union provides about half of the total, including aid provided by ECHO and by Member States separately. Although ECHO's core mandate is emergency aid, the experience and knowledge it has acquired on the ground make it ideally placed to promote active and concrete policy by financing disaster preparedness measures.

ECHO created its Disaster Preparedness Programme in 1996 to support the United Nations International Decade for Natural Disaster Reduction (IDNDR). The programme also helps fulfil Article 2 of ECHO's mandate (Regulation (EC) n° 1257/96), which states that its activities in the field should: "ensure preparedness for risks of natural disasters or comparable circumstances and use a suitable rapid early warning and intervention system".

Disaster preparedness helps to save lives, fuels recovery and reduces the risk of future disasters. It shows that we are far from helpless in the face of natural catastrophes.

A “bottom-up” approach

The fastest life-saving support for disaster victims usually comes from volunteer members of the affected communities. Although local rescue teams do not lack energy or enthusiasm, they are all too often short on resources, equipment and training.

ECHO's disaster preparedness projects are therefore designed to build up local reaction capacity and enable inhabitants to prepare themselves for future disasters. The population is consulted and involved at every stage to ensure that their real needs are addressed.



Photo © Medicus Mundi Navarra

Caripuyo district in Bolivia. Wall built using gabions to provide riverside flood protection. Gabions are also employed to stabilise ground affected by soil erosion.

Training is essential to maximise the effectiveness of disaster preparedness equipment, early warning systems and emergency shelters. DIPECHO projects often include courses for local people to help them recognise warning signs and take the necessary precautions in time. So for example, a project to provide hurricane shelters for vulnerable communities in the Caribbean will also provide training on when and how to use the shelter.

ECHO selects projects for funding on the basis of their potential to achieve concrete results such as spreading knowledge on disaster preparedness, and getting communities to work together. The best results are only achieved when there is effective co-operation between citizens, civil society groups and local, regional and national authorities. ECHO has found that in most cases, community organisations and municipalities are enthusiastic and fully support project activities.

SOME EXAMPLES OF

- Training/capacity building (strengthening local management and local institutions, formulation and implementation of community disaster action plans, materials and services for capacity building, training of disaster brigades, simulation exercises),
- Small scale mitigation works for demonstration purposes and awareness raising (e.g. reforestation, protection walls along river banks),
- Infrastructure support for contingency plans (e.g. emergency shelters, water tanks),

to disaster preparedness

When ECHO calls for project proposals on disaster preparedness, partners are encouraged to create or strengthen institutional links between different actors, to ensure the durability of the project. The objective is to fund projects that produce lasting benefits after ECHO financing has ceased. The more local people become involved in disaster preparedness, the more likely it is that interventions will develop their own dynamic and keep running beyond the project's life-span.

DIPECHO's current annual budget amounts to around €12 million, and this is expected to increase in future. However ECHO's contribution to disaster preparedness goes well beyond the DIPECHO programme as many of ECHO's major humanitarian financing decisions include disaster preparedness or prevention as an objective. Even post-disaster emergency responses often have a risk reduction element. Examples of such activities include livestock shelters built after extreme cold snaps to protect against further losses of depleted herds (Peru); training and equipping of community-based fire brigades in forest fire risk zones (Indonesia); cholera preparedness and health information (Malawi); and anti-rust measures to prevent water pollution and protect pipes from the effects of volcanic ash (Ecuador).

Photo: Robert Watkins / ECHO



A simple flood warning system in Jamaica shows people when the water rises to danger level

DIPECHO ACTIVITIES

- Information networks and awareness raising,
- Provision of equipment (e.g. for refuges), primary emergency kits and scientific material,
- Early warning systems,
- Support for relief mechanisms (institutional strengthening),
- Technical studies and surveys (such as hazard mapping),
- Advocacy for incorporation of natural disaster risk management in the development planning of stakeholders.

Targeting regions at risk

The DIPECHO programme addresses disaster preparedness in a regional framework, focusing on the main disaster-prone areas of the developing world. The programme began in 1996 with projects in Southeast Asia, the Caribbean and Central America. In 1999, ECHO extended the programme to South Asia and the Andean Community and in 2003, Central Asia was added. Disasters that occur in vulnerable regions have devastating effects on human lives and welfare, property, economic activities and natural resources, especially where coping capacities are low. Climate change is likely to make matters worse, and poor communities are already suffering from frequent extreme weather events and rising sea-levels.

