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ASIAN DISASTER MANAGEMENT NEWS

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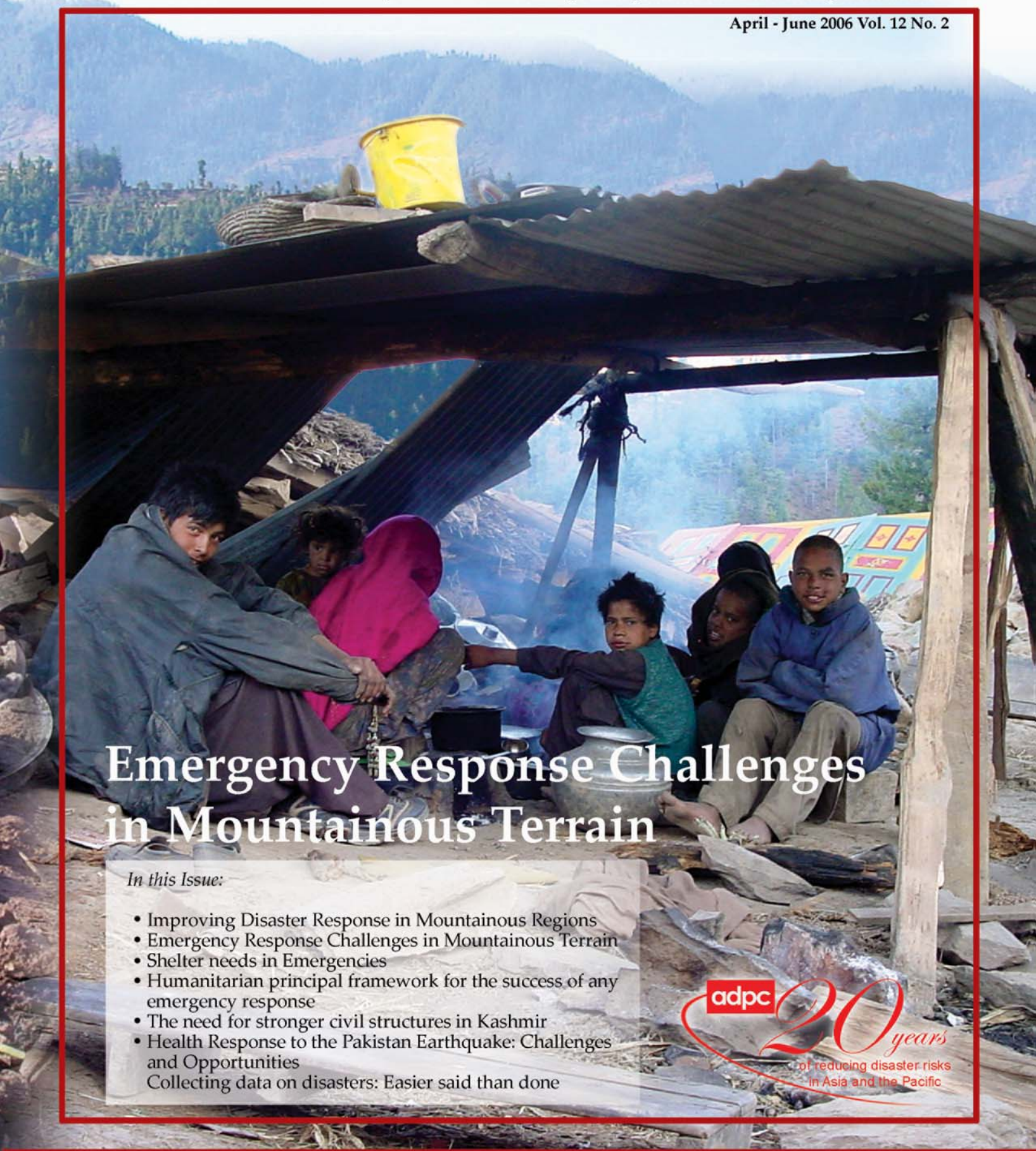


Emergency Response Challenges in Mountainous Terrain

In this Issue:

adpc 20 years of reducing disaster risks in Asia and the Pacific

Asian Disaster Preparednesss Center

20 years message

20 years of commitment to safer communities and sustainable development through disaster reduction

The Asian Disaster Preparedness Center celebrates its 20 year anniversary in 2006. I would like to take this opportunity to express my sincere appreciation to all its partner institutions, national governments, numerous UN organizations and other international organizations for their collaboration and support to ADPC during the past two decades. The work of all stakeholders in disaster management, including ADPC staff and alumni have contributed to making communities and countries better prepared, safer, and more resilient in face of disasters. ADPC is proud to have been a pioneer in some of the significant changes-in paradigm, concepts, and practices paving the way to reduction of the impacts of natural disasters.

ADPC was established in 1986 under late Colonel Brian Ward's illustrious leadership to address the disaster management needs of countries in Asia. In its twenty years ADPC responded dynamically to the paradigm shift in disaster management, readily and actively adjusting its operational strengths to address the evolving developments in disaster risk management by structuring its technical focus on climate risk management, disaster management systems, urban disaster risk management and public health in emergencies. This vigorous and comprehensive approach is further reinforced by ensuring that ADPC's projects and programs enhance institutional capacities, apply community-based disaster risk management practices, and promote and support mainstreaming of disaster management into the development processes. These activities complement ADPC's involvement in building national and provincial disaster management systems, identifying disaster risk management needs, and developing strategic solutions. ADPC's standing and twenty years of experience in the region is confirmed by the substantive encouragement and support from various multi-lateral and bi-lateral development and donor agencies; as manifested in the implementation of our extensive array of projects and programs.

As it moves forward beyond its twenty years of operations, ADPC will continue to build upon its operational and technical strengths and to evolve in its role as a regional resource center, and to act as a regional early warning center. ADPC will further pursue operational partnerships and collaborations with all stakeholders in disaster risk management into sustainable development policies and practices throughout the Asia and Pacific regions.

In closing, permit me to express my gratitude to our staff and consultants who have shared commitment, dedication and loyalty to ADPC's goals and mission.

As its Executive Director, it is my honor to be part of this fine organization. I am confident that ADPC will continue to be responsive to the priorities of our key stakeholders in governments and the international community overcoming challenges to serve the region and beyond.

Dr. Suvit Yodmani
Executive Director, ADPC

adpc 20 years of reducing disaster risks in Asia and the Pacific

editor's note

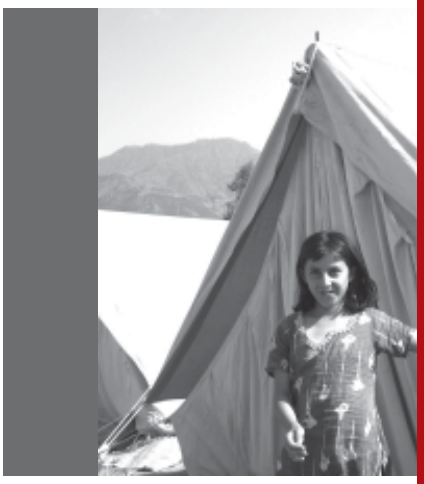
Dear Readers,

This issue of the Asian Disaster Management News focuses on the **"Emergency Response Challenges in Mountainous Terrain"**. The contributions discuss about the nature of issues and challenges posed in Emergency Response (ER) efforts by the isolation of the affected regions, the physical nature of the terrain and at most times in severe harsh climate. There is an urgent call to address the capacity building and institutional development needs and emphasize the strengths and limitations of both the military and civilian authorities' response.

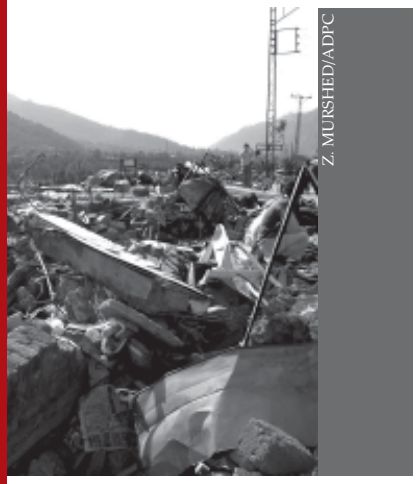
While every community might be exposed to some level of risk, the specific vulnerabilities of the mountainous people, who are exposed to high levels of risks, particularly in the aftermath of a disastrous event is pronounced. The humanitarian actors find it challenging to reach out to affected mountainous communities. This issue of the ADPC quarterly newsletter attempts to address thinking and analysis on some very basic ER issues in mountainous terrain.

Acknowledgement is due to Mr. Zubair Murshed, Manager of the ADPC's CBDRM group and Project Manager of the PDRSEA for his contribution and conceptualizing this issue of the newsletter. I extend my thanks to all the contributors for their reflections and insights into various aspects of ER in mountainous terrain.

Dr. Suvit Yodmani
Executive Director, ADPC



Improving Disaster Response in Mountainous Regions



Zubair Murshed
Asian Disaster Preparedness Center

Introduction

The 08 October 2005 earthquake in Kashmir region, affecting both sides of the line of control (LOC) in India and Pakistan, but more on the Pakistani side has demonstrated that organizing emergency response in mountainous regions can pose peculiar challenges due to the specific geographic, climatic, demographic and developmental characteristics.

The subject requires serious attention, since mountains make up a quarter of the worlds' landscape and are home to at least 12 percent of the world's people. A further 14 per cent live adjacent or very close to mountain areas. Well over half of the global population depends on mountains for water, food, hydro-electricity, timber, and mineral resources. Up to 80 % of the planet's fresh surface water comes from mountains. Amongst the greatest mountain systems includes the Alps (1200 km) in the South and Central Europe, the Andes (8850 km) in the West South America, the Atlas (2000 km) in the North West and North Africa and the Himalayas (2400 km) in the South Asia and China region.

The presence of the Himalayan mountains in the Asian region covering about 6 countries; e.g. Afghanistan, Bhutan, China, India, Nepal and Pakistan and the historical record of major disaster occurrence demands that appropriate actions be taken to put in place adequate response systems in order to reduce the loss of life and property in case another major disaster strikes the region. In the subsequent discussion the analysis focus on the hazards and vulnerabilities in the mountainous regions, the challenges posed for emergency response and provide recommendations to facilitate a better emergency response in future.

Mountain hazards

Mountain regions are home to multiple hazards of geo-physical nature; e.g. landslides, earthquakes, volcanic eruptions, giant rock falls and glacial lake outburst (GLOFs). They are also exposed to hazards that are caused by an inter-play of the geophysical and climatic conditions of the mountain regions; e.g. the avalanches and floods (particularly the flash floods). Secondary hazards can be a significant dimension of the hazard environment in the mountains that can't be ignored; e.g. the occurrence of landslides and mud-flows or dam-bursts and flooding as a result of earthquakes or volcanic eruptions. Climate change, population growth, deforestation (logging and loss of ground cover) and exploitative agriculture, mining and tourism practices contribute to intensification of existing hazardous conditions and introduce new hazards. Dam construction in areas of high seismic activity can also be a major contributory factor to environmental degradation and hazard intensification. The observers believe that catastrophic flooding, landslides, avalanches, fires and famines will become more frequent in the mountain regions. Changing climate patterns may reduce predictability and negate tried practices of hazard reduction. Particularly, in the Himalayas rapid deforestation due to the growth of tourism and of forest-based industries; e.g. furniture, sporting goods and newsprint is contributing new hazard and risk factors. Overgrazing, accidental forest fires and rock quarrying are also amongst the major contributory factors.

Vulnerabilities of mountain people

The peculiar vulnerabilities of the mountain communities in Himalayan region are caused due to the physical isolation, the scattered settlement patterns, and the harsh climatic conditions. The development of infrastructure for health, education, safe drinking water and sanitation is usually overlooked due to the high construction costs and the physical distances and the nature of the terrain involved. The complexity of the physical isolation is further compounded by the fragile mountain ecosystem susceptible to soil erosion, landslides and loss of bio-diversity, which increases vulnerability of its inhabitants to different hazards. There are often big constraints in the land area available and sometimes there is no other possibility than to build a house or road in a position known to be at risk. The mountain people living in remote scattered hamlets lack access to hazard-resistant building technologies and construction materials. Due to the poor communications infrastructure and accessibility, the mountainous people have no way of telling the outside world and the authorities that they have been affected. The vulnerabilities of the mountainous people are aggravated by a host of social and political factors. The mountain regions seem to provide conducive conditions for conflicts, not surprisingly so, since many times they are inhabited by ethnic minority communities. The Director General of the FAO Jaques Diouf claimed at the launch of the International Year of Mountains (IYM) that out of the 27 global conflicts 23 were occurring in mountains in 2002.

