

2006-2007

World Disaster Reduction Campaign

Disaster risk reduction begins at school



United Nations

The campaign is supported by the ISDR system thematic cluster on knowledge and education, which is convened by:



United Nations Educational, Scientific and Cultural Organisation
(UNESCO)
www.unesco.org

For more information on the thematic cluster members and initiatives,
visit: www.unisdr.org/knowledge-education

Disaster risk reduction begins at school



When a natural hazard strikes, children are among the most vulnerable population group, especially those attending school in times of disaster. Disasters such as the October 2005 earthquake in Pakistan, where over 16,000 children died in schools that collapsed, or the recent mudslide on Leyte Island in the Philippines, where more than 200 school children were buried alive, are just a few tragic examples of why more needs to be done to protect our children before disasters strikes.

In all societies, children represent hope for the future. By extension, schools, because of their direct link to youths, are universally regarded as institutions of learning, for instilling cultural values and passing on both traditional and conventional knowledge to younger generations. Protecting our children during natural hazards, therefore, requires two distinct yet inseparable priorities for action: disaster risk education and school safety.

Making disaster risk education part of national primary and secondary school curricula fosters awareness and better understanding of the immediate environment in which children and their families live and work. We know from past experience that children who are taught about natural hazard risks play an important role in saving lives and protecting members of the community in times of crisis.

On a beach in Thailand, when the December 2004 Tsunami struck, British schoolgirl Tilly Smith saved many lives by urging people to flee the shore: her geography class in Britain had enabled her to recognize the first signs of a tsunami. At the same time, Anto, a young boy on the Indonesian island of Simeulue had learned from his grandfather what to do when an earthquake strikes. He and all the other islanders ran to higher ground before the tsunami struck, sparing all but eight members of the community.

In most societies, in addition to their essential role in formal education, schools also serve as a community's central location for meetings and group activities, in normal times, and as makeshift hospitals, vaccination centres or places of refuge and shelter in times of disaster. Yet, several hundred million children across the developed and developing world attend schools in buildings that are unable to withstand the forces of nature.

To inform and insure the future of our communities, the UN/ISDR secretariat and its partners have made disaster risk education and safer school facilities the two key themes of the 2006-2007 World Disaster Reduction Campaign. The campaign, entitled "Disaster risk reduction begins at school", aims to inform and mobilize Governments, communities and individuals to ensure that disaster risk reduction is fully integrated into school curricula in high risk countries and that school buildings are built or retrofitted to withstand natural hazards.

As disaster risk reduction is everybody's business and in everybody's interest, we invite you to join the UN/ISDR secretariat and its partners in this world campaign. Together, we can help children build - with us and for all of us - a safer world. Schools make the difference between despair and hope. They can also make the difference between life and death.

Salvano Briceño
Director of UN/ISDR



Frequently asked questions

Why a Campaign on disaster risk education and school safety?

- Children are among the most vulnerable population group during a disaster, especially those attending school at the time of the catastrophe. During disasters, school buildings are destroyed, taking away the precious lives of children and teachers and stalling access to education in the aftermath of disaster. Rebuilding these schools can take years and is very costly
- Learning about disaster risk in primary and secondary school help children play an important role in saving lives and protecting members of the community in times of disaster. Making disaster risk education an integral part of the national school curriculum helps to build greater awareness of the issues across entire communities
- In addition to their essential role in formal education, schools must also protect children in the event of a natural hazard. Investing in strengthening school structures before a disaster occurs, reduces long-term costs, protects generations of children and ensures educational continuity after the event
- Disaster risk education and safe school buildings are two key priority areas for action outlined in the Hyogo Framework for Action 2005-2015: Building Resilience of Nations and Communities to Disasters, which 168 Governments adopted at the World Conference on Disaster Reduction in January 2005
- Integrating disaster risk education into national curricula and building safe school facilities are two priorities that contribute to a country's progress towards the Millennium Development Goals (MDGs)

Who is organizing the Campaign?

- The UN/ISDR secretariat takes the lead in coordinating biennial World Disaster Reduction Campaigns. These campaigns aim to raise awareness, mobilize action, and harness existing practices to reduce loss of life, livelihood as well as social and environmental losses caused to communities and nations as a result of disasters. The Campaigns' themes reflect the five priorities outlined in the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters
- The UN/ISDR partners, such as UNESCO, UNICEF, IFRC, ActionAid, and key regional organizations within and outside the United Nations, contribute their knowledge and expertise and link their initiatives to the Campaigns. The 2006-2007 Campaign, "Disaster risk reduction begins at school" enlists the support of all of the UN/ISDR partners, including the ISDR system's thematic cluster on knowledge and education. For a comprehensive list of who is doing what, please visit our website: www.unisdr.org/wdrc-2006-2007

What are the Campaign's main objectives?

- To promote the integration of disaster risk education in school curricula in countries vulnerable to natural hazards
- To promote the safe construction and retrofitting of school buildings to withstand natural hazards

How can we achieve the goals of the Campaign?

- Promote best practices to show how beneficial safer schools and disaster risk reduction education are for vulnerable populations
- Involve actors at different levels to convey the main messages of the Campaign

- Sensitize schoolchildren, parents, teachers, policy/decision makers and practitioners at local, national and international levels, and civil society organizations to lobby for safer schools and disaster reduction education

What are the Campaign's main messages?

- Disaster risk education empowers children and helps build greater awareness of the issue in communities
- Safe school facilities save lives and protect generations of children in the event of a natural hazard
- Disaster risk education and safe school facilities will help countries progress towards the MDGs

Who are the Campaign's main targets?

- Primary and secondary school children, teachers, education policy makers, parents, engineers and building professionals
- Government ministry/agency in charge of disaster management issues, ministries of education, national-level political leaders, local authorities and community decision makers

What are the expected results of the Campaign?

- Local and national governments' investment in safer school facilities and mainstreaming of disaster risk reduction into national school curricula
- Increased awareness on the positive impacts of school safety and disaster risk education in school
- Increased action and use of good practices to mobilize coalitions and partnerships, facilitate South-South exchanges, build capacity and guide others to existing resources for training in the area of disaster risk education and school safety

Who can participate in the Campaign?

- School children, teachers, community leaders, parents and individuals who are interested in disaster risk education and safer schools
- NGOs, community-based organizations (CBOs), UN organizations, international, national, regional and local associations/institutions, the private sector and public sector

How long does the Campaign last?

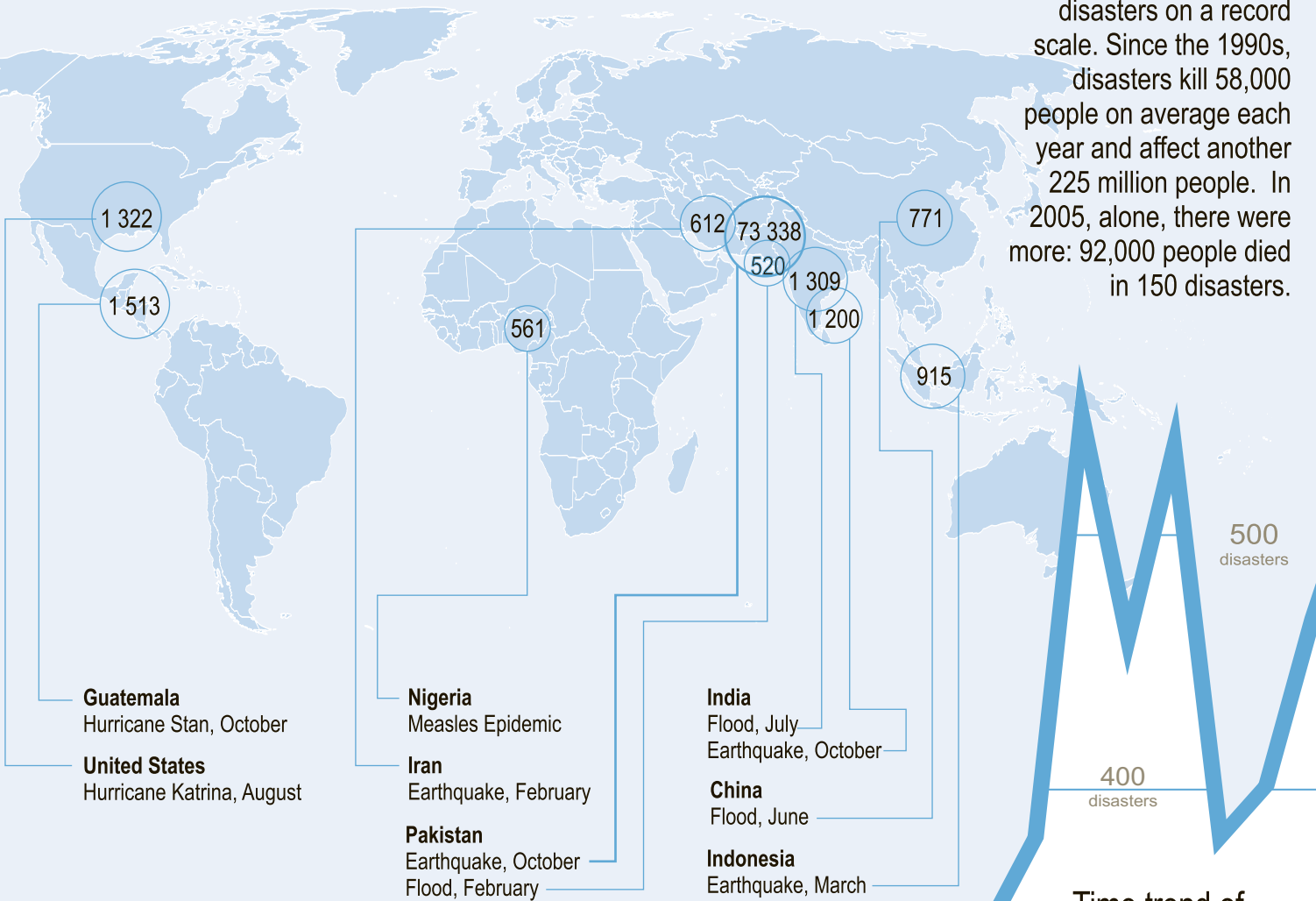
- The Campaign led by the UN/ISDR will last for two years, through to the end of 2007, but it continues thereafter under the auspices of the UNESCO Decade of Education for Sustainable Development