South East Asia. This is one of the most exposed regions of the world, with 37.5 million people affected between 2000 and 2003. The population of the region faces high and multiple risks including typhoons, floods, drought, forest fires (generating smoke hazes), earthquakes, landslides, volcanic eruptions and tidal waves. The toll of deaths and injuries, and the socio-economic consequences, are among the most severe experienced anywhere in the world.

South Asia. Floods and cyclones are frequent throughout the region, especially in India and Bangladesh. India, Nepal and Pakistan experience earthquakes rated 6.0 or more on the Richter scale. The earthquake that hit the Indian province of Gujarat in January 2001 killed around 30,000 people and devastated the lives of many more. The Himalayan areas of Pakistan, Nepal and India are also at high risk from avalanches and landslides.

Regions targeted by ECHO's disaster prepared



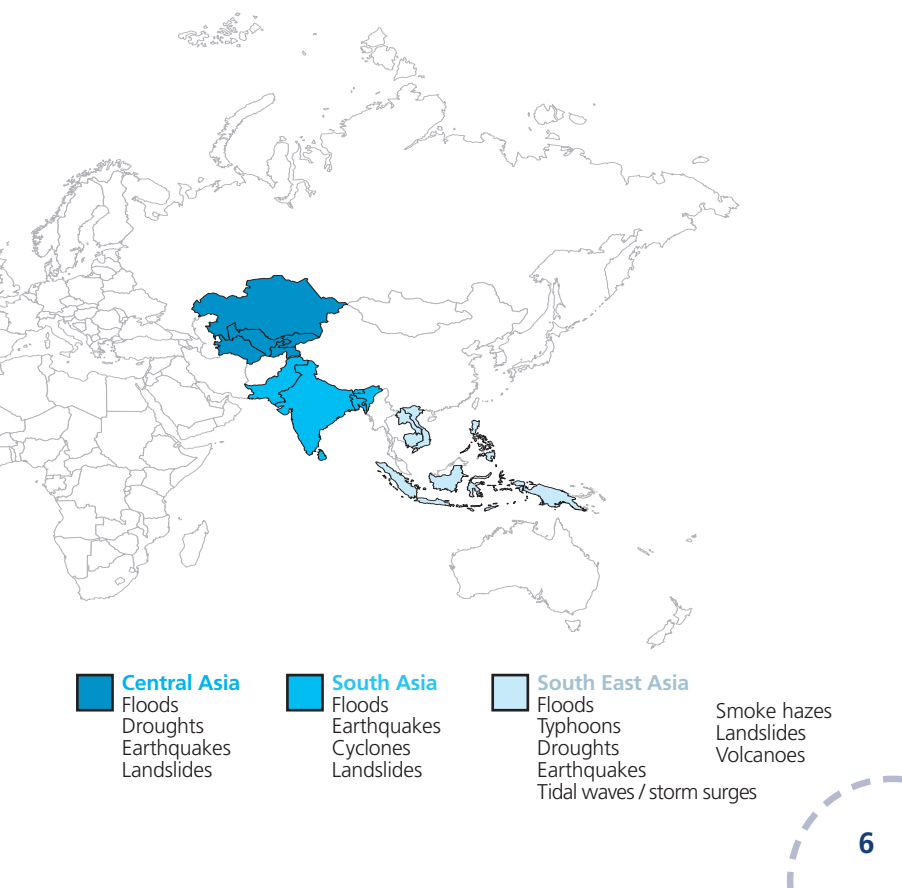
Central Asia. Earthquakes, floods, landslides and to a lesser extent droughts regularly affect Central Asia. Tajikistan, Kyrgyzstan and Uzbekistan are the worst affected countries. During the 1990s several thousand people died in natural disasters and although most events have relatively low fatality rates (in the tens rather than the hundreds), major catastrophes have also occurred. Two of the region’s capitals were almost completely destroyed by major earthquakes in 1948 (Turkmenistan) and 1966 (Uzbekistan).

Caribbean. Flooding is the most frequent and dangerous risk in this region. Floods caused by hurricanes and storms account for more than three-quarters of all disasters in the region. There is also the risk of earthquakes, particularly in Cuba and Hispaniola.