In a post disaster scenario the vulnerabilities of the mountain inhabitants can be complicated by following factors:

a. The roads can be cut-off for days, weeks or even months due to occurrence of secondary hazards; e.g. snow storms or landslides, thus hindering the passing of road based transport to bring in relief supplies;

b. The scattered pattern of settlements on the mountain peaks and in the valleys most probably without any road links would also mean that such communities would become highly vulnerable due to the difficulties in receiving assistance and relief supplies;

c. Communications infrastructure can be damaged as well as electricity supplies disrupted thus further isolating the affected populations from the outside world;
In case the disaster is occurred during or near to the winter seasons, the harsh climatic conditions can expose the affected population to climate related disease and hazards; e.g. snow fall, rains, freezing temperatures thus adding to the death toll;

d. In the aftermath of Kashmir earthquake a range of social groups become specially vulnerable due to various socio-political factors and were unable to access relief; e.g. female headed households, young children who had lost their parents and family members. Also ethnic and political minority communities were not able to access relief due to the lack of access to the mainstream relief system, which was dependent upon local political leaders for verification and recommendation of the victim families and individuals to be eligible to receive assistance.

Challenges in emergency response

The response by the government of Pakistan and India, and the international humanitarian community was considered as quite rapid, effective and successful. However, the government and the humanitarian agencies faced a number of challenges, which is the area of focus in this article. The key challenges faced can be categorized as those related to i) accessibility, ii) climatic conditions, iii) lack of good documentation, and iv) civilian administrative and political governance infrastructure for disaster response.

1. Accessing the affected people had become the biggest challenge. Many major roads were blocked due to the landslides and soil erosion, occurring in the aftermath of the earthquake, thanks to the extensive logging of forest over the past three decades or so. Majority of the mountain dwellers live in scattered hamlets. One could observe clusters of houses built all over the mountains. Such small clusters lacked any road links and telecommunications infrastructure prior to the quake occurrence. These conditions necessitated that relief aid and assistance be provided through air by helicopters over an area of few hundred square kilometers. The irony of the situation was well demonstrated during the first week, in the repeated appeals of the President of Pakistan to the international community through the media for provision of helicopters so that the government could launch a relief operation. In other cases materials were also to be carried on people's backs and on horsebacks.

2. Harsh Himalayan weather in winter propounded another set of challenges. They included the following:

a. The fast approaching winter meant that emergency assistance in terms of health services to the injured, food, warm clothing and shelter be provided as soon as possible, so that the affected people could be saved from the heavy snow fall and freezing temperatures. Otherwise, it was feared, hundreds if not thousands would die or get sick in the Himalayan winter. Thus the concerned government authorities and the humanitarian agencies were doing their utmost to meet this challenge.

b. The relief operations were not left un-affected by the weather conditions. Heavy clouds leading to visibility problems, severe rains and snow fall in the post-quake period hampered the relief efforts in many ways. Helicopter flights were cancelled many a times, leaving behind frustrated victims, either waiting for food or medical aid and shelter. Air-routes were to be changed by the weather conditions. Work on road clearing was hampered during the rains and snow-falls, as well as the relief supplies being provided on horse backs were hindered.

c. The tents that could be produced and distributed as a major source of emergency shelter in a relatively short period of time before the approach of the winter proved inadequate in providing protection to people from harsh weather; e.g. snow fall, rains and freezing temperatures. It was learnt during the emergency response efforts that world community didn't have more than one-fifth of the required number of winterized tents. As per the government sources there was not simply enough time to either produce winterized tents or facilitate construction of emergency shelters for all affected people before the winter set-in.

3. Lack of good documentation about the isolated mountain communities also contributed to the difficulties of response agencies and particularly to the international humanitarian community. The loss of governmental records during the earthquake further complicated the scenario. Lack of information about the location, number and size of settlements meant humanitarian agencies were playing in the dark. They had no idea of what percentage of affected population they had reached and what was still to be approached.

4. A bigger problem was caused due to the problems of governance in the affected regions. The civilian authorities although had no technical capacity to respond to such a disaster, however, their presence in a post disaster scenario could have contributed to an effective emergency response. The damage caused to the government offices, the loss of life of civil servants at the local level and the absence of elected local officials aggravated the problems in emergency response. These included duplication and over-distribution at the one-end, while inadequate and inequitable provision at the other. It took about 2-3 weeks to the military authorities to put in place a relief distribution system by overcoming the chaos that was caused by various factors; e.g. the dumping of relief supplies on road-sides by trucks sent by common Pakistani citizens, the arrival of dozens of international NGOs and individuals needing help, the coordination amongst agencies on who was doing what and where, and need for information about affected people.

Recommendations for improved emergency response

Since our debate is concerned with emergency response, therefore, the following discussion would contain itself to highlighting the key strategies that need to be adopted and the institutional mechanisms to be created in order to organize a better emergency response in the mountainous regions, during a future disaster.

1. Community and local level Preparedness: The first and foremost lesson that has been taught by the response to October 08 earthquake is that there is no better alternative to community and local level capacities for disaster response. In the absence of outside emergency responders for days and weeks, it were the local communities taking action to help themselves and others. Had they been better equipped and trained, they would have been able to save hundreds of lives. The work in this area would involve; awareness raising *(about hazards, risks, disaster response)*, organizing, training *(medical first aid, search and rescue, extrication from damaged buildings, road clearance, fire fighting)*, equipping *(medical supplies, radios, TVs, extrication equipment*), and linking *(with outside agencies)* local communities. The establishment of local early warning systems and the holding of

community level disaster response drills can't be underestimated in this regard. FOCUS Humanitarian Assistance (FHA) in Pakistan is implementing an exemplary project on these lines. Such efforts need to be expanded to other countries in the Himalayan region. The development of capacities of the sub-district, district and municipal governments is particularly crucial for organizing a better emergency response in mountainous areas.

The presence of first response capacity at the local government level would have helped avoid the ironic situation, where national government despite having the ability to mobilize all types, was bound to wait for American helicopters *(which took time to come due to the distance involved in their location)* in order to move. Local medical, search and rescue teams would have been able to do this much faster without waiting. A related issue is the creation of local stockpiles for relief. In a scenario where road-cuts could block the arrival of essential food, clothing, medicines and shelter materials, nothing can be better there, than the establishment of local level warehouses at the union, sub-district, district or municipal levels.

2. Strengthening the role of science and technology: It would be important for the governments in the region to develop their capacities in the area of remote-sensing and satellites. Such technologies could prove enormously valuable in getting information about in-accessible areas and hidden dangers and in assessing the disaster impact. Countries like China and India are relatively better-advanced in this regard. Pakistan is also progressing, however, still far from achieving the application levels. In such circumstances working together and sharing both in-terms of development of technology and information in post-disaster scenario become even more important.

3. Improving the infrastructure and documentation: It is essential to improve the various kinds of infrastructure in the mountainous regions, particularly the roads and telecommunications to develop better conditions for emergency response. However, the development and availability of infrastructure can also lead to further degradation of mountain environment, if not managed properly. The documentation of mountain communities is even more important. This would include mapping out the location of communities, information about their size, proximity to road, clinics and urban centers and alternate transportation routes and means. Information about the land-tenure could also prove crucial in emergency response and early recovery efforts. Such information should be stored at the local, provincial and national levels in order to create redundancy, and if possible should be made available through internet.

4. Establishing relationships between the authorities and the communities: Due to their isolation and issues of ethnicity and conflict, many a mountain communities have poor or no relations with the administrative machinery and political system in countries of the region. It is essential to facilitate the establishment of such relations in order to ensure that the mountain communities will have access to the mainstream relief system after the occurrence of a disaster.

5. Promoting regional cooperation: Provided that good cooperation environment and institutional mechanisms existed amongst the neighboring countries, a lot of lives could be saved in any future disaster in the region through mobilizing technical resources and equipment/machineries. For example, in order to save lives after an earthquake in Nepal, the deployment of military helicopters and other resources from China, India and Pakistan would be much faster than waiting for the American Chinooks, as was the case after the 08 October quake. However, to be able to undertake such cooperation appropriate protocols need to be established and institutional arrangements made prior to the occurrence of another major disaster.

Z. MURSHED/ADPC

EMERGENCY RESPONSE CHALLENGES IN MOUNTAINOUS TERRAIN

Gerald Nyamatcherenga
UNV Media Officer, UNDP Pakistan

The powerful 7.6 earthquake that hit northern Pakistan in October 2005 killed 73,000 people and left three million people homeless, forcing them to face the Himalayan winter in temporary shelters and tents. In excess of 1800 after shocks have been recorded since October 8, some as high as 6.4 on the Richter scale, threatening previously damaged unstable structures and with rain and snow melt increased the risk of further landslips and loss of life. The UN, Government of Pakistan and the humanitarian agencies faced numerous challenges to cope with unprecedented destruction and the daunting tasks to meet immediate needs of a population still in shock. The UN South Asia Earthquake Flash Appeal launched days after the disaster received US$ 378 million from the international community for immediate life-saving materials. Such needs included tents, blankets, medicine, food supplies, water, field hospitals and mobile health clinics.

Challenges

Villages were spread out in numerous isolated areas and due to landslides, it was impossible to reach rural areas to deliver supplies to many different locations. The Pakistan military assisted by the UN and used helicopters to deliver relief assistance to isolated areas in the North West Frontier Province and the Kashmir regions. The helicopters also evacuated the injured to major hospitals in the country. The heavy snow fall and the low temperatures in the mountains posed a serious problem to the people living there. The UN and aid agencies distributed thousands of tents for shelter and organizations managed the food supply chain to reach villages in elevations above 5,000 feet. While trying to address other concerns such as accessing remote villages and providing medical care, there was also an immediate task of assisting people to keep warm with the onset of winter. This required the provision of heating as well as liquid petroleum gas (LPG) cooking stoves to internally displaced residents. The assessment and monitoring teams in the affected areas also noticed that children needed warm clothing.

Communication system in the affected areas was totally disrupted and the lack of information was a great hurdle for the relief and rescue operations. Also, unavailability of permanent

local institutional framework to assess and analyze the damage and plan, carry out, monitor and evaluate the relief and rescue operations was a severe hindrance. OCHA Pakistan adopted a new coordination framework - the cluster approach that comprised ten thematic sectors. Operational stakeholders met regularly to discuss operational issues, identify gaps, coordinate relief activities and plan strategies and operations. The cluster approach brought together a broad range of UN, NGO, Pakistan Army, NATO and government stakeholders. For example, WHO headed the health cluster, coordinated activities with organizations like Merlin, Mercy Corps and Medicines Sans Frontieres (MSF). As a result, relief assistance was undertaken in a more focused and integrated manner while avoiding duplication of activities.

Lessons Learnt

The main lessons learnt were that despite the worsening weather conditions, many families living at elevations above 5,000 feet remained in and near damaged homes and did not descend to the lower levels as expected. As a result many families lived in conditions that were not sufficient to protect them from cold weather, snowfall and rain. Accessibility was therefore a major constraint. The emergency shelter in the form of tents was found to be inadequate to protect families from cold weather during the extreme snowfall in higher altitudes. It was necessary to provide corrugated galvanized iron (CGI) sheets to affected families living in higher altitudes in addition to the tents already distributed to construct shelters. The affected populations were made more vulnerable due to the remoteness of their communities, lack of permanent roads and compounded by a disabled communication network and no disaster management authority.

The Way Forward

The UN in collaboration with aid agencies organized training in earthquake resistant construction techniques. The training was offered to masons, engineers, carpenters, contractors and the local community. During the training, local resource persons were mobilized to train in different earthquake affected locations under the supervision of the National Society for Earthquake Technology (NSET) of Nepal. The training programme created public awareness on the safety of new construction. UN-Habitat in collaboration with NSET, Emergency Architects and UNDP produced and disseminated awareness posters on seismically resilient construction techniques. The Government of Pakistan established an Earthquake Reconstruction and Rehabilitation Authority (ERRA) to spearhead rehabilitation and reconstruction efforts. To carry out this mandate, ERRA has established an appropriate institutional and management framework to implement programme activities in an efficient, cost-effective and timely manner. In supporting this process, partners such as USAID, EC, DFID, the WB, ADB and the UN have been providing ERRA with policy advice for the transition and technical assistance in formulating sectoral plans. The Pakistan Prime Minister has approved long-term measures to establish a National Disaster Management Commission and a National Disaster Management Authority. The National Disaster Management Authority (NDMA) will be responsible to create a culture of prevention in order to address everyday hazards and to meet the consequences of disasters by managing both the risk and impact of natural and human induced catastrophes. The government has also set up the Provincial Disaster Management Committees, National Disaster Emergency Fund and an Emergency Operations Centre that will be under the umbrella of the National Disaster Management Commission. The steps taken by the federal government of Pakistan to establish disaster management structures at both provincial and local government levels will help strengthen their capacities to mitigate future disasters.