Where can I read more about the subject?

- The UN/ISDR website provides a number of links, contacts that can help you to understand the topic better. Please visit: www.unisdr.org/wdrc-2006-2007

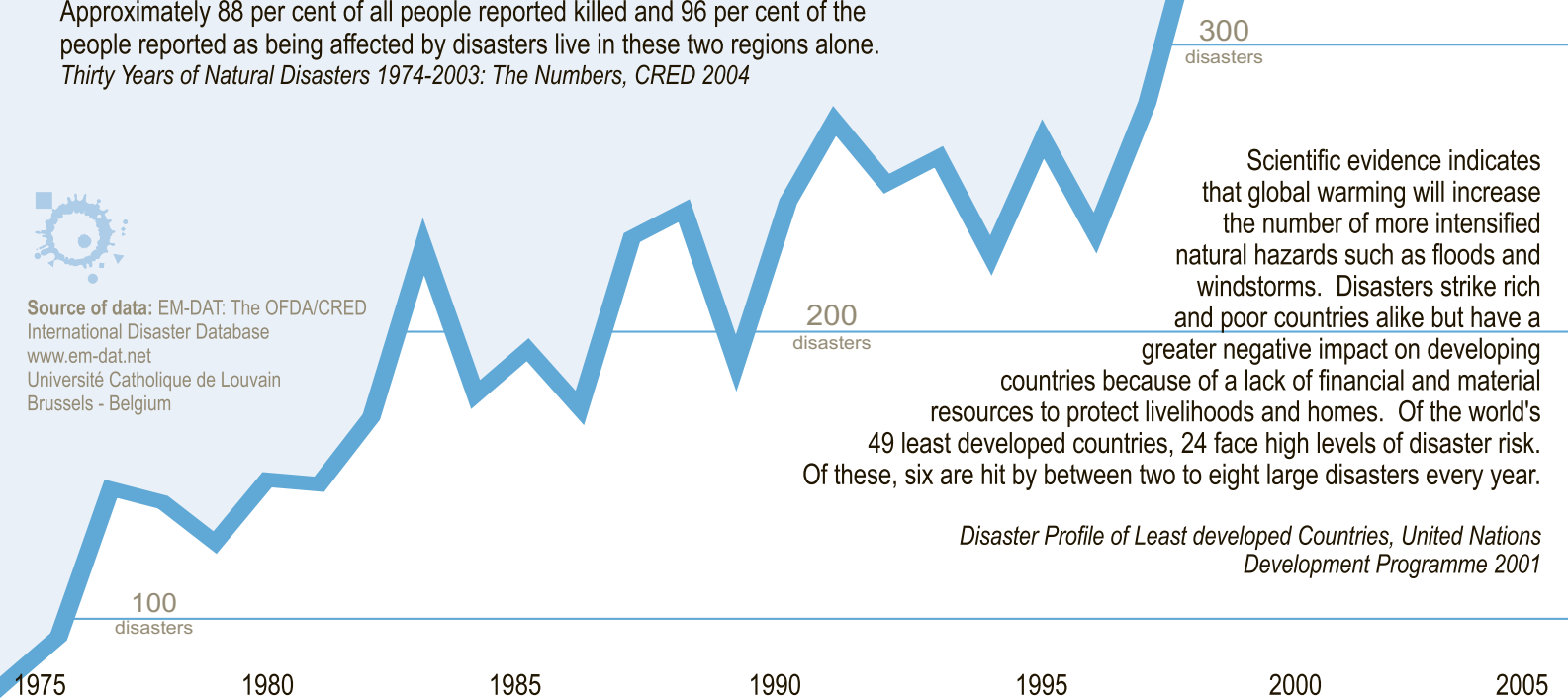
Fact sheet

Today the world is facing disasters on a record scale. Since the 1990s, disasters kill 58,000 people on average each year and affect another 225 million people. In 2005, alone, there were more: 92,000 people died in 150 disasters.



Asia and Africa bear a disproportionate burden of losses due to the impact of disasters. Approximately 88 per cent of all people reported killed and 96 per cent of the people reported as being affected by disasters live in these two regions alone.
Thirty Years of Natural Disasters 1974-2003: The Numbers, CRED 2004

Time trend of disasters 1975-2005



Scientific evidence indicates that global warming will increase the number of more intensified natural hazards such as floods and windstorms. Disasters strike rich and poor countries alike but have a greater negative impact on developing countries because of a lack of financial and material resources to protect livelihoods and homes. Of the world's 49 least developed countries, 24 face high levels of disaster risk. Of these, six are hit by between two to eight large disasters every year.

Disaster Profile of Least developed Countries, United Nations Development Programme 2001

Source of data: EM-DAT: The OFDA/CRED International Disaster Database
www.em-dat.net
 Université Catholique de Louvain
 Brussels - Belgium

The cost of disasters

During the last decade, disasters caused damage of an estimated average of \$67 billion per year. Since the 1950s the economic cost associated with disasters triggered by natural hazards has increased from 3.9 billion a year to 63 billion a year in the 1990s