Central America. This is an area of highly active tectonic faults with more than 27 active volcanoes, lying at the western edge of the Caribbean hurricane belt. Hurricane Mitch’s impact on the Honduran economy in 1998 was estimated at equivalent to three-quarters of annual gross domestic product (GDP). With its mountainous terrain and complex river basin systems, landslides and flooding are common. Parts of the region are also prone to drought.

Andean Community. The geography, geology and climate of the Andean countries expose them to a wide range of natural hazards, including earthquakes, landslides, floods, volcanoes, extreme cold snaps and hurricanes. Normal weather patterns are disrupted by the “El Niño” effect. This is a disruption of the ocean-atmosphere system in the tropical Pacific that has important consequences for weather around the globe (<http://www.elnino.noaa.gov>).

Business programmes, and the major risks they face



A regional approach to preparedness

Effective disaster preparedness requires co-operation at all levels of government. While most DIPECHO projects work at local level with the most vulnerable populations, climate change and the increased frequency of hazards that cross boundaries make the regional dimension increasingly important.

Although capacities differ from country to country, exchanges of knowledge and expertise are an effective way of boosting national capacities and reducing risks. ECHO therefore advocates close co-ordination between all actors intervening in disaster-prone regions, including European Union member states, United Nations agencies and other governments.



In **Asia**, the DIPECHO network clearly links with the Asian Disaster Preparedness Centre that provides a base for information exchange, regional co-operation, the promotion of sustainable best practices in coordination with local authorities and training in disaster preparedness for governments, civil society groups and local authorities. ADPC seeks, as a principal objective, the promotion of improved “community-based disaster risk management” (CBDRM). Furthermore, DIPECHO plays an important role in supporting the evolving strategy of the ASEAN Committee on Disaster Management (ACDM) – an inter-governmental body leading the coordination of cross-frontier disaster management programmes in South East Asia.



The current DIPECHO strategy in **Central America** aims at strengthening the Central American Co-ordination Centre for the Prevention of Disasters (CEPREDENAC), a joint initiative of Central American countries designed to improve regional co-operation.

COMUNIDAD
ANDINA
SECRETARÍA GENERAL



In the **Andean region**, the DIPECHO/UNDP project entitled “Systematisation and dissemination of best practices on disaster preparedness and local level risk management” supports the General Secretariat of the Andean Community of Nations (SG-CAN) and the Andean Committee for Disasters Prevention and Attention (CAPRADE), in formulating and approving the Andean Strategy for Disasters Prevention and Attention (EAPAD). It promotes the dissemination and elaboration of EAPAD’s Quinquennial Strategic Plan to attain the active participation of key stakeholders in the various initiatives aimed at disaster risk reduction in the region.

The DIPECHO project cycle



Photo: ICRC



Photo: A. McAllister



Photo: Karin Michotte / ECHO

Natural disasters such as earthquakes, hurricanes and floods, hit the poorest communities hardest

ECHO decides where to support disaster preparedness activities by assessing the level of risk, the vulnerability of the population and the local or national capacity to cope when disaster strikes. The objective is to target communities living in high-risk areas, but with a very limited capacity to prepare for and respond to disasters. The diagnostic process includes dialogue with local actors, European Union Member States and other donors as well as within the Commission itself. When the needs of local communities have been identified, ECHO draws up a strategy for each region, and a call for expressions of interest for disaster preparedness in the targeted region is published on ECHO's website

(http://www.europa.eu.int/comm/echo/index_en.html).

The DIPECHO programme is implemented by humanitarian organisations in the field. Once the project proposals have been selected, ECHO approves an action plan.

Successful implementation requires interaction between the organisations financed by ECHO, the beneficiaries, and the relevant local, regional and national authorities. It also requires flexibility, and objectives and budgets may be adjusted if additional or different needs are identified. Projects are implemented within a pre-defined context and time-scale.

External evaluations are carried out regularly. Results are published on

ECHO's website and lessons learned from implementation in the field are integrated into the next action plan for the targeted region.

The information is shared with other Commission services, other donors and governments responsible for post-disaster reconstruction and development to ensure effective co-ordination. Disaster preparedness is an essential link in the emergency, rehabilitation and development chain.

Living beside an active volcano in Ecuador

The lives of villagers in the Quero and Pelileo districts of Ecuador have been disrupted since 1999 when the nearby Tungurahua volcano entered a new phase of activity. 40,000 people are considered to be directly at risk.