ARAMBEPOLA/ADPC

MEETING THE CHALLENGES OF DISASTER IN THE MOUNTAINS

Prevention, Mitigation & Preparedness (PMP)
Focus Humanitarian Assistance, Pakistan

The topography of mountains enable people develops indigenous coping mechanisms to deal with different hazards and vulnerabilities. Remote mountain areas face multiple hazards, such as land and mud slides, heavy snow falls, avalanches, glacier outburst floods, and earthquakes etc., which are different to those in the plains or urban areas.

Due to the physical isolation, the mountains and their inhabitants are excluded from development resulting in unemployment, poverty, poor health and education, lack of safe drinking water, insufficient sanitation, other facilities and environmental degradation. The complexity of physical isolation is further compounded by a fragile mountain ecosystem susceptible to soil erosion, landslides, and loss of genetic diversity, which increases vulnerability of its inhabitants to different hazards. While the mountain people have their own indigenous knowledge and skills to cope and protect against small hazards, they seek external assistance against hazards which require capital intensive mitigation measures. However, the mountainous terrain poses issues and challenges for the humanitarian/relief agencies as well as the government institutions to respond when a disaster strikes.

Accessibility to the Affected Areas

Accessibility is the biggest challenge with relief response in mountain regions. Focus's experience in the Northern Areas of Pakistan and the recent experience of humanitarian response to the 8 October 2005 South Asia earthquake have brought this issue in the fore front.

Whether it is a large scale disaster or a local disaster such as heavy snow fall and glacier outburst floods, landslide etc., the timely access to the affected population can be severely hampered by damaged road links. Also, the access to some areas may only be possible through a 4-wheel drive or smaller vehicles. This hampers effective and timely relief and response operations carried out by humanitarian agencies for need assessment, evacuation process, and medical attention or to simply reach people on time.

In far flung areas where road access is cut off, the only means for the humanitarian/relief agencies to provide relief is by helicopters. This was true for Focus's response to the heavy snow fall in Chitral in 2005, where helicopters were used.

However, the provision of stockpiles at the community level ensured that the community had tents and blanket available for immediate response. Moreover, helicopters were effectively used for 8 October earthquake response. Narrow valleys are only accessible through smaller helicopters which can carry limited weight hence more sorties are required to reach larger number of affected which is an expensive effort.

The extreme weather conditions also dictate the air routes and in an emergency where every minute counts, the cancellation of flights/sorties have serious considerations as the much needed medical and relief supplies do not reach in time.

Air-drops of the relief items in inaccessible area have its merits but have constraints too as it is difficult for the humanitarian agencies to ensure that relief has reached the most vulnerable people.

Shelter

The humanitarian/relief agencies need to be fully aware of geographical terrain and weather conditions of the affected areas. The mountain regions have specific shelter requirements which can withstand severe weather conditions. A simple tent may not be the appropriate shelter solution as the need may be for winterized tents or temporary shelters. Also, given the severity of weather, there should be planning of how to keep the tents or temporary shelters warm.

Destruction of Health and Education Infrastructure

In South Asia region the mountain regions are under-developed and have limited medical facilities. In case of a disaster, the destruction of medical facilities means that the survivors need to be evacuated to facilities in other locations or make-shift medical camps on a priority basis. Usually school buildings are considered as safe havens but during the 8 October earthquake most of these infrastructures collapsed.

Resources

It is important to understand that the resource required to respond to an emergency/disaster in the mountainous terrain will be different to the ones in the plains. Also the cost of transportation (air and by road) is comparatively higher in these areas. Moreover, a large scale disaster like the 8 October earthquake creates more demand on the existing resources leading to increases in prices of relief goods.

Lack of Response Capacity of the Community

In case of a disaster, communities are the first responder, however, there is a lack of disaster preparedness capacity at different levels: government, local and at the community level.

In case of the 8 October earthquake, there was limited capacity at the local level to respond to any emergency. This is especially true for specialized services, such as search and rescue and emergency first aid which are critically required immediately after the disaster.

Lessons Learnt

- Emergencies not only exacerbate existing poverty incidences but also result in the emergence of new vulnerable groups; such as homeless orphans, disabled people and single parent households, women-headed household with high dependency on external support. There is a need for the humanitarian agencies to be aware of these groups and their vulnerabilities and to develop appropriate response.
- Continuous situation and needs analysis is very important for effective and appropriate emergency response and relief.
- There is accumulated evidence that people affected by disasters want to participate fully in response, however, humanitarian agencies need to be realistic about the level of participation at given time.
- During the relief operations, humanitarian agencies can avail the local capacities and resources such as labour and materials etc. This will help in normalizing the disastrous situation and provide psychological benefits to affected communities.
- Effective and close coordination among different stakeholders facilitate effective and timely response and better implementation of relief activities. Sharing of information in a disaster helps to address the gaps and avoid duplication of efforts and resources.
- Investment needs to be made in building the local community's capacity in risk reduction strategies and at the same time develop and institutionalize local coping mechanisms for effective response in disaster.
- For mountain regions, it is important to strengthen the linkages between the community and institutions for developing sustainable coordination mechanisms which can be used in case of a disaster.
- Comprehensive local and national assessments of risk from natural hazards and development of early warning systems need to be integrated into development policies and plans.

It is important that disaster preparedness becomes a priority for both the government and civil organizations and working together for fostering disaster resilient communities with an aim to build the capacity of the communities to become **effective first responders**.

research note

Mountain Risks and Hazards

RISKS, COPING STRATEGIES AND LIVELIHOODS *(an excerpt)*

P.C. Zingari and G. Fiebiger

Social conditions and human activities are predominant factors in catastrophic events. Mountain communities have traditionally developed risk-adaptive cultural patterns and coping strategies (risk reduction methods) which include insurance, diversification, flexibility, liquidity, reciprocation and pooling of resources. But where mountain communities lack sustainable livelihood opportunities, risks cannot be mitigated, with grave consequences. The costs of disasters continue to rise, and the greatest impacts continue to fall on developing countries, countries in transition and poor people (IDNDR, 2000). Catastrophes in mountain regions affect the security of people both in the mountains and in adjacent lowlands (Hewitt, 1997). Households and communities in developing countries are particularly vulnerable to risks because of many interrelated factors (IDNDR, 2000). These include large populations living in high-risk areas, high incidence of poverty, livelihood insecurity and environmental degradation. The worst effects are often linked to human behaviour and settlement patterns. Poor people often settle on marginal land, particularly along riverbanks and near or on unstable hillsides. In order to reduce vulnerability to hazards, it is crucial to avoid locating human settlements and infrastructure in high-risk areas.

(source: http://www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/004/Y3549E/y3549e17.htm)

SEEDS, INDIA

SHELTER NEEDS IN EMERGENCIES

Manu Gupta
SEEDS, India

The 8 October 2005 earthquake was the strongest in the precinct in the past 120 years. Due to the magnitude of the earthquake, which measured 7.6 on the Richter scale, the Poonch region of Jammu & Kashmir, India was among the worst affected regions in the Kashmir valley. The tremor, with its epicenter in Muzzafarbad, caused severe damage to houses, shops as well as government property; specifically, 7796 houses and 40 shops were destroyed. Religious structures like the Jama Masjid, Masjid Bagialan and Gita Bhawan also lay ruined. A total of 136 villages in the district and 59,000 of the population were affected.

Schools in Poonch also suffered. The SEEDS relief team responded within 48 hours. The team perceived the enormity of the psychological impact the earthquake had on the children. Their fear and the teachers' unwillingness to allow them to be spoken to were realized.

Severe weather conditions in the region had people build houses with heavy roofs. These structures easily collapsed claiming peoples' lives and belongings. With the onset of winter just a few weeks away, the most imperative need was the provision of shelter to the homeless. Until the SEEDS intervention, the focus of the relief operations had rested on equipping people with tents. The problem deciphered by the SEEDS team was the inadequacy in the number of tents as well as its incongruity with the prevalent climatic conditions. Moreover, for most of the affected families 'a house' and not a makeshift tent was the preference.

The SEEDS team of engineers immediately prepared a design for the interim shelter, intended to be quake resistant, modular so that they could easily be erected, meeting international standards for temporary shelter design and built to last for three years. The design of the shelters in Poonch was then forwarded to the National Disaster Management Authority of the Government of India for approval. The construction approach was based on the Patanka model (Gujarat, 2001), wherein the beneficiaries themselves participated in the construction of their houses. Trained masons from the SEEDS Mason Association in Gujarat assisted the local carpenters and engineers in the construction.

What followed was forty days of collective effort by SEEDS partners and individuals from all walks of life, and the outcome was the completion of 404 shelters for the earthquake-affected families by 27 December 2005. 40 villages and several wards in Poonch City were covered under the Kashmir Interim Shelter Programme. This task was accomplished a week ahead of the winter's first snowfall. The appreciation of the beneficiaries was evident in their contemplation of converting the interim shelter into permanent ones.

Issues and Challenges:

Local conditions posed various challenges related to people's trauma, accessibility, labor, local government support, and the environmental conditions.

Peoples' Trauma: Symptoms of post-traumatic stress disorder were evident leading to 'outward inactivity' and 'withdrawn behavior'. Participation in the reconstruction process actually helped people recover.

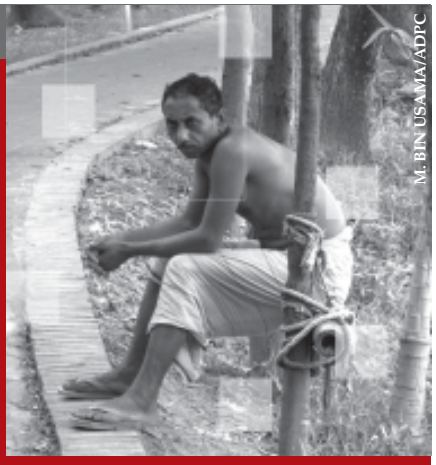
Access: Landslides and damaged roads restricted the access. In Poonch, 35 trucks, each carrying 6 to 10 tones of construction material paved way through treacherous mountain terrain. After reaching the capital city, the material had to be sent to 36 villages, some on very high elevation with precipitous slopes. In addition, material also had to be carried on peoples' backs and on horsebacks. Workers had to remain away from their homes until the work was completed, as daily movement and commuting was impossible.

Shortage of Labor: In the immediate aftermath of a disaster, there was a shortage of local construction labor. Labor as such, is migrant to the area and fled following any big disaster. Also, demand for repair and reconstruction reached a peak. Thus, SEEDS mobilized construction labor from the SEEDS Mason Association in Gujarat.

Government support: Local governments are taken unawares, whenever big disasters strike. With little knowledge and experience of handling large unforeseen catastrophes, the end result is a chaotic situation. The humanitarian agencies are faced with organizing all the logistics to reach out to the affected communities in the shortest possible time. In Poonch too, the local government support was hard to come by initially until suitable "pressures" had to be created from the top.

Weather: The challenges of weather were equally imposing. The team fought against time, to provide shelter to the people before the weather turned worse. In October, when the earthquake struck, winter had already begun to set in. Night temperatures dipped to zero. An average of 10 houses was completed each day. The team had done a micro-planning on the weather pattern. Higher elevations were dealt first as they received snowfall much earlier than the plains and city areas.

The single most important lesson learnt through working in the most inaccessible areas hit by devastating natural disasters is the need for recognizing the existing capacity and building greater resilience among the community itself. It must be an accepted fact that community is the first responder in any disaster. Scientific research has already provided us the database for identifying areas most vulnerable. Of these areas, the most difficult are those that are a logistic nightmare when disasters strike–difficult to access, often faced with severe weather conditions and with widely disbursed population. Such areas are where our work as humanitarian workers must make a head way today, and without waiting for the next disaster to strike.



