3.4 Community action

Risk reduction measures are most successful when they involve the direct participation of the people most likely to be exposed to hazards. Local leaders, including both men and women drawn from political, social and economic sectors need to assume a primary responsibility for the protection of their own communities.

Community processes and actions to accomplish disaster risk reduction are much talked about, in theory, but they are much more difficult to realize in practice. There is adequate experience to show that the involvement of local residents in protecting their own resources can work – if sufficient attention and investment are devoted to the subject. The salient issues and examples which illustrate successful practice are presented under the following headings:

- *the essential role of community action;*
- *community leadership and relationships;*
- *building community capabilities;*
- *NGO and volunteer activities;*
- *building local self-reliance: sharing resources, building partnerships;*
- *dynamics of local collaboration; and*
- *traditional community coping mechanisms at stake.*

"Much has been learnt from the creative disaster prevention efforts of poor communities in developing countries. Prevention policy is too important to be left to governments and international agencies alone. To succeed, it must also engage civil society, the private sector and the media."

Kofi Annan
UN Secretary-General
International Decade for Natural Disaster Reduction (IDNDR)
Programme Forum
Geneva, July 1999.

The essential role of community action

Disaster reduction is most effective at the community level where specific local needs can be met. When used alone, government and institutional interventions often prove to be insufficient and frequently are seen to be sporadic and only responding to crises. They are inclined to ignore local perceptions and needs and the potential value of local resources and capacities in the process. As a result, it is not surprising that emergency relief assistance far exceeds resources invested to develop local disaster risk reduction capabilities.

First, communities must be aware of the importance of disaster reduction for their own well-being. It then becomes necessary to identify and impart essential skills that can translate risk awareness into concrete practices of sustained risk management. Such an approach needs activities that strengthen community capacities to identify and cope with hazards, and more broadly to improve residents' livelihoods.

The Asian Urban Disaster Mitigation Program (AUDMP) has validated these principles through its activities with local institutions working in local Asian environments. In community-based disaster mitigation projects, planning and implementation are participatory in design and address the community's vulnerabilities and capacities.

Projects in Bangladesh and Cambodia have been designed by focusing on people's perception of flood risk, community flood risk assessments, community and resource mobilization and capacity-building. All of these elements contribute to integrating community-based disaster management into the daily concerns of poor and vulnerable communities, making them cost-effective options.

Community

The definition of community in this context refers to a social group which has a number of things in common such as shared experience, locality, culture, heritage and social interests.

Community leadership and relationships

Any system of local planning and protection must be integrated into larger administrative and resource capabilities such as provincial, state and national disaster plans or related risk reduction strategies. Communities cannot implement community-based disaster mitigation plans on their own.

Viable community-based disaster reduction depends on a favourable political environment that understands, promotes and supports this participation process.

A useful Australian study found that the extent of commitment by local governments to take action depends on emergency managers making the right choices about citizen involvement in planning risk management activities. This can build an informed constituency for disaster reduction and drive a real commitment among elected officials to take action. Key decisions include:

- objectives to be achieved by involving citizens;
- the timing and type of activities in the planning process in which citizens participate;
- which citizens to involve;
- techniques that can best motivate citizen input; and
- information that is to be provided to citizens.

Disasters are opportunities for change and community development. Women are participating actively in rehabilitation and reconstruction around the world. Their organizations have a special role to play and are doing so in several places.

By using "networks of networks" community-based organizations and NGOs share experiences among community leaders and groups. One such network linking women's organizations is the Grass Roots Organization Operating in Sisterhood (GROOTS).

Case: India

Another organization, in India, is the Swayam Shikshan Prayog (SSP), meaning self-education for empowerment. It is a voluntary organization based in the state of Maharashtra that seeks to bring women and communities among the poor into the mainstream of the development process.

SSP seeks to achieve its aims by building core social, economic and political competencies among grassroots women's collectives in the context of decentralized planning and development activities. District resource teams partner with community-based women's groups and local governments across the states of Maharashtra and Gujarat.

Box 3.20
Rebuilding communities in India

In January 2001, immediately after the Bhuj earthquake in the Indian state of Gujarat, Indian NGOs and community-based organizations began to help in the recovery effort. One of these NGOs was Swayam Shiksam Prayong (SSP).

Drawing on their experience following the 1993 Latur earthquake in the Indian state of Maharashtra, they proposed a policy which would not only rebuild the devastated Gujarat communities but reform and strengthen their social and political structures.