A project financed under the third DIPECHO programme should enable villagers to cope better with the effects of any future eruption. Implemented by the Catholic Agency for Overseas Development (CAFOD) and its partners in Ecuador, it is based on two key principles:

- 1) the first people to respond to a disaster are those directly affected by it, and
- 2) it is essential that the vulnerable communities and relevant authorities work together to reduce the risk and increase the level of preparedness.

As a result of the project, the people of the region feel, for the first time, that they are ready to face the risks posed by the smouldering volcano on their doorstep. The establishment of a network of local partners including NGOs, church organisations and scientific institutes, guarantees improved monitoring of the volcano and ensures a better understanding of the early warning messages. Extensive training and the organisation of local emergency committees mean that villagers know what to do should disaster strike.

Here are some comments by people who have been involved in the project:

"This project has educated the whole community. Now we know how to access the best escape routes if disaster should strike again." *Zoila* from Yayulihi Alto.

"Thanks to the training received by the local committees, we feel more equipped to cope with daily life." *Luis Carvajal*, team leader in Quero municipality.

"Thanks to this project, communities are able to recognise warning messages from the Early Warning System and to understand regular reports by the Geophysical Institute of the National Polytechnic School." *Jean-Luc LePennec*, IRD investigator.

"We expect the current Tungurahua cycle to continue for several years. With the DIPECHO project we have successfully organised Emergency Committees in 35 communities. Villagers have been trained and the implications of the present situation have been explained to them by scientific experts." *Padre Patricio López*, Social Pastoral Director, Diocese of Ambato.



Geophysical institute : following up of the volcanic activity, first phase of the early warning system

Disaster plans in Jamaica severely tested by Hurricane Ivan

A number of Jamaican communities were well prepared to deal with the effects of Hurricane Ivan thanks to the vulnerability and capacity assessment (VCA) tools provided by the Jamaican Red Cross with DIPECHO financing under a “Community Based Disaster Preparedness” project.

The eight communities covered by the project were shown how to recognise potential hazards and identify the resources they needed to deal with them. Through discussions and interactive learning, they were given practical information enabling them to increase their capacity in times of disaster. 57 people from the eight communities were trained as Community Disaster Response Team members (CDRTs). The training covered a range of activities including first aid, light search and rescue, damage and needs assessments, communications and logistics.

When Hurricane Ivan reached Jamaica's shores in 2004, the volunteers knew that this was no drill, but the real thing, and that their training would be tested to the full.

Before the hurricane made landfall, the volunteers visited some of the most vulnerable communities with megaphones to inform people of the impending storm. They also directed local residents to their closest community shelter and helped transport those who could not make it there on their own. “All were accounted for including the elderly and disabled,” reported one CDRT leader when asked how well the system had worked in her community.

During the hurricane, CDRT members managed or helped to run shelters in their areas. “I took a peek outside and what I saw scared me,” said *Shedene Thawe*, one of an estimated 15,000 residents who sought refuge in the 285 shelters opened across Jamaica in advance of the hurricane. Despite terrible conditions, CDRT members undertook light search and rescue work in several areas, helping people to reach safety. They also maintained regular contact with the offices coordinating the disaster response, providing updates about the situation in their locality.

After the winds had died down, CDRT members began rapid assessments, visiting homes and interviewing hurricane victims. The volunteers also distributed relief items to those affected by the hurricane and consistently produced reports and updates, allowing a more effective response to emerging needs.

The Community Based Disaster Preparedness project – financed by DIPECHO with €276,000 – was designed precisely to limit the dangers posed by storms such as Hurricane Ivan. Its success was confirmed by *Ruth Chisholm* of the Jamaican Red Cross who reported: “After Hurricane Ivan, many Jamaicans have been thanking us for the development of the CDRTs.”

A region vulnerable to landslides and flooding (Nicaragua)

Photo © Solidaridad Internacional

The main objective of the second Local Risk Management Project implemented by Solidaridad Internacional (SI) in the northern region of Chinandega in Nicaragua, was to help reduce the socio-economic and environmental vulnerability of the population, integrating the concept of local risk management into the development process. ECHO provided funding of €351,000 for the project which cost €488,000 altogether.



Evacuation simulation in San Enrique

The project organised and trained 72 local bodies (municipal authorities and community structures) to deal with emergencies. These included school environmental and safety brigades, municipal teams and local forest fire fighters. In addition to their regular participation in activities, 326 women from 27 communities at high risk were invited to receive special training in disaster identification, prevention and preparedness – in recognition of their important role in their communities. All of this was put to the test in three practice drills.