Source: *Natural Disasters Counting the Cost*, World Bank Website

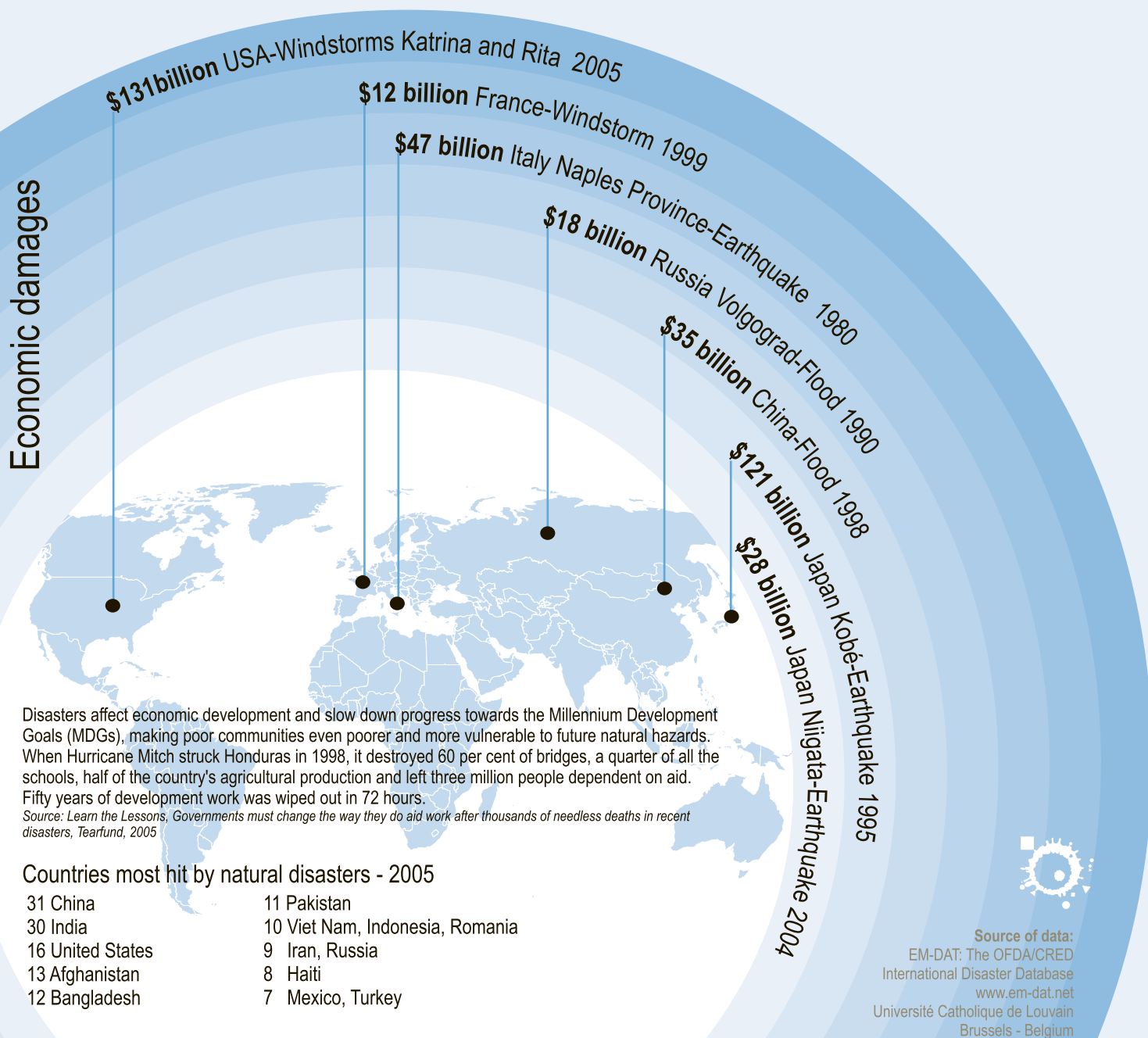
In 2005, alone, losses were at \$220 billion. The World Bank has stated that losses caused by disasters in developing countries, in terms of percentages of the gross national product, are 20 times higher than those in developed countries.

Source: *Educational Facilities and Risk Management Natural Disasters* OECD, 2004

There is growing evidence that investing in disaster risk reduction yields economic and development benefits. For example:

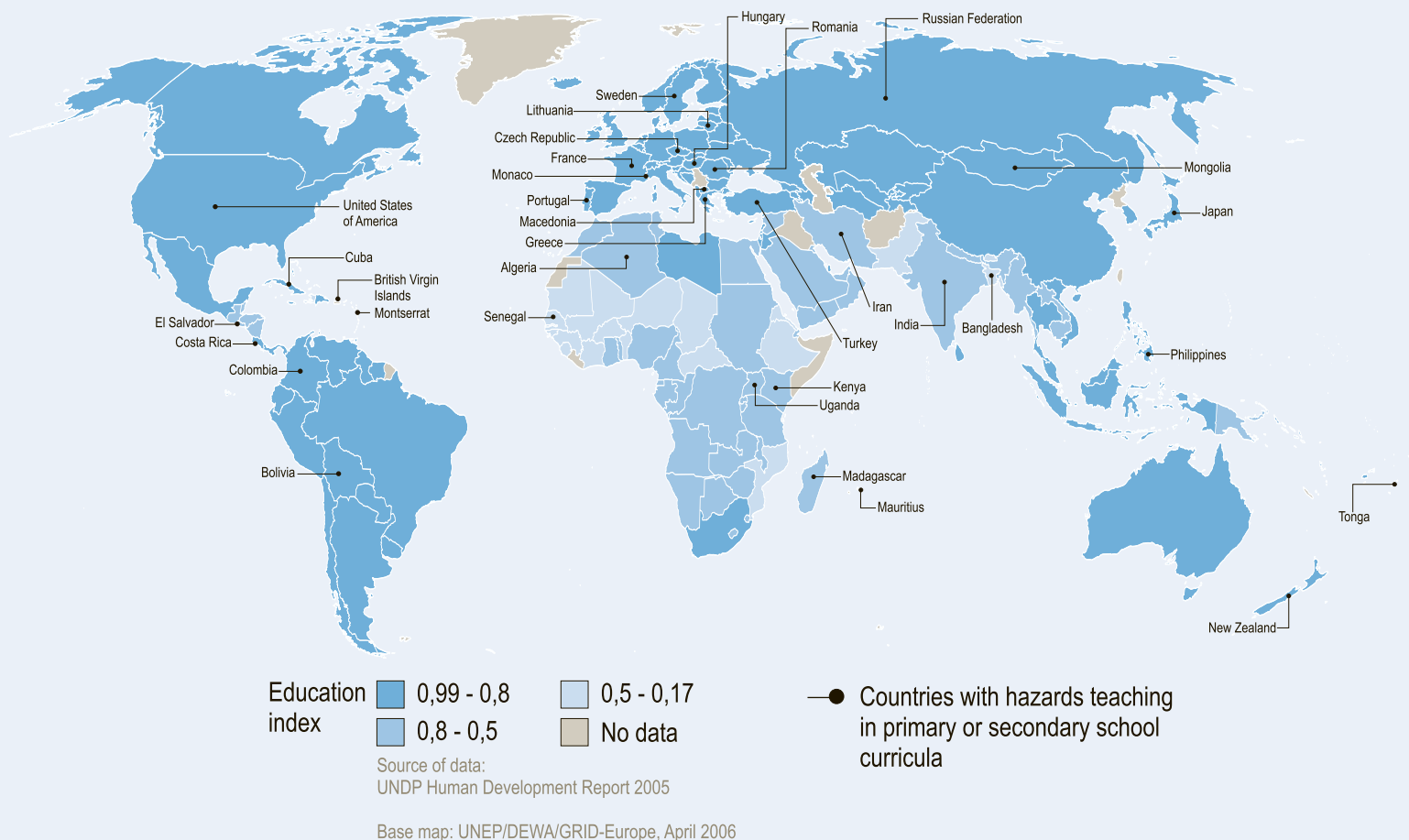
- Potential losses of \$12 billion have been averted in China from an investment of \$3 billion in flood control measures over 40 years.
- Economic losses worldwide from disasters during the 1990s could have been reduced by \$280 billion worldwide if \$40 billion had been invested in mitigation and preparedness according to the World Bank and US Geological Survey.
- It is estimated that for every dollar invested in disaster risk reduction, between two and four dollars are returned in terms of avoided or reduced disaster impacts.

Source: DFID website: <http://www.dfid.gov.uk>



Disaster risk education and school safety

Children who are taught about natural hazard risks play an important role in saving lives and protecting members of the community at a time of disaster. Making disaster risk education part of the national primary and secondary school curricula fosters awareness and better understanding about the immediate environment in which children and their families live and work.



Teaching disaster-related subjects in schools is mandated by law in Mexico, Romania and New Zealand. Other countries such as Brazil and Venezuela report significant primary and secondary teaching at municipal or state level.

