

adpc:

disaster management
excellence in the Asia and
Pacific regions since 1986

The Asian Disaster Preparedness Center (ADPC), the leading regional resource center for the support of national programs for disaster reduction, and a regional focal point for IDNDR in Asia and the Pacific, has been pursuing disaster reduction for safer communities and sustainable development since its establishment in 1986. ADPC recently registered as a non-government organization foundation with the Royal Thai Government. From the outset, ADPC has worked to meet national needs to bring risk reduction into long-term issues of development, through donor-supported initiatives such as the Improving Cyclone Warning Response and Mitigation Workshops (ICWRM) with the assistance of the EU, and the UN Disaster Management Training Program (DMTP). In addition to its core activities of regional and national training, technical assistance and information and research, ADPC now focuses on three new regional programs. The Asian Urban Disaster Mitigation Program (AUDMP) aims to reduce the disaster vulnerability of urban populations, infrastructure, critical facilities, and shelter in partner cities. It does this through establishing sustainable public and private sector mechanisms for disaster mitigation, and promoting replication and adaptation of successful mitigation measures within partner countries and throughout the region. The Extreme Climate Events Program (ECE) focuses on the El Niño and La Niña phenomena, integrating disaster management concerns into numerous public sectors, such as departments of forestry, agriculture, natural resources, public health as well as national meteorological agencies and the climate-science community. The Program for Enhanced Emergency Response (PEER) serves as a catalyst for increasing national capacities for emergency response, particularly in CSSR and MFR. The recently launched Asian Disaster Mitigation Training Network (ADMTN) promotes the delivery of ADPC training courses, developed under the regional programs, at the national and sub-national levels.

adpc vision:

"disaster reduction for safer communities and sustainable development"

Dear Readers,

It is with pleasure that at the end of the International Decade for Natural Disaster Reduction (IDNDR), the team at the Asian Disaster Preparedness Center (ADPC) provides an interpretive and representative publication on the impact of disaster reduction in Asia and the Pacific over the past ten years.

This publication grew out of dialogue between ADPC, IDNDR, and the Economic and Social Commission for Asia and Pacific (ESCAP), the joint organizers of the Regional Meeting for Asia: Risk Reduction & Society in the 21st Century, held in Bangkok, Thailand, 23-26 February 1999. The publication integrates key issues raised during the regional meeting, as well as provides more extensive coverage of lessons learned in Asia and the Pacific over the decade. It captures the experience of national focal points for disaster reduction, regional and sub-regional cooperation initiatives, and international donor-supported disaster reduction programs at the national, regional and city level in the region.

While 1999 marks the end of the IDNDR initiative, it also marks a renewal of efforts in Asia and the Pacific. Institutional capacity for disaster reduction in the region is growing ever stronger. Training networks for disaster reduction have been institutionalized at national levels throughout the region. ADPC, the lead regional focal point for disaster reduction in the region since 1986, has become a non-government organization foundation under the Royal Thai Government, and has appointed an international Board of Trustees (primarily from Asia) and a new Executive Director. The Center now has a stronger team of professional and support staff than ever before. Other regional centers entering the field recently, such as the United Nations Centre for Human Settlements (HABITAT), Fukuoka, Japan and the Asian Disaster Reduction Center (ADRC), Kobe, Japan are contributing resources and expertise to the region for issues ranging from the impact of disasters on human settlements to networking for disaster managers.

While the frequency and vulnerability to disasters is on the rise, so too is the attention that disaster reduction in Asia and the Pacific now receives internationally. Here at ADPC, we hope to continue building consensus among all persons in the region, from community organizers to government authorities, on the importance of making communities safer before disasters strike. ADPC would like to take this opportunity to acknowledge those donor organizations that have helped us in our work since our center was established, notably, ADB, AUSAID, CIDA, DANIDA, DFID (UK), the European Union, JICA, the United Nations and its agencies, and USAID/OFDA. We look forward to continued support of our efforts.