Marian González heads one of the 82 families that live in the isolated community of San Enrique-Las 40 during the dry season. She says, “Our community was and continues to be affected by Hurricane Mitch. Since the disaster, even the sound of the Negro River makes me nervous, but now I feel safer because I am better prepared. I know what measures to take to save my life and those of my family.”

Working with local authorities was pivotal to the project’s success. Municipal technical units were trained and environmental ordinances were drawn up that received significant local support. The aim of the ordinances is to regulate land use, the environment, and agricultural practices, all of which have a direct bearing on the prevention of the natural disasters typical to the region.

The construction of two dykes to control the flow of the Gallo River was one of the many efforts made to prevent future disasters. Earthworks were constructed to stabilise gullies and slopes. The works were only possible thanks to the enthusiasm of the local people.

The Early Warning System for the region was improved with 15 radio communication units and, in collaboration with the Nicaraguan Institute for Territorial Studies (INETER), a telemetric gauging station was installed to monitor the flow of the Tecomapa River.

“Co-ordination between the bodies involved in this operation and the participation of the local people were key to the project’s success”, said *Yolanda Malpardita*, the SI official responsible for the programme.

“You people are living in paradise” (Bangladesh)



Photo © Jane Beesley, Oxfam GB

Mohammed Abu Yusef, community leader at Fulhara cluster village, talking with Mohammed Habib Ullah Bahar, Director MMS

“Life was very hard for people before this cluster village, as the land flooded every year. Now we feel there is no monsoon because we don’t face any of the problems. This village is the most peaceful in the area. Those who took shelter here from this year’s flood said, “You people are living in paradise!”

Mohammed Abu Yusef, community leader.

With support from DIPECHO, Oxfam works with many communities like Mohammed’s, located on sandbanks in the rivers of Bangladesh, where community based disaster-preparedness needs to be a way of life.

Participatory DIPECHO operations have allowed villagers to assess their vulnerability and undertake preparations to cope with the first two weeks of a flood, as well as prepare evacuation plans with early warning systems so that when overwhelming floods occur, the community is able to undertake an orderly evacuation. Collective preparedness activity includes vulnerability mapping and the establishment of village disaster preparedness committees (with emergency funds at their disposal). Individuals, meanwhile, are encouraged to save dry food and fuel, and grow banana trees to serve as rafts.

As community capacity increases, the committees are encouraged to look at raising tube-wells and homesteads to create raised ‘cluster villages’. Adjacent communities are assisted to set up flood shelters and arrange access to rescue boats.

The impact of this community-based preparedness work was evident this year, when Oxfam, with ECHO’s support responded to early and extensive flooding in Bangladesh, the worst for six years. Flooding affected areas both where community based preparedness work had been done and where it had not. Although coping capacities were, in general, stretched to beyond breaking point, it was reported that significantly fewer people needed relief assistance in areas where preparedness had taken place. Communities in these areas were generally much better organised and able to rehabilitate themselves more quickly – illustrating how effective preparedness work can be in limiting the suffering of people caught up in natural disasters.

“This house will last for our children” (Vietnam)

Photo ©DWF



Poster : 10 key points of cyclone resistant building techniques

Every year in central Vietnam, storms and flooding threaten and often destroy the fragile economic development of the region, plunging many inhabitants back into poverty. Over time, houses become increasingly unstable, as buildings often remain unfinished and do not comply with building regulations on storm resistance.

Although the country has invested heavily in numerous early warning programmes, major river and water basin management projects and relief activities, little or nothing is done to protect families – most of them rural – and their properties, schools and clinics.

Development Workshop France (DWF) has been working for many years in the central province of Thua Thien Hué on a natural disaster preparedness and prevention programme, which is now supported by DIPECHO. This addresses the needs and capacities of families, and assists in strengthening existing buildings to reduce vulnerability.

The DIPECHO programme supports the establishment of community-level “Disaster Prevention Action Plans”, drawn up by municipal prevention committees. The plans, carried out at different levels and taking various forms, include publicity campaigns, public awareness-raising about disaster prevention, training for rural officials, builders and schools, demonstrations and information seminars. They also involve meetings with provincial and national decision-makers aimed at making preparedness and prevention a priority in natural disaster management strategies.