Turkey provides yet another example: after the devastating series of earthquakes in 1999, intensive training of disaster awareness instructors took place in Istanbul. By the end of 2002 over 3000 teachers were trained and certified as instructors in 32 districts of the city. These in turn taught more than 34,000 teachers, 6,000 personnel and more than 350,000 parents. In this way, 826,000 school children were instructed. The training was extended to three other Turkish provinces reaching another 1.5 million students.¹

If formal education is to take place in schools, then schools need to be a safe place for learning. In countries that face high levels of disasters, schools buildings are often destroyed, claiming precious lives of children and teachers. If UNESCO's "Education for All" initiatives were successful in the 20 countries that have registered the most deadly earthquakes during the 20th century, but no special attention is paid to the seismic safety of school buildings, at least another 34 million children will be placed at risk to earthquakes while they are attending school.²

¹ Source: Let Our Children Teach Us - A review of the Role of Education and Knowledge in Disaster Risk Reduction, Wisner B./ ISDR 2006

² Source: School Seismic Safety: Falling Between the Cracks? Wisner B., 2004

- Most recently in March 2005, earthquakes in Western Iran destroyed 130 schools directly affecting 36,000 children
- The 2001 earthquake in Gujarat, India directly affected an estimated three million school children. In the hardest hit districts, 55 per cent of all schools were destroyed leaving 317,000 without access to education³
- Nepal has a long history of destructive earthquakes; in the 20th century alone over 11,000 people lost their lives in four major earthquakes. In the Kathmandu Valley, school children are especially vulnerable to earthquake hazards in the Kathmandu Valley. A recent study revealed that the majority of the 644 public school buildings require retrofitting to meet safety standards⁴

Building or retrofitting schools to withstand the forces of nature will protect several generations of children if we consider that the loss of each child represents 40-70 years of lost life and productivity. Each injury represents 40-70 years of potentially expensive medical care.⁵

³ Source: www.seedsindia.org

⁴ Source: Educational Facilities and Risk Management Natural Disasters, OECD, 2004

⁵ Source: School Seismic Safety: Falling Between the Cracks? Wisner, B. 2004

Examples of disaster impacts on efforts to meet the MDGs

MDG	Direct impacts ¹	Indirect impacts ¹	Examples of what risk reduction can contribute ²
1. Eradicate extreme poverty and hunger	<ul style="list-style-type: none"> Damage to housing, service infrastructure, savings, productive assets and human losses reduce livelihood sustainability. 	<ul style="list-style-type: none"> Negative macroeconomic impacts including severe short-term fiscal impacts and wider, longer-term impacts on growth, development and poverty reduction. Forced sale of productive assets by vulnerable households pushes many into long-term poverty and increases inequality. 	<ul style="list-style-type: none"> Disaster risk reduction and MDG1 are interdependent. Reducing livelihood vulnerability to natural hazards is key both to eradicating income poverty and improving equity, and to improving food security and reducing hunger. Reducing disaster impacts on the macro-economy will promote growth, fiscal stability and state service provision, with particular benefits for the poor. Disaster risk reduction and MDG1 share common strategies and tools: this overlap means that giving development more security from natural hazard can be very cost effective.
2. Achieve universal primary education	<ul style="list-style-type: none"> Damage to education infrastructure. Population displacement interrupts schooling. 	<ul style="list-style-type: none"> Increased need for child labour for household work, especially for girls. Reduced household assets make schooling less affordable, girls probably affected most. 	<ul style="list-style-type: none"> In hazard-prone areas, the case for building schools and encouraging attendance becomes much stronger if buildings are safe and students and teachers are trained in emergency preparedness. Promoting safer structures may encourage better maintenance even in non-disaster times. Reduced vulnerability will allow households to invest in priorities other than mere survival. Education is often a high priority. Girls (as 60% of non-attendees) may benefit disproportionately.
3. Promote gender equality and empower women	<ul style="list-style-type: none"> As men migrate to seek alternative work, women/girls bear an increased burden of care. Women often bear the brunt of distress 'coping' strategies, e.g. by reducing food intake. 	<ul style="list-style-type: none"> Emergency programmes may reinforce power structures that marginalize women. Domestic and sexual violence may rise in the wake of a disaster. 	<ul style="list-style-type: none"> Better risk reduction will help protect women from disproportionate disaster impacts. Collective action to reduce risk by households and communities provides entry points for women (and other marginalized social groups) to organise for other purposes too, providing a catalyst for economic and social empowerment.
4. Reduce child mortality	<ul style="list-style-type: none"> Children are often most at risk, e.g. of drowning in floods. Damage to health and water & sanitation infrastructure. Injury and illness from disaster weakens children's 	<ul style="list-style-type: none"> Increased numbers of orphaned, abandoned and homeless children. Household asset depletion makes clean water, food and medicine less affordable. 	<ul style="list-style-type: none"> Disaster risk reduction will help protect children from direct deaths and injuries during hazard events, and will lower mortality from diseases related to malnutrition and poor water and sanitation following disasters. Health infrastructure and personnel in hazard-prone areas will be better protected. This may also promote better maintenance of infrastructure.
5. Improve maternal health	<ul style="list-style-type: none"> Pregnant women are often at high risk from death/injury in disasters Damage to health infrastructure. Injury and illness from disaster can 	<ul style="list-style-type: none"> Increased responsibilities and workloads create stress for surviving mothers. Household asset depletion makes clean water, food and medicine less affordable. 	<ul style="list-style-type: none"> Disaster-related illness and injury will be reduced. Improved household livelihood and food security will lower women's workloads and improve family nutrition. Health infrastructure and personnel in hazard-prone areas will be better protected. This may also promote better maintenance of infrastructure.
6. Combat HIV/AIDS, malaria and other diseases	<ul style="list-style-type: none"> Poor health & nutrition following disasters weakens immunity. Damage to health infrastructure. Increased respiratory diseases associated with damp, dust and air pollution linked to disaster. 	<ul style="list-style-type: none"> Increased risk from communicative and vector borne diseases, e.g. malaria and diarrhoeal diseases following floods. Impoverishment and displacement following disaster can increase exposure to disease, including HIV/AIDS, and disrupt health care. 	<ul style="list-style-type: none"> Public health risks, e.g. from flood waters, will be reduced, and nutrition and health status improved, boosting resistance to epidemic disease. Fewer disasters will free up social sector budgets for human development. Livelihood security will reduce the need to resort to work in the sex industry. Community organisations and networks working in disaster risk reduction are a resource for family and community health promotion, and visa versa.
7. Ensure environmental sustainability	<ul style="list-style-type: none"> Damage to key environmental resources and exacerbation of soil erosion or deforestation. Damage to water management and other urban infrastructure. Slum dwellers/people in temporary settlements often heavily affected. 	<ul style="list-style-type: none"> Disaster-induced migration to urban areas and damage to urban infrastructure increase the number of slum dwellers without access to basic services and exacerbate poverty. 	<ul style="list-style-type: none"> Reduced disaster-related migration into urban slums and reduced damage to urban infrastructure will improve urban environments. An emphasis on governance for risk reduction and more secure livelihoods will help curb rural and urban environmental degradation. Risk reduction partnerships that include community level actors and concerns will offer more sustainable infrastructure planning, and enable expansion of private sector contributions to reducing disasters. Housing is a key livelihood asset for the urban poor. Disaster risk reduction programmes that prioritise housing will also help preserve livelihoods.
8. Develop a global partnership for development	<ul style="list-style-type: none"> Impacts on programmes for small island developing states from tropical storms, tsunamis etc. 	<ul style="list-style-type: none"> Impacts on commitment to good governance, development and poverty reduction—nationally and internationally. 	<ul style="list-style-type: none"> Creating an international governance regime to reduce risk from climate change and other disasters will help overcome disparities in national negotiating weight. Efforts to build equal global partnerships for risk reduction will have particular relevance for small island developing states and HIPC's.
ALL MDGS		<ul style="list-style-type: none"> Reallocation of resources – including ODA – from development to relief and recovery. 	<ul style="list-style-type: none"> Reducing disaster impacts will free up resources, including ODA, to meet MDGs.

¹ UN/ISDR

² Disaster risk reduction: a development concern. A scoping study on links between disaster risk reduction, poverty and development, DFID, 2005



What can be done?

Governments

All governments should commit to teacher training and curriculum development to support large-scale teaching of disaster risk reduction.

Youth and children in many countries benefit from a wide variety of different treatments of natural hazards, disaster preparedness and prevention. These practices are highly varied in approach, intensity and quality but it is probable that half the nations in the world have some form of teaching about natural hazards and safety in some of their school. In some cases, educational policy and supply of teaching materials are decentralized to the sub-national level. The challenge is to build on these practices, promote them in neighboring schools and to encourage such teaching in nations where it is rare or absent.

All governments should review the safety of their schools and develop a comprehensive policy toward school safety by taking all locally relevant hazards into account and using location of schools, maintenance of buildings, design and construction methods as risk reduction tools.

Low cost, effective technology exists for strengthening and for building new, safe schools at little additional cost. While earthquake hazard to schools has received some attention, very little has focused on other hazards. These include meteorological phenomena such as high wind, storm surge, tornado, lightning strike, wild fire and flood. Other geophysical phenomena also threaten schools: landslide, mudslides, and avalanches, effects of volcanic eruptions and later lava flow, and tsunami.