Sincerely,



Dr. Suvit Yodmani
Executive Director



Professor Dr. Krasae Chanawongse
Chairman, Board of Trustees

INTRODUCTION

The year 1999 marks a decade of Asia and the Pacific regional and country-level programmatic, policy and institutional capacity building work - ten years during which approximately the lives of half a million persons and hundreds of billions of US dollars were lost to natural disaster in the region alone.



Worldwide, the frequency and severity of disasters increased over the 1990s, which has been particularly visible in Asia and the Pacific, where the most extreme floods in several decades devastated Bangladesh, China, India, the Republic of Korea and Vietnam; while the El Nino-related droughts caused water shortages and forest fires, affecting a large part of South East Asia. It is a well-known fact that Asia is the most hazard-prone region in the world, accounting for more than 50% of the world's major disasters over the past two decades. But even by Asian standards, the death and destruction caused by disasters over the past 10 years has reached unprecedented levels.

Disaster reduction in Asia and the Pacific did not begin in 1990. Asian countries have been coping with disasters in their own way since long before the western world came into the history books. Over the past 2000 years, China and Vietnam protected themselves with dikes, while some of the oldest wooden structures in the world still stand in Japan due to seismic building technology that flowed into the country alongside Buddhism. The Chinese developed the first seismometer 1800 years ago; while Korea designed the first rain gauge 500 years ago. Indian famine codes of the late 19th and early 20th century still stand up to contemporary ones. The Typhoon Committee and the Panel on Tropical

Cyclones, two joint efforts of ESCAP and the World Meteorological Organization (WMO) have made it easier to track typhoons and forecast floods. The Asian Disaster Preparedness Center (ADPC) opened its doors in 1986 in response to the demand from Asian and Pacific countries for international assistance in strengthening their national disaster management systems.

The UN General Assembly proclaimed the 1990s as the International Decade for Natural Disaster Reduction (IDNDR) to draw the world's attention to a largely neglected but extremely serious aspect of development: thousands of deaths and billions of US dollars are lost to natural disasters worldwide each year. In Asia and the Pacific, ADPC has served as a regional focal point for the IDNDR activities, and helped keep the IDNDR strategy for the region in focus by preparing a mid-term review of the IDNDR in South and Southeast Asia in 1994. The report presented outcomes of the decade's beginning, as well as recommendations for increased resource mobilization and multi-sectoral involvement in the activities of the decade. ADPC now presents this interpretive document, on the occasion of the IDNDR Programme Forum of July 1999, in order to capture the accomplishments and project the challenges and opportunities for the future.



Looking back at the decade in Asia and the Pacific, perhaps the most important outcome to date has been a shift in focus from reaction to prevention of disasters. due to a remarkable increase in awareness and understanding of the causes and ways to address disasters. On the part of the governments, this shift in focus has meant incorporating the issues of disaster management into long-term development plans to ensure inter-sectoral collaboration and responsibilities. On the civil society front, we see increased involvement of the private sector in disaster prevention activities; while among communities we see less resignation and fatalism in the face of disaster, where disasters were previously considered as **"acts of God."** Now civil society is lobbying to make governments accountable for the vulnerable state of communities, and in doing so putting the community at the center of all phases of disaster reduction. We can expect these trends to deepen in the coming years.

REGIONAL MEETING FOR ASIA: an overview of issues

Jointly organized by IDNDR, the United Nation's Economic and Social Commission for Asia and Pacific (ESCAP) and ADPC, the Regional Meeting for Asia: Risk Reduction & Society in the 21st Century, held in Bangkok February 23-26, 1999 provided an important opportunity to evaluate regional accomplishments and recommendations for future action. The lessons learned from the meeting are being presented at the IDNDR Programme Forum in July 1999. In preparation for the February regional meeting, ESCAP conducted a survey in the region to bring to bear the accomplishments and areas for continued work after the decade, recognizing that the survey should be supplemented with comments made during the meeting. The survey suggested the following future actions:

- Integrate disaster reduction activities into the social development process
- Increase public awareness and participation
- Strengthen regional networking and transfer of technologies
- Increase sub-regional cooperation on early warning systems

- Develop communication networks and disaster preparedness

The agenda of the regional meeting centered around several broad themes, including a review of the ESCAP survey, with more specific examples raised in presentations on meteorology-related and geology-related hazards as well as regional programs on seismic risk reduction and extreme climate events. Speakers from governments of Asia and the Pacific and international and local non-government organizations made presentations. Key issues stemming from the discussion of the survey, presentations and general dialogue among participants, serve as a guide for future action.

Wanted: Government Accountability and Political Commitment

Disaster reduction is a long-term process, while political processes and positions are short-term in nature. Disaster reduction efforts need to be

recognized in policies, not just as activities, to get the continuity of efforts, irrespective of changes in the political scene. The methods of implementation of disaster reduction efforts will also vary in the region due to different forms of local governance and the level of accountability to the civil society. Therefore the aspect of decentralized governance may hold opportunities for increased accountability at a local level, while commitment to disaster reduction may largely depend on local politics.

Building Institutional Capacity Means Sustainability

Coordinating bodies for disaster reduction can ensure that action plans involve all necessary branches of government as well as the private sector and civil society. Such bodies have been important for defining the authority for disaster reduction, as well as providing a legal and financial means to act. Moreover, governments need strong institutional frameworks to keep action plans updated as needed, as well as to carry out measures over the long-term. Training for disaster reduction at the regional and national levels has proven successful during the decade in building institutional capacity.

Mainstream Disaster Reduction into Development Frameworks

Success in disaster reduction over the past nine years in the region is symbolized by the increased emphasis governments are placing on disaster management in long-term country development strategies and institutional frameworks. Integration of action plans into the national development programs and budgets in several South and Southeast Asian countries has been achieved through treating those plans: (i) as an integral part of the national development process; (ii) as a social component; and (iii) as a major requirement for sustainable development.

Maps Don't Save Lives, Information Does

In regional campaigns to raise awareness on disaster risks, hazard maps and

educational materials have found their way from communities to central governments. Hazard maps have become more sophisticated during the decade due to increased access to science and technical knowledge in the region. But maps that are costly and take a long time to generate stand little chance of being used during the life of a disaster reduction program. Communications also need to be improved between the geoscience and planning communities by encouraging the use of simple maps as a tool to convey images of disaster risk to decision makers. The bottom line is to build consensus with decision makers, not just provide data.

Give Information without Causing Panic

Information campaigns, using educational materials produced in the local language or newspaper reports, have led to increased awareness in individual communities throughout the region. Yet the approach is critical. One city's success in presenting the results of an earthquake scenario to the population might have dire consequences in another city. In order to prevent causing panic among citizens, both the media and the local authorities need training on how to interpret and present information about disasters.

Hazards of the Future Need Improved Regional Cooperation Now

As hazards do not follow political boundaries, there is an increasing trend of globalization of disasters, with specific regional consequences. During the decade, the region experienced natural disasters caused by climate change. El Nino-induced drought and forest fires affected six countries in South East Asia; while South Asian countries felt the effects of meteorology-induced disasters and floodwater emanating from the Himalayan region. Such regional experiences have brought about a growing realization by governments that the sharing of real-time information on disaster-inducing factors, as well as lessons learned during the decade, is essential in improving disaster reduction capability.

ARISKY REGION



Home to over half the world's population, Asia and the Pacific have more than their fair share of disasters - more than other region in the world, in fact. Floods are by far the most common, but disasters of all nature have their turn across the region: typhoons, cyclones, earthquakes, volcanic eruptions, droughts, tornadoes, debris flows (including landslide and mudflow), hailstorms, surges, tsunamis and regional haze. And disasters are occurring more often, and for the most part, with more devastating consequences in lives and property damaged and lost.