HUMANITARIAN PRINCIPAL FRAMEWORK FOR THE SUCCESS OF ANY EMERGENCY RESPONSE

Nick Mathers

Save the Children UK, Pakistan Programme

It is well recognized that following the earthquake in South Asia on 10 October 2005, there was a largely successful humanitarian response, avoiding a second wave of death and suffering. Individuals and local and national organizations responded with the greatest impact immediately following the earthquake but the need for a concerted national and international aid effort was quickly identified. The international community and the Pakistan Military brought the necessary resources to respond to vast needs for food, shelter and emergency healthcare, the latter distributing twice as much as the former[1]. But how could the response have been more effective and more efficient; meeting the needs of affected people and being accountable to them and donors? How did the government, military and international community approach these needs and how could we respond better given the constraints in such a difficult environment?

The earthquake took place in a highly populated and mountainous region. The scale of the disaster was vast: around 73,000 people died, a similar number were injured and around three million people were made homeless[2]. The mountainous area, predominantly in Pakistan-administered Kashmir and North West Frontier Province[3] meant the logistical challenges were immense. The impending winter, coming only two months after the earthquake, made the speed and appropriateness of the response all the more necessary. One of the most pressing needs was to provide shelter adequate for families to survive the winter. A lot needed to be done, quickly, and in a difficult working environment -and a lot was done. But often the approach was neither effective nor efficient, leading to over distribution, duplication, or inadequate and inequitable provision. This was due to a number of factors: dumping of aid or other inadequate distribution methods; a lack of effective co-ordination; inaccurate data collection (or misrepresentation of achievements and intensions); and lack of preparedness. For the military, their primary objective was to reach as many people as possible in remote areas-and politically, to be seen to be doing so-not to ensure those that needed assistance the most, received it. This could be explained by their inexperience in emergency response and not being familiar with, or guided by, humanitarian principles. For some NGOs, there was also a tendency towards 'flag-planting' and 'tonnage', or a need to represent success in terms of quantity over quality. With the impending winter, speed (quantity) *combined* with effectiveness (quality) were key. Planning and the right approach could ensure that this balance is achieved. All agencies encountered problems with supply delays, quality of goods and inadequate human resources. It is vital to have appropriate internal systems that are flexible enough to allow a quick response while still ensuring accountability. This can be addressed through better emergency preparedness-both in the Government and NGOs-for example, having an emergency response body such as the Federal Relief Commission already in place, pre-positioning of stocks, pre-selection of suppliers and parallel logistics, finance and recruitment systems. Assuming the right systems are in place how can we ensure the response is effective at the point of delivery? We must find an approach which allows adaptation to the climate, terrain and local context. In Pakistan, the majority of NGOs took the 'one warm room' strategy to shelter provision, so a family could survive the winter. If a humanitarian principles framework were applied at all stages, from assessment, to programme design and implementation, it would force us to ask questions that will take in to consideration the local and changing humanitarian context. The immediate response to the earthquake was to provide tents. Apart from families who were forced to migrate to camps, this was not the most appropriate response-it was clear early on that shelter tool kits were the preferred option. This approach would be borne out in a humanitarian principles framework: transitional shelter was more culturally sensitive (given the need for privacy and security, and the materials and skills available); it contributed towards reducing future vulnerabilities (the materials can be re-used for permanent housing); and it built on local capacity and participation ('self-help' toolkits). Importantly, in the winter context, they provided more protection from the elements than tents and allowed for safer heating. Addressing the primary humanitarian principle-meeting the 'humanitarian imperative' and delivering aid to those least able to withstand the stress of a crisis-assessments, targeting and selection criteria are key. While some agencies distributed on a 'road-side' basis, priority for distribution of shelter was broadly made by altitude to meet the needs of those who would be most effected by the winter weather. Given limited resources other criteria can be used to ensure the needs of the most vulnerable are met first: collapse or severe damage to the house; those with *cacha* (mud houses) who have little in the way of reclaimable materials; female headed households and households with young children, for example.

How do you reach these people and ensure the principle of non-discrimination is met? The military and some NGOs were reliant on local leaders to undertake distribution. This lead to relief supplies going to those more favored by cast, political persuasion or other preference. By employing a house to house approach-having teams physically assess every household in an area-and personally registering families based on vulnerability criteria-you can ensure an equitable response targeting those most in need. Looking at the bigger picture, when organizations distributing relief aid report to co-ordination mechanisms and say they have 'covered' an area, this impacts on both local co-ordination and larger strategic decisions. If the information provided is not accurate or misrepresentative, further lives could be lost and scarce resources can be wasted or misdirected. To achieve the most efficient, effective and timely response in any context, we need sound emergency preparedness, an approach that follows the guiding principles of humanitarianism and strong coordination. *(The views of the author do not necessarily reflect those of Save the Children)*

[1] *In terms of shelter coverage, according to UN OCHA Shelter Cluster data*

[2] *Preliminary Damage and Needs Assessment, World Bank and ADB, 12 November 2005*

[3] *The earthquake also struck Indian-administered Kashmir and parts of Afghanistan*


Z. MURSHED/ADPC

The Need for Stronger Civil Structures in Kashmir

G. Schaumberger
former Programme Manager of the NGO Hilfswerk Austria in Bagh Region and presently with the Evaluation Department of the Austrian Development Agency

The earthquake of 8 October 2005 caused a collapse of the civil administration structures in Kashmir, but also hit the Pakistani army infrastructure heavily. Civil Defence departments of cities like *Muzaffarabad* or *Bagh* were unable to provide even rudimentary digging tools to the citizens.[1] The Government allowed for the first time since independence, the presence of international NGOs in the region, also perhaps, because Pakistan never faced a calamity of this magnitude.

The first days after

Beside the international and national NGO's presence, UN OCHA and also NATO military contingents from Italy, Lithuania, Netherlands, Poland, Spain and United Kingdom arrived in *Bagh* within the succeeding weeks. The 5th Baluch regiment arrived to facilitate local relief responsibilities. Mobile phone communication was admitted for the first time in history in Kashmir - the major challenge in the beginning was to be quick, but also to be coordinated and fair in distribution.

From the beginning the coordination at spot was mainly with the Pakistani army, which was the quickest to respond through its prior strong presence on the ground. The civil administration was hardly visible, although a civil defence system, starting from a Directorate for Civil Defence (Ministry of Interior) down to local committees under the Deputy Commissioner were theoretically in place already before. Only with the arrival of UN agencies, the de facto responsibilities of the army were slowly co-shared. UN OCHA applied for the first time the so called "10 cluster approach", aiming to bring together all kinds of UN, governmental and non-governmental actors together for relevant humanitarian sectors.[2] The same cluster system was applied on different levels: Geneva, Islamabad and the field level in the four different UN hubs. While Islamabad and Geneva were acting more on the strategic and political level, the field hubs were dealing pragmatically mainly with coordination issues on the local level.

Inter-Agency cooperation in the Pakistani context

Local and international NGOs varied in size and professionalism, as well as in their ideological orientation and organisational mandate. NGOs are known for their independent mandate. Here, the UN clusters system helped to streamline the needed communication for coordination enormously, although the leadership skills and experience of cluster heads was criticised by many NGOs. The clusters should have also invited local NGOs more actively, and use beyond English a local language or Urdu. In these meetings the emergency representatives of the Deputy Commissioners appeared rather passive and shy in comparison to the army majors and generals. The Pakistani army contingents had an enormous advantage in terms of manpower and resources, which made it also a potential partner for secondary distribution for internationals. The army quickly created stock of important relief goods such as tents, food rations, blankets etc. In case an NGO opted for a military partnership for distribution, intensive monitoring of the distribution process was still advisable.

Most international NGOs uphold the Humanitarian Principle morally very high and they do not want to be associated with the political mandate of the army present. But the army essentially performed functions that were crucial to the civilian sector already before the earthquake. The National Logistics Cell was responsible for trucking food and other goods across the country; the Special Communication Organization maintained the communications network in Kashmir.

The need for authentic civilian structures working close to the villagers

In comparison, at the end of 2004 the Directorate General for Civil Defence concludes that "*the Civil Defence Organization can be an exemplary organisation if requisite resources and necessary equipment are provided to it.*".[3] At the beginning of 2005 a review[4] of the civil disaster management system concludes that "civil *disaster and relief departments and organizations remain under-resourced, untrained, and are not given required importance within administrative hierarchy.*"

[1] *Dr. Kamal Munir: Act of Man. 11 Nov. 2005*
[2] *For details see UN Early Recovery Framework (November 2005), p.3*
[3] *www.pakistan.gov.pk*
[4] *WCDR (2005): Review of Disaster Management Policies and Systems in Pakistan*

After the disaster, one single official "President's Relief Fund for Earthquake Victims 2005" was created, which was criticised for being unaccountable to the parliament or international donors. Entirely new structures responsible for relief administered it, such as the "*Federal Relief Commission*" and the "*Earthquake Rehabilitation and Reconstruction Authority*"(ERRA), of which both had Army Generals as heads. The army took over also classical civilian tasks like official damage assessments and subsequent government compensation payments to villagers, on the grounds that civilian authority had virtually collapsed in Kashmir.

But even with their limited capacity, Union Councils, the lowest tier of local government, could have been a valuable source. Civilian administrators were sidelined by the military, and, as a result, failed to use their expertise in assessing and meeting the local needs. For example in NWFP *nazims* (elected mayors) headed district emergency coordination committees, but army representatives marginalized their role.[5] A former senior bureaucrat stressed that the timely mobilisation of the civil administrations of unaffected provinces in coordinating the systematic dispatch and orderly transportation of relief goods to the base camps would have averted unnecessary chaos.[6]
Other moderate national NGOs like the *Edhi* Foundation were deliberately marginalized according to ICG. This way, national and regional policies did not arrive on the community level, as most of the villages were not connected to proper information systems and the army did not follow a pro-active information policy.

In conclusion, the Pakistani case has shown that the national as well as the international army does neither have the capacity nor a credible mandate for working with a community-based, demand-driven approach. The core competency of the army remains security and logistics. The structures of local civil defence communities were - although weakened - formally in place and could have contributed much more, if they had been given a stronger role in decision-making on relief, reconstruction and rehabilitation. Donors must make sure that local civil defence professionals and volunteers get more support, capacity and resources in the future, especially as they work closer to the victims and the affected.

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[5] *Policy Briefing of the International Crisis Group, 15 March 2006, p. 4*

[6] *Shamshad Ahmad Khan, „Lapses in crisis management", The Dawn, 27 October 2005*

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Resource

F.J. ABO/ADPC

Collecting data on disasters: Easier said than done

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Disaster Data: Essential for Preparedness

The need for systematic data for disaster mitigation and prevention has been an increasing concern of both development and response agencies. Until recently the needs were addressed on an ad-hoc basis, collecting the information at the time of the emergency. As a result, data were incomplete, outdated or unusable for a variety of reasons, even if better quality information existed. The time pressure to respond quickly for fund raising or relief planning was usually paramount and the quality and availability of information suffered. Disaster management remained reactive in nature, focusing on relief and then rehabilitation and reconstruction. Prevention planning or community preparedness was rarely funded and not a policy priority with national governments or with UN and other international development institutions. With the increase in the scope of disaster impacts, mostly in the poorer developing countries, concern has been mounting regarding the poor state of preparedness, mitigation and prevention. Natural disasters engender serious setbacks to the development process - highlighted in the last years by earthquakes in India (2001), Iran (2003), Pakistan (2005) and the Indian Ocean tsunami (2004). The result of these events has been that the demand for disasters data from policy makers and development planners has increased.

Experiences from EM-DAT: The International Disaster Database

Within this context, the Centre for Research on the Epidemiology of Disasters (CRED), developed in 1988, the EM-DAT database with the initial support of UNDRO, WHO and the Belgian Government. The database was designed to provide rapid and accurate information to serve purposes of humanitarian action at national and international levels.

RESOURCE

Further collaboration with the U.S. Office for Foreign Disaster Assistance (USAID/OFDA) and the Climate Information Project of NOAA, allowed the enhancement of the database, the creation of a dedicated website as well as a dynamic display of its products. Currently, users access through different search options to updated figures on the occurrence and effects of over 15,800 natural and technological disasters since 1900.[1] EM-DAT has become the unique global reference database mainly due to its methodological rigour consistency and comparability in time and space. It provides essential evidence for priority setting and resource allocation at multiple levels.