UN & other international organizations

The UN and other international organizations can work with professionals, educators, communities, children and youth to ***develop a short list of “quick win” actions that can rapidly increase the safety of schools and raise risk awareness among all those concerned with schools.***

“Quick wins” are actions in support of the Millennium Development Goals (MDGs) that are almost certain to bring big benefits quickly. The Millennium Project’s list already includes ending user fees in primary schools and expansion of school meal programmes in support of UNESCO’s “Education for All” initiatives, as well as actions to support other MDGs including free mass distribution of malaria bed-nets and massive replenishment of soil nutrients.

The UN and other International Organizations can ***dynamize coalitions and partnerships, facilitate the creation of knowledge networks including South-South exchange, build capacity and guide others to existing resources for training.***

Donors

Donors can ***link these issues to all MDGs not just the education MDG.*** Previously some thought of disaster risk reduction as a separate agenda that would siphon resources away from the core mission of development. Now the two are seen as one. Similarly, there are many potential synergies among education, disaster reduction, and the other MDGs. These, in turn, link to more integral strategies such as the Poverty Reduction Strategy Papers (PRSPs). If the school becomes a centre from which emanates into community methods for participatory risk assessment. A community mobilized in this way is more likely to find local solutions to other MDG related development problems.

Donors should ***pick a dozen “fast track” countries*** that have considerable numbers of schools in dangerous locations or otherwise at risk and show ***the potential for rapid scaling up of school protection***. These countries should receive a large increase of assistance to push such programmes forward.

In Highly Indebted Poor Countries that have many schools at risk and do not show “fast track” potential, ***assistance is also required, but perhaps could be combined with “debt for safety” swapping in order to stretch donor country resources***.

The private sector

Included in the private sector are the ***many private schools in the world***. Where they are parts of national or even international networks and associations – such as the Montessori schools, schools accredited by the International Baccalaureate Organization, as well faith based schools (e.g. Aga Khan schools, Catholic schools, Yeshivas) their ***apex organizations can provide guidance and resources so that their students also study safety and their schools are also safe***. In some cases, ***private schools can twin*** with public sector schools, helping them achieve standards of structural safety perhaps greater than that mandated by national standards and enriching their curricula and teaching resources (libraries, computer or internet access, etc).

Professional organizations involved with schools and building ***should work with Governments to establish and enforce strict building codes of conduct so that high standards are met in school construction***.

A new culture of respect for building codes of conduct within professional bodies involved with building schools should be established.

Educators and other professionals

Professionals are working hard to enrich education with knowledge important to sustainable human development, peace, justice, and safety. Nevertheless, there are ways that their efforts can ***focus more clearly on natural hazards without detracting from the work they do in other important areas***. Considering the loss of life, injury, and disruption of education and normal child and adolescent development caused by natural hazards, one would think that more professionals would seek out more direct and rapid ways of communicating with parents, policy makers, community leaders, and the children and youth themselves. Professionals such as educators, researchers, engineers, and journalists might be the first point of contact.

Communities and schools

Schools can start right now with the addition of some teaching about safety and natural hazards. It is as easy as taking an hour a week to lead a class out the door and to begin to look with a critical eye at the geographical surroundings of the school building and compound. Paper and pencil are all that is required for teachers and students to begin to map these possible hazards. Even where there are large classes, few resources, or the pressure to “teach to exams,” an hour a week spent in this way can repay enormously in terms of lives saved and the risk awareness of the future generation.

Parents

Parents who have lost children in school during disasters can join together as a ***community based organization*** to do whatever they can to prevent other parents from feeling the pain and grief they know so well. In a similar way, just as one example, parents of children who have suffered sudden heart attacks in the UK have formed a group to work on this issue.

Parent Teacher Associations exist in various forms in many countries. These can become the forum for discussions of what their children and youth learn about safety and hazards and how schools can be protected.



Photo: Save the children

Let's be prepared

An educational project about disasters in Cuba

Introduction

Cuba is heavily exposed to natural hazards such as tropical cyclones, floods, intense rains and strong winds. During an average season up to ten hurricanes are formed, however awareness of these natural hazard risks have increased in recent years and the Cuban Government has implemented strategies to significantly reduce the population's vulnerability to disasters which have decreased loss of life, agriculture, and livestock.

Cuba has incorporated disaster risk awareness into different school programmes through cultural training, extracurricular and non-teacher-centered activities. These activities draw on cross-cutting issues such as disaster prevention and preparedness. Despite these efforts, the links between disaster education and communities still require strengthening with students as the leading actors in this process.

The project entitled "A Prepararnos" was implemented in the province of Holguin to develop environmental education through formal, non-formal and informal means with the active participation of children and the community at large. The project focused on the relationship between schools and communities. It also established follow-up mechanisms for specific results, and adapted a number of methodologies based upon the local environment, existing problems and natural and human disasters and their prevention. The project was implemented in pilot schools and communities throughout the 14 municipalities of Holguin.

Project brief

The project was initially implemented during the 2000-2001 school year but was extended through 2003. A total of 400 people from 47 pilot schools in Holguin participated in this project. Some 150 training sessions were held in these schools and communities, involving more than 1,000 teachers, students and community members.

The project began with an assessment that revealed there was a general lack of knowledge about the concept of disaster, as well as weak participation on the part of children. For this reason, it was essential to initiate a training process for school staff. The project activities generated the interest and enthusiasm of children, teachers, parents and community members because the activities were adapted to the local environment, and were not carried out during the time allocated to develop regular school activities.

The project aims to engage the active participation of the communities, students and teachers in solving local environmental problems, and in activities for disaster prevention and mitigation. In addition, the project helps to build capacities to reduce disaster risk and to deal with emergency situations.

Sequence of activities

- Assessment of existing knowledge about disaster prevention and preparedness in 30 pilot schools
- Training workshops: material design, development, organization, testing and assessment
- Municipal workshops: material design, development, organization and assessment
- Development of risk and vulnerability maps in different schools
- Communication campaigns in order to address disaster related issues
- Reforestation, environmental protection, and water management activities
- Creation of school brigades
- Dissemination of and support for activities scheduled by the Civil Defense Agency and/or the Ministry of Education
- Activities with parents and round tables with community members
- Evacuation drills and exercises, as well as training sessions on what to do before, during and after a disaster
- Development of educational videos and games

Lessons learned

The results of this project were obtained because Cuba already has policies and strategies in place. In addition, the national authority carries out activities aimed at preserving human life, which enables the population to have integrated alternatives in case of disaster.

The involvement of students as major actors in disaster prevention and emergency preparedness, along with teachers, professors and communities, and the fact that these activities were not carried out during regular school hours yielded great results. Children and communities became involved and addressed disaster related issues in the context of new and innovative strategies.

Throughout this process, it was recognized that nature is less and less responsible for generating disasters and that environmental protection was a key aspect of development planning.

The project showed that disaster and prevention related issues stimulate the virtues, feelings and values of those who have been affected by disasters. Through this project, it was also possible to raise awareness among children regarding their pivotal role within their respective communities.

Major results and achievements

- A specific methodology has been developed to assess the progress of this project and the knowledge instilled in teachers and students
- Students and teachers have been able to build their capacities for disaster prevention and preparedness
- Communities have been motivated by a number of educational and participatory campaigns in the field of disaster prevention This has led to increased response capacities
- The contributions of the project have been incorporated into institutional policies

Dr. Orestes Valdés Valdés
Especialista y Asesor Nacional Dirección de Ciencia y
Técnica Ministerio de Educación
Calle 17 y O. Vedado. C.P 10400
Habana 4, Ciudad de la Habana, Cuba
ovaldes@rimed.cu

Ferradas Mannucci, Pedro
ITDG, Soluciones Prácticas Pobreza
Gerente, Programa de Desastres
Av. Jorge Chávez, 275, Miraflores, Casilla 18-0620,
Lima 18, Perú
pedrof@itdg.org.pe



Local risk management in earthquake zones of Kazakhstan

Photo: UNDP Kazakhstan, Almaty, 2005

UNDP Kazakhstan
Ministry of Emergency Situations of the Republic of Kazakhstan
Red Crescent Society of Kazakhstan

Introduction

Due to the diversity of landscape, climate conditions and industrial infrastructure, Kazakhstan is at risk of high levels of natural and man-made disasters, in particular to strong and devastating earthquakes. Approximately 30 per cent (650,000 km²) of Kazakh territory is home to more than six million inhabitants and a high concentration of industrial facilities (40%) are located in the high seismic zones.