During the present decade, two major earthquakes in Iran and India claimed over 50,000 lives and rendered hundreds of thousands homeless. The eruption of Mount Pinatubo in the Philippines indirectly caused 847 deaths and displaced hundreds of thousands. The Hanshin-Awaji earthquake in Japan took over 6,000 lives and injured more than 40,000 people.

Before 1987, one disaster was registered in the region with losses in excess of US\$1 billion in insured assets. In 1997, property damage from floods alone amounted to a staggering US\$7 billion in seven countries,

according to the annual ESCAP survey on meteorology-related disasters. Almost peanuts compared to the US\$27 billion lost the following year, in 1998, when the worst floods in decades swamped vast portions of Bangladesh, China and Vietnam.

July 1998 would bring the macabre image of lagoons full of floating cadavers after a 10-meter tsunami hit Papua New Guinea and killed 2,000 people. And while water levels rose beyond control in some countries, in others there was just not enough of it. El Nino-related droughts caused water shortages and forest fires in Indonesia and the Philippines and the noxious haze that spread over six countries in Southeast Asia in 1997 and 1998 was a wake up call for many. The nature of disaster had changed; impacts now crossed borders.

It was not surprising then that respondents to the ESCAP Asian Survey of Accomplishments, all pointed to 1998 as the annus horribilis of what was certainly one of the most horrific decades in memory in terms of disasters. The survey noted the aggravating trend in the magnitude of events, but it also highlighted valuable achievements and success stories catalyzed by the IDNDR.

A DECADE OF IMPLEMENTATION: The Asia and Pacific Country Responses

The IDNDR Asian Survey of Accomplishments for Northeast, South and Southeast Asia, carried out by ESCAP in 19 countries gives a representative picture of how the decade played out in this part of the world. The survey provides statistics and analysis on recent disasters and progress made, regional achievements, structures in place, and requirements to meet the challenges of the future. It found governments have responded in different ways to the array of disasters that struck the region with particularly devastating effects between 1992 and 1998. In 1998 alone, Asia and Pacific countries experienced 30 of the 40 most disastrous events around the world and sustained 80% of the casualties. Among responses were structural and non-structural measures, short-term and long-term plans or strategies, legislative measures, institutional development and public awareness programs. Here is a brief summary of main findings:

IDNDR has helped countries to

- Inspire greater government commitment to disaster management
- Take disaster reduction as a criteria for sustainable development
- Lay down model frameworks to fortify disaster management systems
- Arouse public awareness and give greater attention to disaster reduction
- Establish national coordinating bodies for disaster management
- Realize how critical these issues are around the world

National achievements

- Accessibility to national and local warning systems
- Links with international mechanisms, e.g. Typhoon Committee, the Panel on Tropical Cyclones and WMO programs
- Availability of various components for risk management in most countries
- Comprehensive risk assessment at the national level in two countries, one transferred to selected localities
- National coordinating bodies structured
- Mitigation plans in various stages of preparation or implementation in six countries; one with provincial and local plans

In Bangladesh, timely action to a cyclone limited the number of deaths to about 100 in 1997. A cyclone of similar intensity in 1991 claimed 140,000 lives.

Regional and sub-regional achievements

- Substantial sub-regional collaboration in forecasting tropical cyclones, floods, tsunami, and training in disaster preparedness and management.
- Committed work of the ESCAP/WMO Panel on Tropical Cyclones and WMO/ESCAP Typhoon Committee, the UNESCO Tsunami Warning System, the Asian Disaster Preparedness Center (ADPC), and the establishment of the ASEAN Regional Haze Task Force, the Asian Disaster Reduction Centre (ADRC) in Kobe, and the East Asia Natural Hazards Mapping Project.
- Regional mechanisms to promote exchange of information and experience