Do Nguyen, a farmer in the Phu Da commune, has seen his house destroyed twice over the last 20 years. With the help of the programme, he explained, “we have rebuilt a strong and attractive house. It took us a year to build and three years to pay off the loans. But this house will last for our children.”

Truong Quang Ky, Chair of the Prevention Committee in Quang Tho commune, has been unstinting in his commitment to the programme. “With DWF, we have paid great attention to the selection of beneficiary families in the villages. The inhabitants themselves have chosen, sometimes by secret ballot, who should have priority! This has strengthened solidarity – and not jealousy – in the village.”

Much remains to be done to protect the most vulnerable poor families effectively from disasters. The DIPECHO programme, however, which includes four other projects in Vietnam, is making an important contribution to addressing the needs and realities of those most at risk, particularly in rural communities.

“Who says that elders have nothing to learn from their children” (Tajikistan)

Photo © CARE

“My land is at the mercy of the wind and the weather. For centuries, our forefathers have struggled against the forces of nature,” says Ibrogimova Mohira, a 14-year old student in Somoni, Tajikistan. He lives in the Varzob area in the mountains some 50 kilometres north of the capital, Dushanbe. There are landslides and floods every year here. Ibrogimova continues his story:



“Earthquakes, though less frequent, severely affect our lives. Every year several houses are destroyed, livestock are washed away and people disappear. I have a small dog because the village elders believe that dogs can anticipate earthquakes and warn us of upcoming danger. The dog became my friend....but it isn't much good when it comes to warning us about hazards!”

Community disaster response plan and simulation exercise in Chorvodor, Varzob district

“Before this project, we didn't know how to help ourselves when disaster struck. Now, with the help of CARE and funding from ECHO, we are learning what precautions to take to minimise the risk to our homes, our property and ourselves. We do role plays in school with model disaster situations in order to think through what actions we should take. We learn that we should not build houses in poor locations and must ensure that building standards are followed.”

“In March 2004 we had a workshop at school on disasters. If someone wakes me up in the middle of the night because of a disaster, I now know what to do and what plans are in place for my community. Certain people have been assigned tasks, including search and rescue, first aid, temporary shelter, disease control, situation assessment and water safety. Although we would need help from the Government, if something bad happens, we can take the first steps to protect and help ourselves.”

“People in our village used to say ‘What ever will happen will happen’, meaning that no-one can prevent the inevitable. I now tell people that, despite the forces of nature, they must be responsible for helping themselves. Life-saving skills must be learned and practiced in advance of a disaster: not just when it happens. I feel responsible for my community and have been sharing the lessons we learned through this project. Who says that elders have nothing to learn from their children?”

In Tajikistan, CARE is working with more than 60 communities to develop disaster mitigation and response skills. ECHO is co-financing the project with a budget of €250,000 for 2004.

Towards a global risk management strategy

The lives of vulnerable people living in disaster zones can be saved or dramatically improved by disaster preparedness and prevention measures. To achieve maximum impact it is necessary to incorporate such measures into development policy on a global scale, especially in the context of climate change.

There has been a significant increase in the number of hydro-meteorological disaster events (floods, tropical storms, droughts) since 1996. The UN's International Strategy for Disaster Reduction (ISDR) predicts that in economic terms, the global cost of natural disasters will exceed \$300 billion annually by 2050, if the projected impact of climate change is not countered by substantial disaster reduction measures.

A global risk management policy would increase the sustainability of development aid and reduce the need for humanitarian aid. Planning ahead for disasters is a cost-effective way to help people, since it reduces emergency, recovery and reconstruction expenditures. A successful policy would comprise both short-term disaster preparedness measures and long term development policy.

ECHO will continue to focus on the short-term dimension of risk management in its DIPECHO programme. This is in line with its mandate to provide emergency relief for the victims of humanitarian crises, and to ensure preparedness for natural disaster risks.

ECHO advocates that disaster preparedness, prevention and mitigation should become integral to development policy. Successful DIPECHO projects with a demonstrative character or multiplier effect are an essential part of this advocacy. When ECHO finances a small-scale micro-project, such as a model house designed to resist cyclones and earthquakes, it actively encourages local communities, governments and donors to follow up on a larger scale.