An estimated 200,000 residents in Almaty live in building types that are vulnerable to seismic hazards, and it is projected that up to one third of all residential buildings would be destroyed in the event of a catastrophic earthquake. This does not include public infrastructure such as schools, hospitals, power plants and other critical facilities, which are also at great risk. Given the unlikelihood that existing structures will be retrofitted to protect against seismic vulnerability, a comprehensive seismic safety programme must include building the capacity of local organizations to respond to emergencies. The framework outlined below not only advanced the critical educational messages being communicated under the Central Asia Region for Earthquake Safety Initiative (CARES!), but also promoted the response capacity of one of Kazakhstan's leading non-governmental organizations that have a proven track record in delivering disaster preparedness, response, and health services.

In response to an umbrella initiative of the UNDP's Bureau for Crisis Prevention and Recovery, Disaster Reduction Unit (UNDP/BCPR/DRU), the Government of Kazakhstan and UNDP in Kazakhstan designed a joint project to support local risk management in earthquake zones of Kazakhstan.

Project brief

The project aims to strengthen the capacities of local communities to participate in early warning and preparedness for earthquakes, and to equip them with the knowledge and skills required to mitigate against the effects of natural disasters.

The project raises the level of awareness of the local population, decision-makers and public on natural, technological and environmental disasters, so that they can better understand the benefits of prevention and preparedness. It also promotes access to information for civil society on disaster response and decision-making.

This project is designed on the basis of partnerships between community-based organizations and various government bodies. These partnerships help to promote sustainable development through forging stronger linkages between disaster mitigation and broader development goals. The project is nationally executed. The Emergency Agency of Kazakhstan is the Implementing Partner and provides overall control of the project implementation. The Red Crescent Society of Kazakhstan and UNDP Country Office, in collaboration with BCPR, are responsible for selected project activities as described in the work plan. Other partners include: GEF/Small Grants Programme, UN OCHA, UN/ISDR, ADRC (Asian Disaster Reduction Center).

Project activities include:

- Training programmes (brochures with briefings and attachments) to teach students (grades 1-university) what to do in case of earthquake
- Trainings programmes at summer camps, children's village, orphanages, middle and high schools
- Brochures explaining what precautions to take in the event of an earthquake
- Non-fiction educational movies on natural hazards produced in Russian, English and Kazakh about earthquakes, mudslides and floods
- A film about disasters
- An educational cartoon to teach children about what precautions to take in the event of an earthquake. The cartoon is a computer animation available in Russian, Kazakh and English. Books and posters will soon be published using similar cartoon models
- Educational modules for grades 10-11 entitled "Learning to be safe if there is a disaster" which include computer presentations, resource materials and video clips, developed jointly by the UNICEF programme on "Health Care and Life Skills" and the Ministry of Education and Science of the Republic of Kazakhstan
- A training seminar (August 2005) for the instructors at pilot schools in Almaty (4) and South Kazakhstan oblast (6), as well as for the teachers and trainers of advanced courses in all oblasts of Kazakhstan

Lessons learned

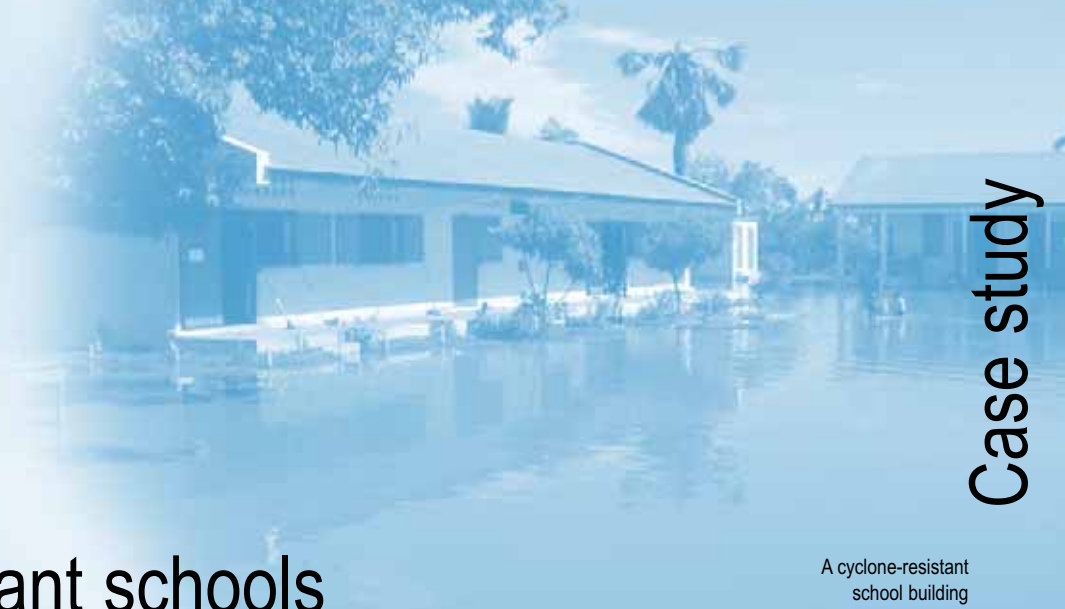
Drafting the "Learning to be safe if there is a disaster" educational modules for children is still in the very early stages and needs to be continued. Furthermore, the first experience at the pilot schools proved that safety issues are crucial and school students and teachers are interested in working with this programme. Cooperation with UNICEF on the Project on "Health Care and Life Skills" proved to be the fastest way in which to merge educational modules into the educational process. The Project is being supported by the Ministry of Science and Education of Kazakhstan and provides for rapid implementation of the results achieved. In September 2005 the pilot schools started using educational modules that were drafted in June-August 2005.

The Ministry of Emergency Situations, jointly with the Red Crescent Society in Kazakhstan, is the coordinator of national activities in disaster preparedness and mitigation. The Red Crescent Society in Kazakhstan actively supports the Government, and a number of institutes belonging to the Ministry of Education and Science, UNICEF, GEF-SGP. However, it is necessary to expand the number of organizations involved in risk reduction and disaster mitigation.

Assessment of disaster preparedness and monitoring system are very strong components in disaster preparedness. Currently these components are not sufficiently developed. Self-organization of the population on the community level is also an imperative for the disaster preparedness. In this regards, it is extremely essential that the community take initiative and mobilize individual skills. NGOs can play an important role of catalyst in this process.

Saule Ospanova, Programme Coordinator / Good Governance & Sustainable Development Unit, Tel.: (+7 3272) 582643 ext.1118, Fax.: (+7 3272) 582645
saule.ospanova@undp.org
<http://www.undp.kz>

Alexandr Kravchuk, Chief Technical Specialist, Project "Local Risk Management in Earthquake Zones of Kazakhstan", Tel.: (+7 3272) 916437
kravchukalex@yahoo.com
<http://www.undp.kz>



Disaster-resistant schools

A cyclone-resistant school building

A tool for universal primary education Development Intervention Fund, Madagascar

Introduction

The cyclone-prone island of Madagascar is on track to reach the Millennium Development Goal of Universal Primary Education by 2015. In the last three years, primary school attendance rate increased by 80 per cent, from 53 percent in 2002 to 95 per cent in late 2005.

The Malagasy Government's free supply of school materials such as textbooks and pens to low-income families in selected areas, a massive recruitment and training of primary school teachers, and the construction disaster resistant school buildings are three main factors that have contributed to the rise in primary school attendance.

Project brief

Located off the South-East coast of mainland Africa, the island of Madagascar is exposed to tropical cyclones six months per year—from November to April. At least one cyclone a year causes significant damage to part of the island. In response, the Malagasy Government has initiated the Development Intervention Fund IV (FID¹ IV) project that aims to reduce cyclone risk.

Under a FID IV Project component known as "Shock Response", school buildings and primary health centres are built or retrofitted using cyclone-resistant construction codes. The FID IV project emerged in mid-2004 after two strong cyclones (Gafilo and Elita) struck the country's East and West coasts, damaging 3,400 schools—of which 1,420 were completely destroyed—and leaving more than 200,000 people without shelter.

The success of the FID IV project relies entirely on the leadership, management and ownership of the local community. A local association is formed by community members who submit a formal funding request to the FID for the construction or rehabilitation of a public building.

Upon approval of the request², a "project manager" status is conferred on the community members'/parents' association to supervise the administrative, technical, financial and business-related aspects of the development of the building including the design, construction codes, tender, selection of contractors/sub-contractors, business negotiations, follow-up, and completion of work.