Infrastructure and legislation established

- Designated government authority for coordination of disaster management in most countries
- Varied government institutional arrangements for the designated authority, e.g. chairs include government heads, line ministers and, in one instance, a parliamentary commission
- Budgetary resources earmarked for risk management, but not always enough
- Firm legislative frameworks for disaster management in general or particular disaster such as floods, forest fires, tropical cyclones, earthquakes
- A comprehensive act under draft in one country

Education and training on disaster reduction

A wide diversity of established networks to transfer and apply knowledge and technology, disseminate information and articulate collaboration, including:

- existing mechanisms (e.g., the South Asia Association for Regional Cooperation (SAARC), WMO and Japan Meteorological Agency);
- newly established bilateral projects (e.g., Malaysia-France, Pakistan-USA and Japan)
- networks for sectoral disaster that developed into multi-sectoral coordination (e.g., China).

Future requirements

Top priority:

- Need more policy and budget commitment
- Integrate disaster preparedness and mitigation activities into the economic and social development process
- Increase public awareness and participation
- Strengthen regional networking and transfer of technology

Also focus on:

- International cooperation
- Information dissemination
- Strengthening of local authorities
- Network building

Future requirements for regional cooperation

- Technical assistance, financial support and technology transfer
- Early warning systems, communication networks and disaster preparedness
- Political commitment, proper institutional frameworks for coordination and resources

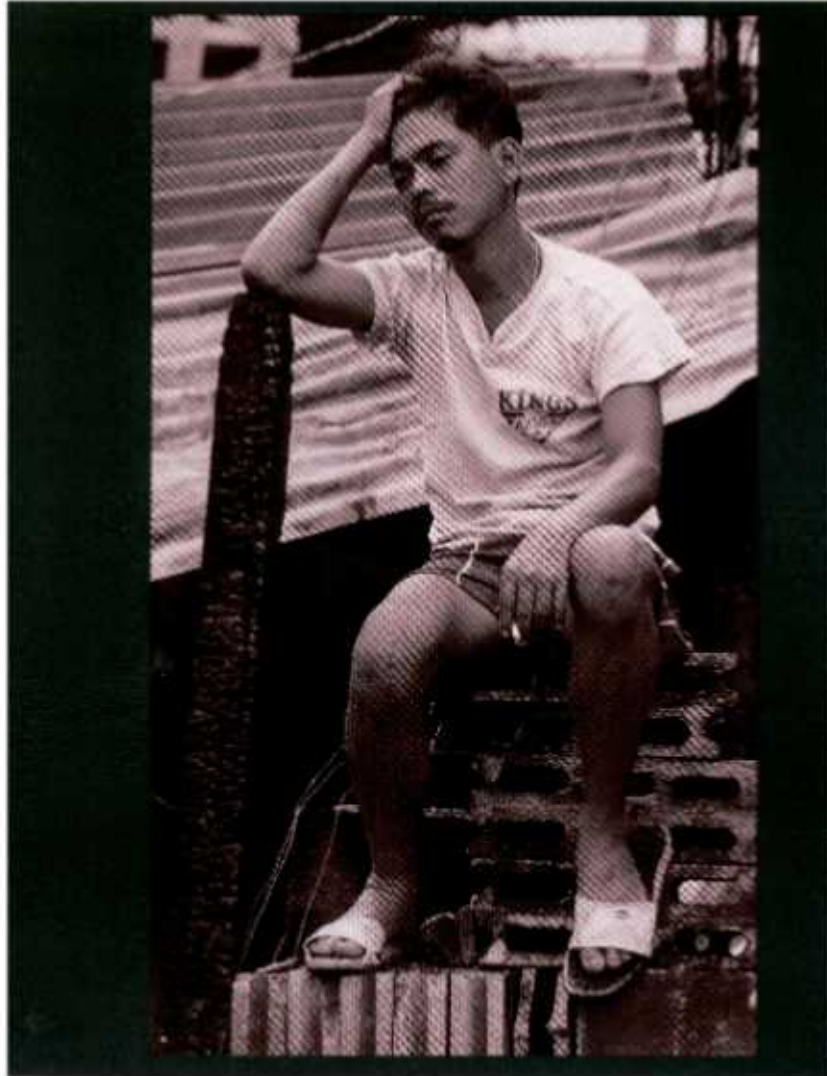
A DECADE OF CHANGE

During the nineties, a series of conferences, dozens of advocacy and informational publications, and a wide range of national and local research projects have helped the IDNDR achieve global recognition of the need to reduce disaster and commitment to take action. The survey found ample evidence of this trend in the institutional infrastructures that sprung up in many Asian and Pacific countries to ensure effective resource mobilization and sustained public participation in the national efforts.