Disaster Data: Methodological Issues

Today, data on disaster occurrence, its effect upon people and cost to countries remains patchy. No single institution has taken on the role of prime providers of verified data. Key problems with disaster data include a lack of standardized collection methodologies and definitions. Furthermore, ambiguities exist regarding the intent behind the reporting of the data, the loose definition of people affected, dates reported and changing national boundaries. Information is not specifically gathered for statistical purposes and so, inevitably, even where the compiling organization applies strict definitions for disaster events and parameters, the original suppliers of the information may not.

Information systems have improved vastly in the last 25 years and statistical data is now more easily available. However, the lack of systematic and standardized data collection from disasters in the past is now revealing itself as a major weakness for any long-term planning. Despite efforts to verify and review data, the quality of disaster databases can only be as good as the reporting system that feeds them. Fortunately, due to increased pressures for accountability, many donor and development agencies have started placing priority on data collection and its methodologies, but this has yet to result in any recognized and acceptable international system for disaster-data gathering, verification and storage.

Collecting disaster data is a complex and tedious task. Basic maintenance work can be time consuming and confusing when calculating trends. Inconsistencies, data gaps and ambiguity of terminology make comparisons and use of different data sets difficult. This leads to a fair amount of confusion in the evaluation of a disaster situation and poses severe obstacles for prevention planning and preparedness.

In the last years, EM-DAT has developed a methodology for selecting and validating data coming from various sources and frequently with contradictory reports. While weaknesses abound in the EM-DAT statistics like any other global database, its main strength is its internal consistencies and coherence.

Overview of Existing Databases

Other publicly available databases also exist. Recently, CRED has undertaken an analytical review of selected data sets on natural disasters and impacts[2] The paper aims to summarize the content, presentation and accessibility of a select group of disaster losses databases. The objective was to provide a comprehensive overview of the current disaster database landscape to better identify gaps in information and strengths in our individual interpretations.

The paper highlights the strengths and weaknesses of all those efforts that have taken place to better document the effects and impacts of disasters and draw the attention to the problems and the areas in which management of disaster information could improve:

Disaster definition: Differences and lack of standardization of the terminology complicates comparisons of data.
Disaster typology: Databases struggle with disaster (sub) types classification as well as their primary and secondary effects. Without standardized terminology, databases continue to face a decreased precision in reporting disaster related impact.
Georeferencing: It allows for more accurate recording of the location of the event but questions remain on how to locate larger-scale disasters that cross borders (i.e. floods). While data resolution (by smallest administrative boundary) offers a detailed perspective not usually available, disaggregating the effects of a disaster becomes difficult and may lead to overestimation of impact.
Temporal aspects: Issues of the level of resolution of a database are compounded by the difficulty of reporting the date of occurrence of an event.
Methodology: Lack of a publicly available methodology, raises issues of the transparency of databases but also makes comparability difficult because of the ambiguity of variables (definitions, sources, criteria)
Sourcing: Availability of sources varies across the board. Whereas particularly developing country databases must rely on one source of information due to the lack of resources, many developed countries struggle with trying to integrate and validate an overabundance of data sources.

The issues raised above are not new but represent the areas in which we should be focusing our attention and remind us of the challenges that this area of research continues to face. It also opens up two channels of discussion: the accessibility of these databases and the inter-operability from one database to the other one. Standardization of methods and definitions is clearly the key issue to be addressed for improvement of data quality. And this can only be achieved if international efforts are made to develop these tools and make them available for national level use.

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[1] *See "EM-DAT" Guideline section on: http://www.em-dat.net/guidelin.htm*

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ARAMBEPOLA/ADPC

Health Response to the Pakistan Earthquake:
Challenges and Opportunities

Altaf Musani, Regional Adviser
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Emergency Preparedness and Humanitarian Action

According to His Excellency the Ministry of Health of Pakistan, a mere 40 seconds on 8 October 2005 changed the lives of the people of Pakistan forever. The affected zone stretched from the northern side of Pakistan's administered Kashmir in close proximity to Indian Administered Kashmir to the adjoining areas of the Northwest Frontier Province of Pakistan with Afghanistan and China. The affected area resides in the middle of the Hindu Kush range of mountains where some peaks sore up to 8000 meters. The geographic magnitude, scale and mountainous areas posed a significant challenge, in addition to the seasonal heavy snowfalls up to 3 meters and minus 16ºC temperatures and heavy rains.

The search and rescue efforts in the immediate aftermath were slowed down by landslides and lack of helicopters. By 21 October, 68 operational helicopters from various militaries had been deployed and were air lifting vital tents, food and medical supplies and carrying back injured patients to medical facilities on their return flights. Most relief efforts were concentrated in the north of Pakistan where the only means of to get supplies was through mule trains or helicopters[1]. By January, World Food Program (WFP) in operations were reaching over one million of the most vulnerable victims with food assistance, among them, 400,000 were living in tents above an altitude of 1,500 meters and were scattered in remote areas. Helicopter service was grounded in January for days, as temperatures dropped between minus six and minus 16ºC[2]. This seriously curtailed rapid assessment efforts by doctors and public health professionals.

Assessments of damage to the health infrastructure reported that up to 80% of the health facilities were not functional. A detailed assessment of the health situation, including structural damage to health facilities, has shown that some 320 health institutions were destroyed, 44 were partially damaged and only 171 remained functional. Many of the health workforce including doctors, nurses, and paramedical staff were also either killed or lost a close family member and thus, unavailable in the immediate aftermath. Hence, the provision and delivery of essential medical and preventive services was seriously compromised. More than three million people needed basic health care. Priorities included defining the immediate acute needs of the sector, restoring primary and secondary health services and strengthening human resources. And with time, the needs grew for prostheses and rehabilitation services for amputees (> 1400 reported) and those with spinal cord (> 700 reported) injuries would be in great need during the early recovery phase. The Ministry of Health estimated costs for health sector recovery at US$ 651 million.

In Pakistan, local and national authorities rose to the challenge and immediately launched search and rescue operations. The Pakistani military and international aid agencies managed to clear essential supply routes and establish an air bridge and number of bases for operations. Over 22 foreign field hospitals were dispatched to the area, 14 health clinics were established and 15 medical teams arrived from a number of donor countries. This complimented the already more than 100 teams of skilled national health personnel deployed from neighbouring provinces equipped with basic medical kits, supplies and equipment. Thousands of injured people received medical and surgical attention, and more than 20,000 critically injured survivors were evacuated by air to hospitals in the major cities in Pakistan. Trauma care was the first priority, followed by the vital need to restore primary and preventive health care. More than 13,000 pregnant women were expected to give birth each month in the affected areas, with complications expected in about 2000 cases and in 1500 newborns. Their survival depended on appropriate and timely emergency care.

To ensure the timely identification of health needs and improved overall coordination of health partners the Pakistan Ministry of Health and WHO established an Emergency Coordination Centre during the first week. This Centre provided a hub for telecommunications, mapping services and coordination facilities which were utilized by all health partners. WHO was nominated through the recent Humanitarian Response Review to act as lead agency of the United Nations Inter-Agency Standing Committee for the health cluster. The cluster mechanism brought together national and international health partners in order to improve the delivery of humanitarian assistance to affected populations. A forum for members of the cluster, established immediately in Islamabad and later in the affected areas, was used to exchange information on the evolution of the health situation.

The main objective of WHO's emergency programme in Pakistan was to provide support to the health sector in revitalizing the primary health care system and hospital and referral care services; activating a disease-surveillance and early-warning

system; establishing emergency relief operations including coordination and information management; ensuring environmental health; and meeting maternal and child health and mental health needs. A number of health achievements included:

implementing mass vaccination campaigns against measles, diphtheria, poliomyelitis and tetanus;

a system for disease surveillance and early warning and response, consisting of weekly reports from health facilities complemented by the possibility of immediate alerts that needs to be expanded;

restoring basic water and sanitation systems in health facilities and advising on clinical waste management as well as assessing water quality in displaced camps;

establishing pre-fab health care units to provide basic primary health care services, in particular re-establishing tuberculosis clinics;

addressing the importance of mental health by developing appropriate interventions based on the psychosocial first aid model

Key lessons that can be drawn from the Pakistan experience to contribute to the overall development of best practices for future emergency response are the development of clear and workable coordination mechanisms in the event of a major crisis. Coordination of various sectors like health, water and sanitation, camp management and shelter have been previously flagged as critical elements to any emergency response which is often overlooked as it is seen as a means to control the response. On the contrary, the need and purpose of coordination is to ensure that any response is effective and efficient in nature so that duplication of assistance is avoided and gaps are not created. In addition, the Pakistan experience has highlighted the following issues:

the critical investment and commitment to emergency preparedness and risk reduction measures to be implemented in high risk countries. This translates into developing appropriate disaster reduction programs that are active pre-crisis to build appropriate national and local emergency response capacities;

the importance of health facilities in particular hospitals to withstand the impact of natural hazards is essential in order to provide services in the event of a disaster. Additional measures for hospital preparedness to address mass causality events should be developed and tested;

Myths that generally propagate post a disaster should not hinder and delay the overall assistance in the event of any emergency. One myth in particular that tends to surface after an earthquake is the concern over the management of dead bodies, which has been demonstrated not to be a public health threat.

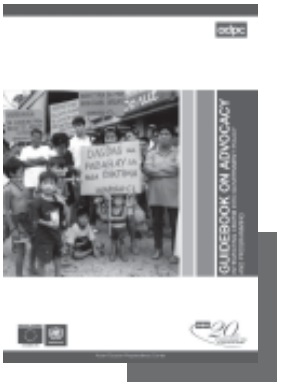
Certainly future emergencies will occur in Pakistan as it is at risk to a number of natural hazards as demonstrated through its track record. The window of opportunity is now to ensure that all partners are engaged on disaster preparedness activities to ensure that ultimately the suffering is reduced and lives are saved in the event of another major disaster.

[1] *http://www.ens-newswire.com/ens, 31-10-2005*

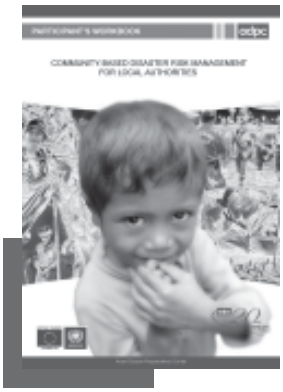
[2] *World Food Programme. News– Press Release, http://www.wfp.org/english*

ADPC forthcoming publications

Guidebook on Advocacy: Integrating CBDRM into Government Policy and Programming



This publication aims to develop and strengthen the skills and knowledge of stakeholders on designing and implementing advocacy strategies to integrate Community-Based Disaster Risk Management (CBDRM) into policy-making, planning and programming of local authorities in Southeast Asian countries.

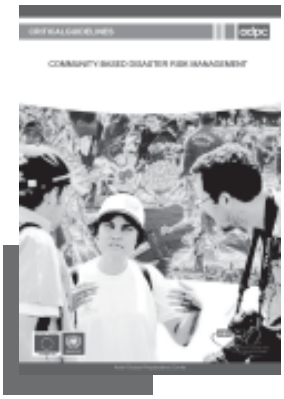


Community-Based Disaster Risk Management for Local Authorities (Participants' Workbook)

The purpose of this workbook is to facilitate the capacity building of local government officials on Community-Based Disaster Risk Management (CBDRM) in Southeast Asian countries including Cambodia, Indonesia, Lao PDR, Timor Le'ste and Vietnam. It is expected that the workbook will be adapted and used by National Disaster Management Offices (NDMO) and NGOs in the countries of South East Asia for training the local government officials.

Media Kit: Community-Based Disaster Risk Management and the Media

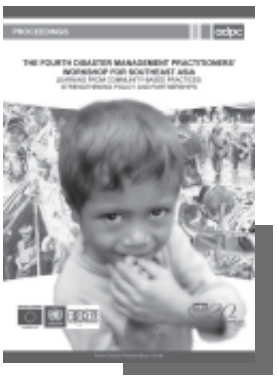
This Kit has been developed as a guide for media professionals in five Southeast Asian countries (Cambodia, Indonesia, Lao PDR, Timor Le'ste and Vietnam) to raise the awareness of media professionals about its role in disaster risk reduction; and to enable them to perform that role in an effective manner.