After construction is completed, the local association also takes full responsibility of maintaining and administering the building. Since mid-2004, the FID IV Project has helped develop 2,041 cyclone-resistant school buildings that can withstand cyclone winds of up to 250 km/hour.

¹ FID stands for « Fonds d'intervention pour le développement » in French (Development Intervention Fund in English). The word "FID" refers both to the project - established under the World Bank-driven Structural Adjustment Programme - and the institution running the project.

² The FID Project allocates funds to communes for their priority development actions. Intervention sites are selected based on well-defined criteria such as remoteness, local government revenues, school attendance rate, access to drinking water, etc. The ongoing FID IV (Phase 4) Project ends in 2007.

Teacher training and recruitment is managed by the Malagasy Ministry of National Education, in which a high number of “informal” teachers previously employed by families in rural areas in a “food-for-teaching” scheme, participate. On completion of their training, the former “food-for-teaching” teachers receive monthly salaries by the Education Ministry. The FID IV Project has also helped build and retrofit 311 health centres using the same disaster-resistant construction codes. This increased local community’s access to health services in the areas concerned by 50 per cent.

Lessons learned

1. The construction/rehabilitation of schools using disaster-resistant standards took place mainly on Madagascar’s cyclone-prone coastal areas where school attendance rate was lower. This helped increase school attendance rate
2. The improved appearance of the school buildings, as well as community’s management of the entire process, also helped boost school attendance rate
3. The disaster-resistant schools became widely-used community meeting places and “havens” before, during and after cyclones
4. The construction of the disaster-resistant schools raised awareness and understanding of disaster issues among community members
5. The disaster-resistant schools are now “ready-to-run” pilot sites for mainstreaming disaster risk reduction into primary and/or secondary school

Mr David Rajaon,
Managing Director, FID,
Antananarivo, Madagascar
e-mail: dirgen@fid.mg

Mr Jacky Roland Randimbarison
Executive Secretary, CNS (National Relief
Council)
Antananarivo, Madagascar
e-mail: cnsmira@netclub.mg

Mr Marson Raherimandimby
Director of Secondary Education
Ministry of National Education and
Scientific Research
Antananarivo, Madagascar



Building construction practices prevalent in Afghanistan are based on unengineered and non-reinforced mud, and lack adequate strength. This applies to school buildings too, thus putting school children, particularly in the earthquake prone northeastern parts of the country, at grave risk.
Photo: SEEDS, Bamiyan, 2004.

School safety as part of post-conflict reconstruction

Community based disaster management, Afghanistan

Introduction

Afghanistan frequently experiences disasters such as earthquakes, floods, sandstorms and extreme winter. What makes the response and recovery processes difficult is the low capacity left after more than two decades of wars and internal conflicts. As part of the community, schools and school children suffer from both disasters and post-conflict hardships. School buildings are weak, old and poorly maintained. Infrastructure is very poor, and there are hardly any resources with the local administrators to improve things. Most crucially, knowledge resources on mitigation and preparedness are extremely scarce.

In 2003, under the arrangement with the United Nations Assistance Mission in Afghanistan (UNAMA) and the Department of Disaster Preparedness (DDP) of the Government of Afghanistan, SEEDS carried out the consultation process for the preparation of National Disaster Management Plan for Afghanistan. The following year SEEDS worked with UNAMA and DDP for dissemination of the National Plan towards Community Based Disaster Management in Afghanistan. The dissemination activities included awareness and capacity building of line ministries, provincial and district governments, and schools. The school component was important as this was viewed as the critical link between government plans and community initiatives.

Project brief

The school safety activities were held in Nangarhar High School in Jalalabad in 2005 as part of a larger community based disaster management programme. The activities were effective in raising general awareness of safety issues related to disasters and specifically about earthquake safety in schools. More importantly, the initiative generated much interest in the government machinery and local NGO and education community. SEEDS has subsequently produced a range of educational material for school safety for wider use in Afghanistan. This is currently being disseminated through national government and NGO partners.

The objectives of the project were to:

- introduce concepts of disaster management to school teachers and students
- orient teachers and students on their role during a disaster
- form a Search and Rescue Team of students and provide training to students on various rescue methods
- form a First Aid Team of students and provide training to students on first aid
- develop an evacuation plan for the school and train the teachers and students to implement it

The sequence of activities followed in at the school level is as follows:

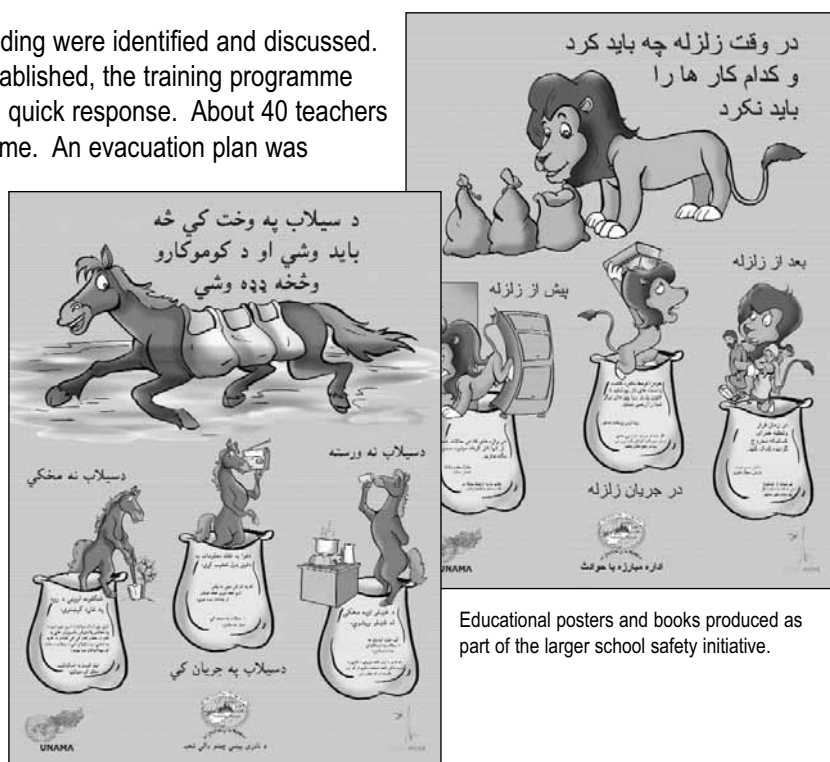
- Survey of the school buildings and preparing a disaster evacuation plan
- Providing orientation and training to teachers
- Providing orientation and training to students
- Formation of a Search and Rescue Team of students and providing its members training in appropriate tools and techniques
- Formation of a First Aid Team of students and providing training
- Conducting rehearsal of evacuation
- Final demonstration of evacuation, search and rescue and first aid by students

The structural and non-structural hazards were identified in the school building and were discussed with the school administrators, teachers and students. The major hazards identified in one specific school building in Nangarhar are listed below:

1. The main gate of the building has door shutters that open inwards. This can cause casualties due to crushing in the eventuality of a mass exit when it may be difficult to open the doors quickly
2. The main gate of the building is narrow, which can constrict mass exit
3. The second door in the building exists at the end of the corridor, but the door is usually kept locked and blocked. It is necessary to keep this door open and unblocked for using as an emergency exit. This makes it inoperational as an emergency exit
4. The class rooms are overcrowded, accommodating almost twice their seating capacity. This creates an imbalance in the number of occupants and the capacity of the evacuation system
5. Class rooms have only one door each. This is inadequate as there will be no means of exit if falling material blocks the door
6. Outer walls have wide windows. Wide openings in wall reduce the strength of wall against earthquakes
7. In some class rooms the beam is positioned very close to the window. Such beams are vulnerable to earthquake shaking

Structural and non-structural weaknesses of the building were identified and discussed. Once the need for appreciating such issues was established, the training programme was conducted. It covered hazard identification and quick response. About 40 teachers and over 1,200 students participated in the programme. An evacuation plan was prepared for the building, and the students were trained in systematic evacuation. Ten students were trained in light search and rescue and ten in first aid. It is expected that the awareness provided to the students will also reach their parents.

A wider awareness programme was launched for addressing school safety needs. Posters and books on school safety were produced in different local languages, and are being disseminated to about 2,000 schools across the multi-hazard provinces of the country. A Radio programme on "Disaster Awareness for Schools" is also being developed for a wider outreach.