A milestone of IDNDR global effort, the 1994 World Conference on Natural Disaster Reduction, held in Yokohama, Japan, identified in the diversity of experiences already evident by then, a wealth of opportunity for effective

regional cooperation. Yokohama called for prioritizing the compilation and exchange of information in the region, and promoting regional and sub-regional cooperation between countries exposed to the same natural hazards, especially for the benefit of developing countries.

Many in Asia heeded this call. The Association of South East Asian Nations (ASEAN) countries have prioritized joint intervention against haze, outlined in a regional action plan released in 1997 at a meeting in Singapore. Disaster relief coordination was discussed at the three ASEAN Regional Forum Intersessional Meetings in 1997, 1998 and 1999. The ASEAN Experts Group on Disaster Management, established in the early eighties, met five times over the decade. While



in South Asia, two initiatives at both government and non-government levels have changed the approach to disaster reduction in that sub-region. The South Asian Association for Regional Cooperation (SAARC) held a Workshop on Natural Disaster Reduction in 1994 and is now exploring institutionalized mechanisms for cooperation. While the South Asian NGO network Duryog Nivaran, or "Initiative on Disaster Mitigation," has engaged in disaster reduction work with an alternative perspective, namely to treat disasters (and conflicts) as unresolved problems of development - as part of the "normal" development of societies.

Across the region today, countries are at different stages in terms of disaster

preparedness. Some like Japan have long-established frameworks for dealing with sequences of geological and meteorological events that affect the archipelago. That is experience. Others, like Nepal or Sri Lanka, facing no less frequency of events, are still in the early stages. Following the Yokohama Guidelines, many governments in the region launched or refined policies, national strategies, action plans and programs with increased focus on reducing the impact of natural disasters, rather than merely responding to them. One of the most ambitious and forward-looking is the Chinese National Disaster Reduction Plan (1998-2010). For a non-exhaustive list of action plans, **see Table I.** ☞

Table I. Select National Action Plans

Country	National Action Plans
Australia	National Plan
Bangladesh	National Disaster Management Plan
China	National Disaster Reduction Plan
Hong Kong	Hong Kong Contingency Plan for Natural Disasters
India	National Contingency Action Plan
Indonesia	National Action Plan
Japan	Basic Plan for Disaster Prevention, Operational Plans for Disaster Prevention
Korea	Disaster Prevention Plan
Lao PDR	Hazard Action Plan
Malaysia	National Hazard Action Plan
Nepal	National Action Plan on Disaster Management
Papua New Guinea	National Disaster Management Plan
Philippines	National Disaster Management Plan
Vietnam	Strategy and Action Plan
Singapore	Contingency Plan within Emergency Preparedness Programme
Sri Lanka	Action Plan
Thailand	National Civil Defence Plan

Source: ESCAP Asian Survey of Accomplishments. Country reports presented at the First ADRC International Meeting, Kobe, Japan, 15-18 February 1999.

Many countries have appointed a national IDNDR committee or a central organization to coordinate the disaster reduction activities of government bodies and other groups. In parallel, most countries have enacted legislation providing necessary controls and responsibilities to cope with disaster situations and have upgraded their civil defense capability for rescuing people from endangered areas.

Table II provides a selection of focal points from the region.