Critical Guidelines on Community-Based Disaster Risk Management

This publication responds to the demand within the disaster risk reduction community to formulate minimum standards for practice in the area of community-based disaster risk management. It was drafted through a consultative process with stakeholders and particularly as a result of the "Regional Workshop on Standards of Community Based Disaster Risk Management" held on 24-27 January 2006 in Bangkok Thailand.

Proceedings of the Fourth Disaster Management Practitioners' Workshop for Southeast Asia



This document brings together the Proceedings and Outcomes of the "Fourth Disaster Management Practitioners' Workshop for Southeast Asia" (DMP SEA) held on 8-10 March 2006 in Bangkok, Thailand. The main theme of the workshop was "Learning from Community Based Practices: Strengthening Policy and Partnerships".

ADPC Activities

CLIMATE RISK MANAGEMENT (CRM)

I. CLIMATE FORECAST APPLICATIONS AND CLIMATE CHANGE ADAPTATION ACTIVITIES

ADPC initiating expansion of Climate Forecast Applications program in China (4-9 April)
CRM and Training Resource Group senior technical experts visited Jiangxi Province, China to discuss the possibility of implementing a climate forecast applications (CFA) project. They held meetings with the leaders of the provincial department of agriculture and meteorological agency, and the Mountain-River-Lake Development Committee of Jiangxi Province. At present, ADPC is implementing the CFA program in Bangladesh, Indonesia, Philippines, and Vietnam.

Climate Forecast Applications program meeting held in India (1-4 May)
A senior technical expert of ADPC's CRM team participated in the Extended Range Forecasting System (ERFS) project meeting at the Indian Institute of Technology in New Delhi. The aim of the meeting was to prepare a work plan for implementing climate risk management activities. The ERFS program is being implemented by seven different organizations in India and ADPC.

Demonstration activities on livelihood adaptation to climate change activities to start soon in Bangladesh (6 May)
A senior representative of ADPC CRM team organized a one day pre-monsoon workshop in Dhaka to finalize adaptation practices that will be demonstrated in drought-prone areas of Bangladesh. Representatives from FAO and Department of Agriculture Extension attended the workshop. The technical and administrative aspects of demonstration activities were decided in the workshop.

Flood Forecast Technology for Disaster Preparedness (CFAB-2) project meeting held in Bangladesh (9-11 May)
CRM Team Director, Mr. A.R. Subbiah and a technical expert from the CRM team participated in the "Flood Forecast Technology for Disaster Preparedness in Bangladesh" (CFAB 2) project initiation meeting in Dhaka. The provision of technical inputs to climate and flood forecast modeling as well as the scope of and potential for issuing forecast for the summer monsoon were among the major issues discussed during the meeting. CFAB 2 is aimed at developing climate and flood forecast models that enhance the skill of existing forecast system and at strengthening the technical capacity of relevant institutions to operate an end-to-end climate/flood forecasting and applications system.

Workshop on climate forecast applications for managing climate risks held in Indonesia (15-16 May)
ADPC's CRM team was in Indramayu, West Java, Indonesia to organize and facilitate the international workshop entitled "Climate Forecast Applications for Managing Climate Risks." Hosted by the Regency of Indramayu, the workshop discussed the status of the existing climate forecast generation and application in different sectors for mitigating the impacts of climate hazards in Indonesia. The workshop also provided opportunity for cross-fertilization between program sites (Indonesia and the Philippines), and developed an action plan for addressing constraints and exploiting opportunities for institutionalizing climate forecast applications in different sectors.

Flood Forecast Technology for Disaster Preparedness in Bangladesh project started (28 May-12 June)
A senior representative from ADPC's CRM team was in Bangladesh to conduct various start-up activities for the implementation of the Flood Forecast Technology for Disaster Preparedness, also known as the Climate Forecast Applications in Bangladesh 2 (CFAB 2). Field visits were undertaken from June 8th to 12th in order to select the project's pilot sites. The activities are being funded by USAID/CARE Bangladesh.

ADPC presented experiences in livelihood adaptation to climate change in Bangladesh (5 June)
A senior representative from ADPC's CRM team made a presentation on livelihood adaptation to climate change in a national seminar organized by the Bangladesh Department of Environment. About 300 participants from several research and development organizations attended the seminar. The seminar was one of the highlights in the recently concluded World Environment Day celebration in Bangladesh.

II. REGIONAL MULTI-HAZARD EARLY WARNING ACTIVITIES

ADPC – Vietnam finalized agreement on the establishment of regional multi-hazard early warning system (6-7 April)
Senior technical experts from the CRM team were in Hanoi to finalize the Memorandum of Understanding with the Government of Vietnam, represented by the Ministry of Natural Resources and Environment, on establishing the regional multi-hazard early warning system and to discuss specific activities for implementation. Meetings were also held with the Hydro-meteorological Service of Vietnam, the country focal point of the new Danish International Development Agency (DANIDA)-supported project entitled "Enhancing Community Resilience to Natural Hazards in Southeast Asia," to brief and engage officials in the program. They also met with the Royal Danish Embassy in Vietnam to link the program with other ongoing DANIDA-supported projects in coastal areas in Vietnam.

ADPC – Maldives finalized agreement on the establishment of regional multi-hazard early warning system (13-18 April)
A.R. Subbiah, CRM Director finalized the Memorandum of Understanding with the Government of Maldives, represented by the Department of Meteorology, on establishing the regional multi-hazard early warning system. Specific activities under the project were also discussed, particularly the ISDR-supported workshop on improving community response to warnings.

Training on Incident Command System (ICS) for disaster management held in Sri Lanka (21 April-2 May)
Under the Indian Ocean Tsunami Warning System (IOTWS), ADPC technical experts assisted the US Forest Service in conducting an orientation workshop for senior officials and a five-day training course on basic and intermediate ICS. The orientation workshop made the participants aware of the work that has been done by the Government of Sri Lanka to ensure that the country will have well-trained disaster response teams. The ICS course was attended by 39 participants from various institutions and disciplinary backgrounds. It was followed by a one-day meeting to clarify the steps needed in implementing ICS in Sri Lanka.

ADPC finalized agreement with the Philippine Institute for Volcanology and Seismology (5-6 May)
Mr. A.R. Subbiah, Director of ADPC's CRM team finalized the Memorandum of Understanding with the Philippine Institute for Volcanology and Seismology on cooperation for early warning arrangements, preparedness and mitigation of natural hazards. Arrangements for establishing a sea level station in Subic Bay and future work on establishing seismic stations were also discussed.

Regional workshop on tool development for coastal community resilience (CCR) program held in Bangkok (23-25 May)
The regional workshop on tool development for the CCR program under the IOTWS program brought together disaster and coastal management experts from Indonesia, Thailand, India, Sri Lanka, and Maldives to develop a toolkit for the CCR program. The toolkit will serve as a guide for planning and action to address tsunami and other coastal hazards.

First Tsunami Alert Rapid Notification System (TARNS) workshop held in Thailand (23-27 May)
The first TARNS workshop on System Design and Plan in support of the US Government Indian Ocean Tsunami Warning System (IOTWS) was held in Hua Hin, Thailand. Program Integrator ADPC assisted in facilitating and documenting the workshop. The workshop was led by the US Forest Service and US National Oceanic and Atmospheric Administration under the IOTWS Program in collaboration with Thailand National Disaster Warning Center (NDWC).

ADPC conducted national workshop on risk communication in Maldives (9-12 June)
A senior level delegation from ADPC, led by A.R. Subbiah, Director of the CRM team was in a mission to Male to facilitate a national workshop on risk communication. With the broad goal of improving community response to warning, the workshop was organized by the Department of Meteorology in collaboration with ADPC and Asia Pacific Broadcasting Union, and with funding support from the UN International Strategy for Disaster Reduction (UNISDR).

ADPC participated in regional workshop on tsunami early warning system in Thailand (14-16 June)
A.R. Subbiah, Director of the CRM team and A. J. Rego, Director of the DMS team participated in the "Regional Workshop on Mitigation, Preparedness and Development for Tsunami Early Warning Systems in the Indian Ocean Region." Held in Bangkok, the workshop was organized by the UN International Strategy for Disaster Reduction (UNISDR) and United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), in cooperation with the Intergovernmental Oceanographic Commission (IOC). The workshop formulated strategies to strengthen the roles of disaster risk reduction and planning in the development of tsunami early warning systems.

DISASTER MANAGEMENT SYSTEMS (DMS)

Flood Emergency Management Strengthening (FEMS) project activities

Cambodia
Installation of Flood marks in Peam Chor district: The Department of Hydrology and River Works, in collaboration with ADPC and Peam Chor District Committee for Disaster Management, will conduct a survey in the high risk (flood) villages along Tonle Sap river in Peam Chor for installation of flood marks. The activities under the GTZ-MRC-ADPC project "Flood Emergency Management Strengthening (FEMS)" are expected to complete by middle of July 2006.

8-12 May-A consultative workshop on "Development of District Flood Preparedness Plan in Sithor Kandal District" was organized in Prey Veng Province, Cambodia.
18-19 May-The FEMS team attended the annual Flood Forum of Mekong River Commission Secretariat (MRCS) in Siem Reap, Cambodia.
30 May-The FEMS team attended the "Project Management Unit" meeting under MRCS' Flood Management and Mitigation Program held at MRC's Flood Management and Mitigation Center in Phnom Penh, Cambodia.

As part of the Flood Preparedness Plan implementation, "Community Based Flood Management" training was organized in Lovea Em district of Kandal Province in Cambodia from 20-22 June, targeting at Commune Councils for Disaster Management in Lovea Em.

From 29 June to 1 July, the second training on "Community Based Flood Management" was held in Peam Chor district, Prey Veng province for Commune Councils for Disaster Management in Peam Chor.

Viet Nam
Two project orientation meetings at the provincial levels took place in AN Giang and Dong THap provinces in Vietnam on 18 and 21 April, respectively.

It was followed by four district level consultative meetings in four target provinces of Tan Chau (27 April), Chau Thanh (3 May), Tan Hong (9 May) and Thanh Binh (11 May).

26-29 June-Training on "Search and Rescue" was organized in Tan Chau district, An Giang province for personnel working at rescue posts in the district.

RCC Program on Mainstreaming Disaster Risk Management into Development Policy, Planning and Implementation in Asia
Under this wider program on Mainstreaming the following projects/studies were conducted by the DMS team:

Mainstreaming Disaster Risk Reduction into Education and Agriculture Sector: This study supported by GTZ, looked into developing two RCC Guidelines on Mainstreaming Disaster Risk Reduction into Education sector by incorporating DRR aspects into school curriculum and Mainstreaming DRR into Agriculture sector. The study also developed implementation plans for mainstreaming disaster risk reduction into education curriculum for Cambodia and Agricultural plans for Lao PDR.

Priority Implementation Project on Mainstreaming Disaster Risk Reduction into Infrastructure sector:
The DMS team initiated the pilot project on Mainstreaming Disaster Risk Reduction into Infrastructure sector by incorporating risk assessments into planning process before construction of new Roads and Bridges in the Philippines.

The project is implemented by National Disaster Coordinating Council (NDCC) and Department of Public Works and Highways (DPWH), the Philippines in support with ADPC and UN/ISDR.

Coastal Risk Analysis of Tsunamis and Environmental Remediation (CRATER) project activities

CRATER project organized a series of consultative meetings with various government agencies to get comments and feedbacks on project outputs, as follows:

15 May-Consultative meetings in Phuket province on 15 May with two participants of Department of Public Works and Town & Country Planning (DPT-Phuket) and one participant of Kamala Administrative office;
16 May-Consultative meetings in Phangnga province with one participant of DPT- Phangnga and two participants of Disaster Prevention and Mitigation (DDPM- Phangnga);
31 May-Consultative meeting with 8 participants of Tourism Authority of Thailand at TAT office;
19 June-Consultative meeting at DDPM office with 11 participants of DDPM.

OFFICE OF THE EXECUTIVE DIRECTOR (OED)

ADPC welcomed H.E. Mr. Bill Paterson, Australian Ambassador to Thailand, Bangkok (10 May)
ADPC held consultation meeting with Mr. Bill Paterson, Australian Ambassador to Thailand, and Ms. Bronwyn Robbins, First Secretary (Technical and Economic Co-operation) Australian Embassy on the AUSAID-ADPC partnership to assist smaller countries in the provision of a regional early warning arrangement.