Natural risk management is a concept that can be integrated into a wide range of policies. For example, education programmes can help teach pupils what to do in the event of an earthquake, or include natural risk assessment in civil engineering curricula. Development aid infrastructure projects could propose obligatory building codes (for planning, construction, design and materials) to make new buildings resistant to natural disasters. It does not cost much to ensure the contractor complies with building codes when a new hospital is planned. But it is a terrible waste of resources if the hospital is destroyed after a particularly ferocious hurricane because the materials used were sub-standard.

There is an urgent need for disaster risk reduction to become an integral part of global sustainable development policy. As the world's largest donor of development aid, and one of the main donors of humanitarian assistance, the European Union is committed to playing a leading role in achieving this.

Glossary

Capacity (Capability) : A combination of all the resources and knowledge available within a community, society or organisation that can reduce the level of risk, or the effects of a disaster.

Coping capacity : The level of resources and the manner in which people or organisations use these resources and abilities to face adverse consequences of a disaster.

Disaster : A serious disruption of the functioning of a community or a society causing widespread human, material, economic and/or environmental losses which exceed the ability of the affected community or society to cope using its own level of resources. Although disasters are generally categorised as natural or man-made, recent understanding of these events show that most “natural disasters” are also caused by human interactions with environment and nature, thus they are not purely “natural”. The term natural disasters however is commonly used to refer to events that are triggered by natural hazards.

Disaster (risk) reduction : The conceptual framework of elements considered able to minimise or reduce disaster risks within a community or society, to avoid (prevention) or to limit (mitigation and preparedness) and to manage (emergency response) and recover from the adverse impacts of natural and man-made hazards, within the broad context of sustainable development.

Disaster risk management : The systematic management of administrative decisions, organisation, operational skills and abilities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related potential environmental hazards. This comprises all forms of activities, including structural and non-structural measures to avoid (prevention), to limit (mitigation and preparedness) the adverse effects of hazards and/or to manage (emergency response) and recover from the consequences of the event.

Early warning : The provision of timely and effective information, through identified formal and informal institutions and communication networks, that allow individuals exposed to a hazard, to take action to avoid or reduce their risk and prepare for effective response.

Emergency management : The organisation and management of resources and responsibilities for dealing with all aspects of emergencies, particularly preparedness, response and recovery.

Hazard : A potentially damaging physical event, phenomenon and/or human activity, which may cause loss of life or injury, property damage, social, economic disruption and environmental degradation.

Mitigation : Structural (physical) measures undertaken to protect and/or strengthen vulnerable elements to minimise the adverse impact of natural hazards, environmental degradation and technological hazards.

Preparedness : Activities and measures taken in advance by people and organisations to ensure effective mobilisation of response to the potential impact of hazards, including the issuing of timely and effective early warnings, the temporary removal of people and property from a threatened location and support to the indigenous coping capacity of the population at risk.

Prevention : Activities and/or physical measures to provide outright avoidance of the adverse impact of hazards or the means to control the hazards at their source whenever possible.

Relief/response : The provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those affected. It can be of an immediate, short-term or protracted duration.

Risk : The probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between natural and/or human induced hazards and vulnerable conditions. Conventionally, risk is expressed by the notation $\text{Risk} = \text{Hazards} \times \text{Vulnerability/Capacity}$.

Vulnerability : A set of conditions and processes resulting from physical, social, cultural, political, economic, and environmental factors, which increase the susceptibility of a community to the impact of hazards.



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*Flooded street in Kingston, as rain and winds
of Hurricane Ivan hit Jamaica*

This leaflet is printed on environmentally-friendly paper.

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ABOUT ECHO

HUMANITARIAN ACTION WORLDWIDE

ECHO is the European Commission's Humanitarian Aid department, a service under the direct responsibility of Commissioner Louis Michel.

Since 1992, ECHO has funded relief to millions of victims of natural and man-made disasters outside the European Union. Aid is channelled impartially to the affected populations, regardless of their race, ethnic group, religion, gender, age, nationality or political affiliation.

ECHO works with about 180 operational partners, including specialised United Nations agencies, the Red Cross/Crescent movement and non-governmental organisations (NGOs).

ECHO is one of the biggest sources of humanitarian aid in the world. In 2003, it provided €600 million for humanitarian programmes. This does not include the aid given separately by the European Union's Member States. ECHO support went to projects in more than 60 countries. The funds are spent on goods and services such as food, clothing, shelter, medical provisions, water supplies, sanitation, emergency repairs and mine-clearing. ECHO also funds disaster preparedness and mitigation projects in regions prone to natural catastrophes.

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