Table II. Select Focal Points for Disaster Management in Asia and the Pacific

Country	Focal Points for Disaster Management
Australia	Commonwealth (Federal) Government
Bangladesh	Ministry of Disaster Management and Relief with Disaster Management Bureau
Cambodia	National Committee for Disaster Management, Ministry of Youth Rehabilitation
China	China National Committee for IDNDR
India	National Disaster Management Division, Ministry of Agriculture
Indonesia	National Natural Disaster Management Coordinating Board (BAKORNAS PB), Ministry for People's Welfare and Poverty Alleviation
Japan	National Land Agency, Disaster Prevention Bureau
Korea	Ministry of Government Administration and Home Affairs
Lao PDR	Ministry of Agriculture and Forestry
Malaysia	National Disaster Management & Relief Committee (NDMRC), Inter-ministerial Committee chaired by Minister of Information
Myanmar	National Disaster Management Committee, Ministry of Social Welfare
Nepal	Ministry of Home Affairs
Pakistan	Emergency Relief Cell in Cabinet
Papua New Guinea	National Disaster and Emergency Services
Philippines	National Disaster Coordinating Council, Ministry of Defense
Singapore	Ministry of Home Affairs
Sri Lanka	National Disaster Management Center, Ministry of Social Services
Thailand	National Civil Defence Committee, Ministry of Interior
Vietnam	Central Committee for Flood and Storm Control, Ministry of Agriculture and Rural Development

Source: ESCAP Asian Survey of Accomplishments. Country reports presented at the First ADRC International Meeting, Kobe, Japan, 15-18 February 1999.

It is gradually being recognized that the initial and most vital response to disaster must be at the local level and that the community must be well informed about disaster-preparedness measures and be alert in times of disaster. To promote community involvement in disaster prevention and preparedness, community awareness programs and educational programs on warning systems and other aspects of disaster management are being developed and implemented.

Committees with government and non-government representatives are being established at the local level, to monitor and guide disaster-relief operations, and give inputs to action plans.

During the past decade, higher levels of awareness led to increased interest of hundreds of non-governmental organizations, community bodies, the private sector and other stakeholders in civil society. As a result, whole new sectors incorporated risk management into their priorities. An international initiative fueled by Asian inspiration, the Global Forum of NGOs for Disaster Reduction (GFNDR), established by NGO participants of the Yokohama World Conference in 1994, met annually to discuss lessons learned and future directions. A regional focus on community-based disaster management took off with the International Federation of Red Cross and Crescent Societies in Kathmandu (1995) and Kunming (1996), while the joint efforts of ADPC, Duryog Nivaran, and the Network for Social Studies on Disaster Prevention in Latin America (LARED) has begun to improve the collection of and access to data on hazards in Asia and the Pacific. At the national level, the Philippines excelled in the involvement of non-traditional sectors in disaster reduction. The Corporate Network for Disaster Response (CNDR) supported community capacity building for disaster management through its Bayanihan program in Luzon, Mindanao, and Negros Occidental, while the Philippines Business for Social Progress (PBSP) held showcases on innovations in disaster mitigation. The Citizens Disaster Response Center (CDRC) showed the world how to mobilize communities before and during disaster strikes.

The support and participation of decision makers and other stakeholders in disaster reduction programs across the region was achieved through highly successful information campaigns.

Forums for information dissemination gave the issues of disaster management planning, policy formulation, strategy implementation and legislation prominence at highly visible occasions. The forums also provided a mechanism for on-going dialogue between different sectors involved in disaster reduction. Information made materials accessible to as many people as possible, through translation of general knowledge into the local languages, and finding the most appropriate mechanisms for delivering the messages to those who need it.

Efforts to generate public awareness in the region ran the gamut of information, education and communication and social mobilization approaches, in programs at the national, provincial and local levels. As part of the Red Cross Integrated Community Disaster Planning Program (ICDPP) in the Philippines, Vietnam and Bangladesh, ADPC assisted with training in community-based approaches to disaster management. Commemorative events to raise awareness at the national and community levels have been held in Kathmandu and Sri Lanka.