The Canadian Ambassador's visit (11 May)
Dr. Suvit Yodmani welcomed H.E. Mr. Denis Comeau, Canadian Ambassador to Thailand to the ADPC office. The visit provided an opportunity to brief H.E Mr. Comeau on ADPC's activities and involvement in the region and to further enhance the on-going partnership and collaboration between the Canadian Government and ADPC.

International Symposium on Building and Synergizing Partnership for Global Human Security and Development, Bangkok (30-31 May)
ADPC's Public Health in Emergencies (PHE) Team Leader, Mr. Jonathan Abrahams attended the Human Security Network's International Symposium on Building and Synergizing Partnership for Global Human Security and Development. The symposium was organized by Ministry of Foreign Affairs (MOFA), Thailand. The meeting was in preparation for the 8th Ministerial meeting on 1 & 2 June, which Dr. Suvit Yodmani, Executive Director of ADPC attended as observer.

Strategic National Action Plan (SNAP) for Disaster Risk Reduction, Bangkok (30 May)
ADPC's director of Finance, Monitoring & Evaluation, Mr. Tay Boon Tiong represented ADPC at the Strategic National Action Plan (SNAP) for Disaster Risk Reduction at the office of the Disaster Prevention and Mitigation (DDPM), Bangkok.

Regional Workshop on Educational Materials, Bangkok (1 June)
ADPC in partnership with UNESCO, Bangkok organized the regional workshop for "Education for Natural Disaster Preparedness in Asia-Pacific in the context of Education for Sustainable Development (ESD)". The workshop provided a forum to share invaluable insights of natural disaster preparedness and mitigation at national and regional levels and to maximize the synergies as well as strengthen the network between ESD practitioners and stakeholders.

Pakistan Ambassador visited ADPC (2 June)
ADPC welcomed H.E. Lieutenant-General (Ret.) Khateer Hasan Khan, Ambassador of Pakistan to Thailand, during his briefing at ADPC as a member of ADPC's Board of Trustees. H.E was accompanied by Mr. Ameer Khurram Rathore, Counsellor, Embassy of Pakistan to Thailand. H.E was briefed on ADPC's activities and involvement in the region, particularly in Pakistan. The meeting further enhanced the on-going partnership and collaboration between Government of Pakistan and ADPC. Pakistan is a signatory to the new Charter of ADPC, signed in February 2005, recognizing ADPC as an international organisation.

ADPC held meeting with teachers, Mae Hong Son, (8-9 June)
ADPC through its Mine Risk Education (MRE) Project met consultants and teachers from schools located in mine risk areas in Mae Hong Son Province. The meeting was to enhance collaboration with potential partners, Government agencies and NGOs, like the Provincial Education Office, Thailand Mine Action Center (TMAC), Humanitarian Mine Action Unit, Border Patrol Police unit, Thailand Campaign to Ban Landmines (TCBL). The project will also organize Camping Programmes for students in July and September 2006.

ADPC Board of Trustees Meeting, Bangkok (16 June)
ADPC will hold its bi-annual Board of Trustees meeting in Bangkok to discuss ADPC activities, strategy and to present members of the Board with a complete briefing on ADPC's progress and future activities related to the implementation of the Tsunami & Multi-hazard Early Warning System for Southeast Asia and the Indian Ocean. The meeting is likely to be the last meeting of ADPC's current Board before the new ADPC Charter comes into effect in late 2006, whereupon the new Board will be composed of the nine governments who are signatories to the ADPC Charter (Bangladesh, Cambodia, China, India, Nepal, Pakistan, Philippines, Sri Lanka and Thailand).

Regional Consultation on Emergency Preparedness and Response (EPR): From Lessons to Action, Bali, Indonesia, (27-29 June)
Dr. Suvit Yodmani and ADPC's Public Health in Emergencies (PHE), Team Leader, Mr. Jonathan Abrahams attended the Regional Consultation.

PUBLIC HEALTH IN EMERGENCIES (PHE)

Presentation on "Emergency Medicine: The Tsunami Experience", Bangkok (30 March)
ADPC in partnership with Thai Red Cross Society, Thammasat University, and Nopparat Ratchathani Hospital organized a half-day event on "Emergency Medicine: The Tsunami Experience". The event featured a presentation by Dr. Prasert Vasinanukorn, Consultant for Emergency Department at Songklanakarind Hospital, Thailand, on emergency medicine, disaster planning, and the pitfalls in the health response to the 2004 Indian Ocean Tsunami.

ADPC & the Thammasat University, Bangkok signs MoU, Bangkok (20April)
ADPC & the Thammasat University (TU)-Faculty of Public Health (FPH), Bangkok signed a Memorandum of Understanding (MoU) to further develop and establish a dynamic mechanism to strengthen and mainstream PHE in the overall concept of Disaster Management. The goal of this MoU is to develop and establish a dynamic long-term partnership of ongoing collaboration and cooperation between ADPC and TU Faculty of Public Health, building upon and strengthening the common and complementary elements of their respective mandates.

Officials from United States Centers for Disease Control and Prevention International Emergency Health Program and the School of Public Health, University of Texas visited ADPC, Bangkok (24 -27 April)

ADPC's PHE team, led by Mr. Jonathan Abrahams, hosted meetings for officials from United States Centers for Disease Control and Prevention International Emergency Preparedness Program, represented by Dr Mark Keim and Mr Paul Giannone, and the School of Public Health at the University of Texas, represented by Dr John Herbold and Dr David Lakey to discuss potential collaborations.

Development of Health Collaboration along Thailand-Myanmar Border Areas, Bangkok (26-28 April)
A representative from ADPC's PHE team attended the "Meeting on Development of Health Collaboration along Thailand-Myanmar Border Areas" in Ratchaburi Province. The meeting was organized by the Thailand Ministry of Public Health, Department of Disease Control with the support from WHO. The main objectives of the meeting were to share information on the border situation and the activities of organizations working in Thailand-Myanmar border areas and to develop tools and mechanisms for increasing health access among cross-border population and coordination among organizations working in the border areas. At the Opening Ceremony, the Governor of Ratchaburi gave the Welcome Address followed by the Opening Remarks of WHO Representative to Thailand, Dr William Aldis. The Inaugural Address was delivered by the Permanent Secretary for Public Health in Thailand.

Planning and Development Workshop, Bangkok (2-5 May)
ADPC's PHE team in collaboration with the WHO conducted a planning and development workshop for a "training programme for health care facility emergency preparedness and response to pandemics and epidemics, using the model of human cases of avian influenza".

ADPC's training programme on Public Health in Complex Emergencies (PHCE), Bangkok (8-20 May)
ADPC's PHE Team organized an international training program on PHCE in Asia. Dr. Suvit Yodmani, Executive Director, ADPC opened the course. The course was jointly organized with the World Education, Inc. (WEI) and the International Rescue Committee (IRC) together with other two regional partners, the American University of Beirut and the Makerere University Institute of Public Health, Uganda. The PHCE training program was a two-week residential course that focused on critical public health issues faced by NGO's and health personnel working with displaced persons and refugee population in complex emergencies.

International Symposium on Building and Synergizing Partnership for Global Human Security and Development, Bangkok (30-31 May)
ADPC's PHE team leader, Mr. Jonathan Abrahams attended the Human Security Network's International Symposium on Building and Synergizing Partnership for Global Human Security and Development. The symposium was organized by Ministry of Foreign Affairs (MOFA), Thailand.

ADPC conducted the Evaluation of Prevention and Mitigation Plan, Bangkok (1 June)
Senior Technical Manager from ADPC's PHE team conducted an evaluation of the Prevention and Mitigation Plan for Transportation and Communication in Udon Thani.

Community Based Psychological Support Training Course, Bangkok (12-16 June)
ADPC in partnership with the University of South Dakota's Disaster Mental Health Institute (DMHI) organized a training course on Community Based Psychological Support from. The course had a strong programmatic and planning component. Participants had the opportunity to explore the ideas of Psychological First Aid and psychosocial support programs.

TRAINING RESOURCES GROUP (TRG)

Distance Learning Workshop, Enschede, the Netherlands (24 April -12 May)
ADPC's TRG team leader, Mr. Falak Nawaz attended the Desistance Leaning Workshop and delivered some sessions. The workshop was held at the International Institute for Geo-Information Science and Earth Observation (ITC), Enschede, the Netherlands and it was organized by Government of the Netherlands.

Training Activities in Pakistan, (5-30 June)
ADPC's TRG delivered one course on Disaster Management on 5-7 June and conducted the first Project Proposal Writing workshop on 8-10 June in Hyderabad. The courses were in partnership with Sindh Agricultural and Forestry Workers Coordinating Organization (SAFWCO) and Capital Development Authority (CDA) Islamabad. The other proposed training courses on Disaster Management and Damage Assessment and Need Analysis conducted in Pakistan have been postponed and the new dates will be announced soon.

Training Activities in Country – Mae Sai, Mae Sot and Mae Hong Son (May- Sept)
TRG coordinates a series of training courses in Mae Sai, Mae Sot and Mae Hong Son under the supervision of Mr Boon Tiong Tay, Director - Finance/Monitoring & Evaluation, OED. The training courses are organized by IRC in order to enhance their capacity and institutional building focused on NGOs workers who undertake development work for communities along the Thai-Myanmar border. Recently two courses on project proposal writing and project management were held in Mae Sai, Chiang Rai on 31 May-1 June and 20-21 June respectively.

China Program

Climate forecast applications in Jiangxi Province, China (April-June)
ADPC's senior technical experts from CRM and TRG teams visited the Jiangxi Province of China to explore and discuss the possibilities of developing Climate Forecast Applications project with the leaders of the Provincial Department of Agriculture and Provincial Meteorological Bureau and Provincial MRL (Mountain, River, Lake) Development Office in April. A draft MoU from ADPC on Climate Forecast Applications for Disaster Risk Management in Jiangxi Province was sent to Jiangxi for review and comments, and the first draft proposal on CRM project from Jiangxi was sent to ADPC in June.

Signing the MoU in cooperation on early warning arrangement for preparedness and mitigation of natural hazards (May-June)
ADPC's senior experts was in Beijing from 30 May-3 June, China as a follow up on the MoU signing, focusing on cooperation on early warning arrangement, preparedness and mitigation on natural hazards between China and ADPC. Discussions with

China Earthquake Administration (CEA), China Meteorological Administration (CMA) and State Oceanic Administration of China (SOA) were held. CMA has signed the MoU with ADPC via mail in the middle of June. CEA will sign the MoU with ADPC in the middle of July when its delegation will visit Bangkok to attend ADPC's Regional Cooperation meeting on Early Warning for Preparedness and Mitigation of Natural Hazards from 12- 14 July 2006. SOA will also sign the MoU with ADPC soon.

URBAN DISASTER RISK MANAGEMENT (UDRM)

Project Planning Meeting, Pakistan (17-20 April)
Under the Program for Hydro-meteorological Disaster Mitigation in Secondary Cities in Asia (PROMISE) project, a Planning Meeting was organized to discuss project activities in the selected area in Hyderabad, Pakistan and to finalize the proposal. An institutional assessment was also conducted on Aga Khan Planning and Building Service in Pakistan (AKPBSP)–PROMISE Pakistan project partner and a field visit was also planned to the project demonstration city. The project was implemented with funding support from USAID/OFDA.

Trial Run for Distance Education Course on Multi-hazard risk Analysis (25 April-12 May)
The second trial run was organized at the International Institute for Geo-information Science and Earth Observation (ITC) in the Netherlands. The three weeks trial run was conducted under the CASITA II program.

PROMISE, Vietnam
Under PROMISE, an inception workshop was planned in Da Nang, Vietnam. The workshop was an initiation activity for partners in Vietnam. The project is being implemented with funding support from USAID/OFDA.

Distance Learning on Non Structural Approaches for Risk Reduction (11 May)
ADPC's UDRM organized a lecture session on Approaches for Risk Reduction (Non Structural) followed by a plenary session via distance mode to test the viability of using distance education modes in university education. N.M.S.I. Arambepola, Director, UDRM gave the lecture from Asian Institute of Technology (AIT) in Thailand. The audience were international students from the International Institute for Geo-information Science and Earth Observations (ITC) in the Netherlands. Video conferencing technology was used in the lecture session. This was an activity under the CASITA project (Capacity Building in Asia using Information Technology Applications) Phase II funded by EU.