Educational posters and books produced as part of the larger school safety initiative.

Lessons learned

Community based disaster management forms the backbone of any disaster management initiatives in societies with low government capacity, as is the case in post-conflict situations. The only way for Afghanistan to be able to better respond to and be prepared for disasters is to build the capacity of its people along with its government systems. Schools are one of two nerve-centres of the afghan community, the other being the Shura, or community council. Disaster mitigation and preparedness messages going to schools will not only help make schools safer and communities wiser, but will also aid the overall recovery process and help the community emerge from the trauma of over two decades of violent conflict. The current project covered only 1,200 students, which is a very small number considering the population that needs to be reached out to, but it is a beginning that holds promise of change. In the absence of such work, schools will continue to suffer from disasters and will take decades to recover from the effects of conflict. The involvement of the national government and its will to take up school safety as a large scale programme is a positive element.

SEEDS India

D-11, Panchsheel Enclave, New Delhi – 110017, India

Tel: (+91-11) 26498371, 41748008 Email: info@seedsindia.org

Web: www.seedsindia.org



From rehabilitation to safety

School students working on search and rescue techniques.
Photo: SEEDS, Saraswati High School, Ahmedabad, 2005.

Gujarat school safety initiative, India

Introduction

A devastating earthquake hit Gujarat in western India in 2001. The tragedy was marked with a very high number of casualties among school children. Many school buildings collapsed, trapping children and teachers under their rubble. The loss of 400 school children in the city of Anjar is one of the many school-based incidents that are etched in the memories of those who lived through the disaster. Extensive rehabilitation programmes followed the earthquake, into which were woven elements of disaster mitigation and preparedness. The Gujarat State Disaster Management Authority (GSDMA) and national NGO SEEDS took up the Gujarat School Safety Initiative, a first of its kind in the region.

The project addresses two issues:

1. Understanding and preparedness amongst school children, teachers and parents to reduce disaster risk in schools and to be prepared to act appropriately in an emergency
2. Disaster management appreciation amongst teachers so that they are able to impart disaster education to children more effectively

Direct implementation of school based preparedness activities is being carried out in 175 schools and teachers' training is being conducted across 25 Districts.

Project brief

The project aims to:

- promote a culture of disaster safety in schools
- reduce disaster risk in schools through structural and non-structural corrections
- prepare School Disaster Management Plans (SDMP)
- establish school safety clubs and task forces in schools and to provide training to them
- prepare tools like manuals, games and activity kits for training school teachers and students in disaster management
- train teachers for creating a culture of safety in schools, and institutionalize the programme through training of trainers

The project follows a process wherein individual schools are targeted by the project team to sensitize the school administrators and seek their participation. This is followed by a series of activities to orient the students, teachers, administrators and parents on disaster management issues relevant to school communities. The learning takes place in a very participatory and fun based environment with the use of interactive games, demonstrations and practical activities. Students play an active role in assessing the risks and preparing their School Disaster Management Plan (SDMP). There are mock drills to rehearse the plan, and systems are put in place for its periodic rehearsal and updating. A school safety club is then formed and it is linked to the statewide school safety network and to other networks outside the state. This keeps the momentum alive and the exchange programmes are very high-energy events for the school clubs.

The project activities are carried out using a variety of child friendly educational tools. These include working models, board games, flash card games, activity books, and demonstration kits. Formal and non-formal tools are being used in parallel, and text

books for formal education within the school curricula have also been prepared to go hand in hand with the informal activities promoting school safety planning. In addition, teacher training curriculum has been developed, and training workshops are being conducted for teacher trainers and teachers across the state.

The school based activities are being carried out in 150 schools in the cities of Ahmedabad, Vadodra and Jamnagar and one model school in each of the 25 Districts of Gujarat. The teacher training activities cover teachers from all 25 Districts of Gujarat. The teacher training programme is seen as a tool for upscaling and institutionalizing the activities that have been piloted in the project schools.

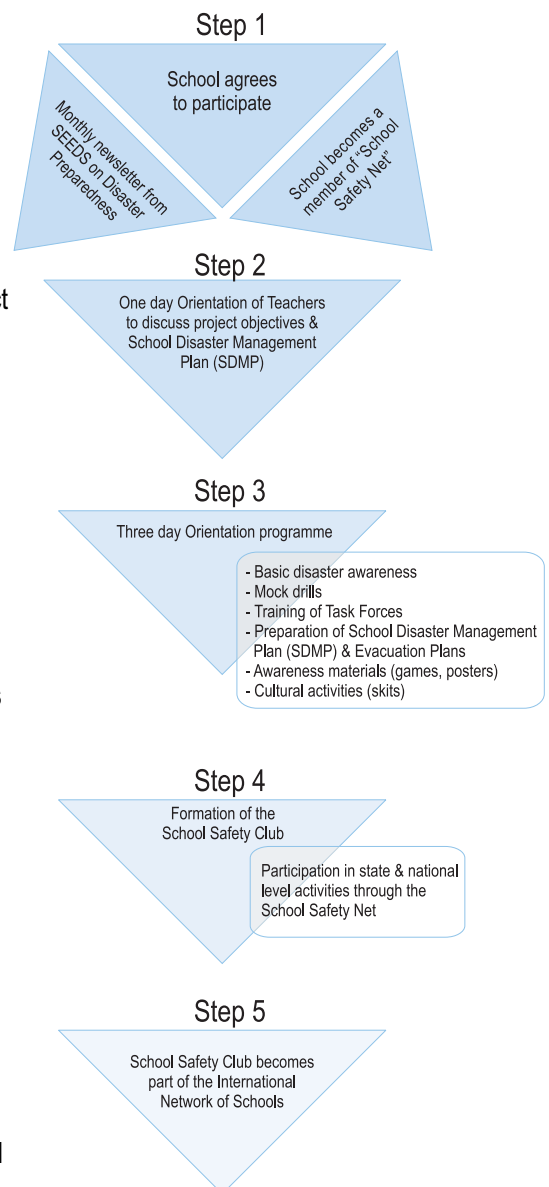
SEEDS India and Gujarat State Disaster Management Authority are implementing the project. Its duration is three years, from January 2004 to December 2006, and it is directly benefiting over 100,000 students and 9,000 teachers across the state.

Lessons learned

Schools are the future of a society. School safety is the most efficient starting point for inculcating a culture of safety. The Gujarat School Safety Initiative has piloted a methodology of school safety, and has demonstrated how it can be upscaled and mainstreamed into the education sector. The interest and involvement of the state government has ensured that this pilot project turns into state practice.

The project has directly benefited about 105,000 students across 175 schools. Of these 150 schools were in the three project cities, and one pilot school in each of the 25 districts of Gujarat. The teacher training component of the project has raised 100 teacher trainers and has directly trained over 9,000 teachers. It has created model content that can now be easily replicated in other schools. In other areas where the project is not yet being implemented, only a formal intervention in the form of text books for senior students is being introduced. This does not have a desirable level of impact on the students, and the teachers find it difficult to teach the new curriculum in the absence of any orientation or training.

The project methodology



"My school has taken many initiatives for safety. We have an Emergency Evacuation Plan, and have identified and trained task forces for search and rescue, first aid, fire safety, evacuation, and awareness. The activities are done in such a way that children enjoy them and also learn very useful lessons in the process."

Ms. Nita Joshi, Principal, Kumkum Vidhyalaya, Ahmedabad, one of the project schools.

SEEDS India

D-11, Panchsheel Enclave, New Delhi – 110017, India

Tel: (+91-11) 26498371, 41748008 Email: info@seedsindia.org

Web: www.seedsindia.org



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United Nations Inter-Agency Secretariat
of the International Strategy for
Disaster Reduction (UN/ISDR)

Palais des Nations
CH 1211 Geneva 10, Switzerland
Tel: +41 22 9172529/762/759
Fax: +41 22 917 0563
isdr@un.org
www.unisdr.org

UN/ISDR Africa
Nairobi, Kenya
isdr-africa@unep.org
www.unisdrafica.org

UN/ISDR Asia and the Pacific
Bangkok, Thailand and
Dushanbe, Tajikistan
isdr-bkk@un.org
www.unisdr.org/asia

UN/ISDR Latin America
and the Caribbean
Panama City, Panama
eird@eird.org
www.eird.org

UN/ISDR Platform for
the Promotion of Early Warning
Bonn, Germany
isdr-ppew@un.org
www.unisdr-earlywarning.org