Visit of Mr. Peter Dias Amarasinghe Secretary of the Ministry for Disaster Management and Human Rights (15-23 May)
Mr. Peter Dias Amarasinghe, Secretary of the Ministry for Disaster Management and Human Rights of Sri Lanka, was on a study tour to Thailand and Philippines facilitated by ADPC. Mr. Peter Dias Amarasinghe had discussions with the DG-GISTDA to explore the possibilities for collaboration between GISDTA and MDM&HR for information sharing and training, including supply of satellite imageries for DRM activities. At Phuket, organized by the DDPM he saw the recovery activities after the Tsunami, Tsunami early warning system in place, volunteer network of first responders and CBDRM activities undertaken by ADPC in tsunami affected provinces of Phuket.
The visit to Philippines was facilitated by CDP and Mr. Peter Dias Amarasinghe had visited the National Disaster Coordinating Council (NDCC), the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) to discuss the general disaster management institutional arrangements and national early warning measures related to weather related disaster events. He showed special interest in the strategy adopted by NDCC in creating public awareness especially the integration of disaster management subjects in school curriculum. He had a visit to Marikina city to witness the municipality emergency services, response capacity of the city and long-term risk management activities undertaken at city level.
The visit was initiated and funded by UNDP-Sri Lanka under the ongoing technical support for disaster management capacity building in Sri Lanka.

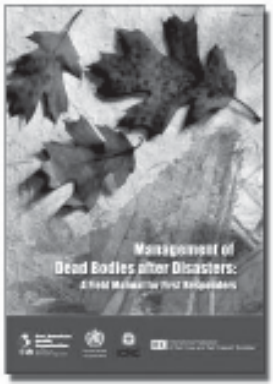
National Workshops on Disaster Management (27 May and 5 June)
Postgraduate Institute of Science (PGIS), University of Peradeniya, Sri Lanka in collaboration with the ADPC, Disaster Management Center held two national workshops on 27-28 May, 5 & 6 June on Disaster Management in Kandy, Sri Lanka. SNV-The Netherlands funded this workshop through the UDRM's technical assistance to Tsunami Affected Countries Project.

Workshop on Damage and Loss Estimation for Risk Management (31 May-2 June)
ADPC, in collaboration with the Disaster Management Center (DMC), UNDP Sri Lanka, National Building Research Organization (NBRO) and Central Bank (CB) Sri Lanka, held a workshop on "Damage and Loss Estimation for Risk Management" in Colombo. The Hon. Mahinda Samarasighe, Minister for Disaster Management and Human Rights, Assistant Resident Representative of UNDP, DG-DMC, DG-NBRO and Director, CB attended the opening ceremony. This activity was implemented under the UDRM's Technical Assistance to Tsunami Affected Countries Project with funding support from the Netherlands Development Organization (SNV-The Netherlands).

Mission to Da Nang, Vietnam (12-15 June)
A senior representative from ADPC's UDRM team visited Da Nang, Vietnam to provide technical assistance to the Canadian Centre for International Studies and Cooperation (CECI). Technical assistance was provided on the preparation of a case study of the impacts of land use planning by Da Nang city government upon the flooding risk and overall coastal management in Cam Le, Da Nang; and the development of a coastal management geographic information system (GIS) for monitoring flooding risk and land use. CECI is ADPC's partner in the Program for Hydro-meteorological Disaster Mitigation in Secondary Cities in Asia (PROMISE).

Mission to Dhaka, Bangladesh (8-13 June)
N.M.S.I. Arambepola, Director of ADPC's UDRM team led a senior level delegation to Dhaka to attend the Strengthening Household Abilities for Responding to Development Opportunities (SHOUHARDO) Partners Workshop on Urban Programming on 8 June in Savar, Dhaka. It addressed the issue of food security by responding to people's vulnerabilities. CARE Bangladesh is ADPC's partner in this project.
The team provided technical assistance to CARE Bangladesh in reviewing local consultants' proposals for vulnerability assessment. They also visited the program office of the Comprehensive Disaster Management Programme (CDMP) to follow up on ADPC's Expression of Interest to collaborate with CDMP, and to follow up on a proposal to provide training on damage and loss estimation.

Bookmark



Book Review

Management of Dead Bodies after Disasters:

A Field Manual for First Responders

Frederick John ABO, RN
Technical Manager
Asian Disaster Preparedness Center (ADPC)

The Pan American Health Organization (PAHO) has recently released practical guidelines for first responders in handling dead bodies in times of mass fatality incidents. This publication is a follow up of the Disaster Manuals Series No. 5 on the Management of Dead Bodies in Disaster Situation released in 2004, which provides strategic recommendations in the management of dead bodies in disaster situations.

The December 2004 Tsunami was an opportunity for WHO to review the existing publication and incorporate the lessons learned from the tsunami disaster including the Asian perspective in the management of dead bodies after disasters. A workshop was held in Lima Peru in May 2005 participated by representatives from PAHO member states, Thailand, Indonesia and ADPC to provide contribution and share lessons learned from the Tsunami. As a result of the workshop, it was recommended to develop a practical field guide that is simple and easy to use by first responders. This resulted to the development of the new publication by PAHO, *Management of Dead Bodies after Disasters: A Field Manual for First Responders*.

The manual provides practical information and guidelines on coordination, health risks posed by dead bodies, how to recover and store dead bodies, long term storage and disposal of dead bodies, methods of body identification, risk communication and support for the families of the dead.
(download a copy from: http://www.paho.org/english/DD/PED/DeadBodiesFieldManual.htm)

Evaluating International Humanitarian Action: Reflections from practitioners
Edited by Adrian Wood, Raymond Apthorpe and John Borton

With the number of violent conflicts within countries increasing all the time, as well as other forms of natural and man-made complex emergencies, humanitarian intervention has become a much more frequent form of providing assistance. There has also been a corresponding rise in the need to evaluate the effectiveness of such interventions. In this volume, ALNAP has compiled experiences of, and lessons learned by, those practically engaged in humanitarian programme evaluations.

information resources

Briefing Paper:
ALNAP- Provention South Asia Earthquake 2005: Learning from previous earthquake relief operations
http://www.earthquakepakistan.com/images/ALNAP-ProVention_SAsia_Quake_Lessonsa.pdf

Policy Brief:
Save the Children-Protecting Children in Emergencies
http://www.savethechildren.org/advocacy/images/policy_brief_final.pdf

Report:
Asian Development Bank and World Bank-Preliminary Damage and Needs Assessment 2005: Pakistan 2005 Earthquake
http://siteresources.worldbank.org/PAKISTANEXTN/Resources/Publications-and-Reports/CompleteReport.pdf

United Nations: Early Recovery Framework
http://siteresources.worldbank.org/PAKISTANEXTN/Resources/293051-1132326511753/EQ-ERF-UN.pdf

Conferences
International Trauma Studies Program: Mailman School of Public Health, Columbia University, New York, September 2006 - May 2007 http://www.itspnyc.org/

On-line Journal:
Mountain Research and Development (MRD) - Hazard Management and Resilience in Mountains (vol. 24/1 – February 2004)
http://www.mrd-journal.org/issue.asp?Issue_ID=38

Research Findings:
United Nations University (UNU) Project on Sustainable Mountain and Forest Development. UNU contribution to the Agenda 21 Chapter 13 Managing Fragile Ecosystems: Sustainable Mountain Development http://www.unu.edu/env/mountains/

Websites:
Incorporated Research Institutions for Seismology http://www.iris.edu/about/

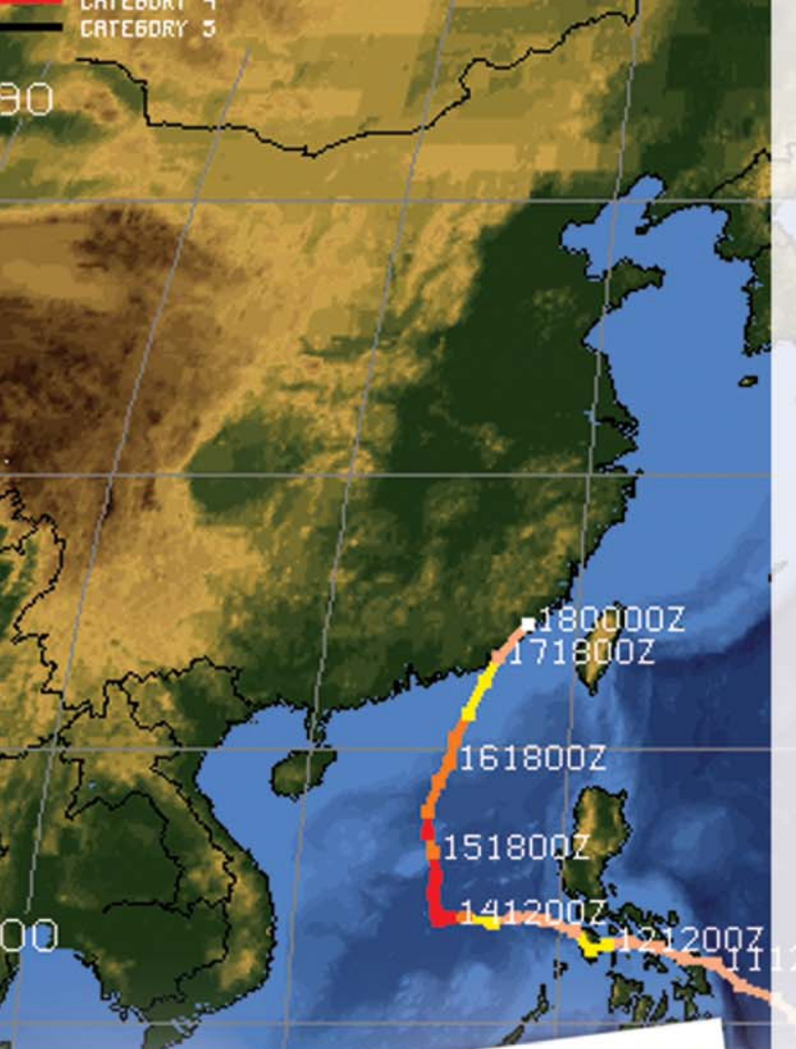
U.S. Geological Survey Earthquake Hazards Program http://earthquake.usgs.gov/

UNDP Crisis prevention and recovery –Pakistan
http://www.undp.org/bcpr/disred/english/regions/asia/pakistan.htm

ICIMOD Mountain Risks and Infrastructure in the Hindu Kush-Himalayas – An Introduction
http://www.icimod.org/focus/risks_hazards/mre_intro.htm

Mountain Partnerships: http://www.mountainpartnership.org/PAKISTAN/pakistan.html

Pictorial



FLOODING IN DA NANG

Typhoon Chanchu, left a trail of destruction in Vietnam, the Philippines and China. The typhoon with winds of up to 170 km per hour is the strongest on record to enter the South China Sea in May, the start of the storm season. It killed at least 37 people in the Philippines last weekend, and by late Friday rescuers had found the bodies of 44 Vietnamese fishermen drowned after their ships were caught in Chanchu's path. It killed 23 people in China after it slammed into the southern coast on Thursday and caused landslides, flooding, and forced the evacuation of more than one million people.

Eight fishing ships sank 1,000 km east of Vietnam's central city of Da Nang, while eight remained missing. Rescuers had found 26 bodies and rescued 81 others, the government said in a statement. As many as 400 fishermen were reported missing from Da Nang and nearby provinces of Quang Nam and Quang Ngai.

Da Nang is a city selected to be part of the Program for Hydro-meteorological Disaster Mitigation in Secondary Cities in Asia. It is highly vulnerable to urban floods and tropical storms. The Vietnam partner is Canadian Centre for International Studies and Cooperation (CECI).

The main activities identified for Da Nang include hazard mapping and participatory vulnerability assessment, community planning for disaster preparedness and mitigation, the development of community-based end-to-end early warning mechanisms, the establishment of emergency operation centers and emergency rescue teams, and capacity building in planning and disaster preparedness.

(data on Chanchu based on Reuters and globeandmail.com)

Pictorial

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The Asian Disaster Management News is published quarterly by the Asian Disaster Preparedness Center, to serve as a channel of communication and source of information for disaster risk management practitioners and development workers in Asia and the Pacific.

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This publication is also available at:
http://www.adpc.net/infores/newsletter.html

Cover Photo Credit:
Mr. N.M.S.I. Arambepola
(Pakistan Earthquake Damage and Loss Assessment ADPC 2005)

Theme for next issue of the Asian Disaster Management News, July-September 2006:

Flood Preparedness Planning

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EUROPEAN COMMISSION
Humanitarian Aid