The central concept was that people – especially women – need to rebuild their own communities. Key elements of the strategy included:

- using reconstruction as an opportunity to build local capacities and skills;
- forming village development committees made up of women's groups and other community institutions to manage rehabilitation;
- engaging village committees to monitor earthquake-resistant construction;
- redressing grievances at the village level;
- striving to locate financial and technical assistance within easy reach of affected communities, and not be dependent on it being mediated by others;
- arriving at a clear definition of the role of local governments in planning and monitoring, information flow, problem-solving, and infrastructure use and development;
- distributing information about earthquake safety and entitlement to all homeowners;
- encouraging the use of local skills and labour, and retraining local artisans in earthquake-resistant technology;
- including women in all aspects of the reconstruction;
- assigning titles of houses in names of men and women;
- encouraging coordination among government officials, district authorities and NGOs; and
- seeking to facilitate public-private partnerships for economic and infrastructure development.

<http://www.sspindia.org>

Through the process of self-education, SSP facilitates the demonstration and scaling up of initiatives and strategic partnerships, and in so doing provides space for the women's collectives to participate in local planning and guidance processes. Self-help groups are encouraged first to address women's own savings and credit needs, before proceeding to broader communal development needs. This credit for empowerment strategy includes more than 20,000 women who spearhead a grassroots movement for self-reliance. The community-based network initiated by SSP now has more than 1,200 women's self-help groups, linked together through a federation that forms the basis of the movement.

Case: Turkey

In April 2001, the *Huairou Commission Newsletter* reported that Turkish women displaced by the major earthquake that struck the Marmara region in August 1999 began organizing themselves immediately after the disaster. Assisted by the Foundation for the Support of Women's Work (FSWW), Netherlands Organization for International Development Cooperation (NOVIB) and the American Jewish World Services, they worked with government agencies, local municipalities, other NGOs and technical professionals.

FSWW built eight women and childcare centres to provide a safe environment for children and a public living room for local women, providing day-care services as well as income earning opportunities for women. Additionally, these facilities have become centres for women to consider housing and resettlement problems and priorities including:

- the future utility and limitation of temporary prefabricated settlements;
- how to resolve problems of isolation, transportation, local governance, minimal infrastructure and wide-spread unemployment;
- housing requirements of renters and others who are not legal owners; and
- earthquake safety standards for future housing.

Groups of women go door to door in their community to gather basic information about their settlements, to publicize meetings and to increase participation. The women discuss problems and possible solutions, and consider their role in motivating changes. They invite experts to their centres, visit construction sites, prioritize lists of officials to contact, and devise strategies to hold authorities accountable for the information they provide and the promises they make. They visit local authorities to get information about reconstruction activities and then post their findings at the centres, the settlement administration office, shops and schools.

In all eight centres women's groups meet regularly with local officials. They also exchange strategies across centres. In Izmit, they signed a protocol with the city council to develop policy proposals on the future of prefabricated settlements and housing safety in the region. Local authorities have started to understand that the women serve an effective communication function within the community.

The most important lesson the women have learned is that resettlement is a long process that requires ongoing monitoring. Following are some of the women's impressions about their work:

- They feel more confident and stronger.
- They have begun to see that they can influence the decision-making process if they act together.
- They believe that only a common and widespread sense of responsibility in the community can promote public safety and mitigate the effects of a new earthquake.
- They are comfortable with the technical language related to construction and can question safety and quality standards.
- They understand infrastructure issues.
- They can undertake repairs and become plumbers, electricians and carpenters for the benefit of the community.

Building community capabilities

Many inhabitants of local communities are potential victims of natural disasters. Their personal assets, physical property and ways of life can be threatened by hazards. They also represent the greatest potential source of local knowledge regarding hazardous conditions, and are the repositories of any traditional coping mechanisms suited to their individual environment.

It is little wonder that it is the local population which responds first at times of crisis. Indeed, they are also those left behind to pick up the pieces and rebuild after a disaster. Given these conditions, it is striking that the participation of local communities often proves to be problematic in many disaster risk management strategies. There are several reasons why this may be so, and each points to a lesson for effective engagement of community participation.

A grass roots approach is needed to promote change and to engage fully all members of the community in reducing risks. Local communities are the most aware of historical risk scenarios. Local community groups should have the chance to influence decisions and manage resources to help reduce their vulnerability and cope with risk.

Neither the widespread dissemination of prior experience nor the abundance of scientific and technical knowledge reaches local populations automatically. An informed and sustained programme of public awareness is essential to convey the benefits of experience to vulnerable communities in terms that relate to local perceptions of need.

To be effective, knowledge must be presented in a way that relates to local conditions and customs. While this has long been accepted as a cardinal principle in sustainable development, it is not well integrated in risk reduction strategies. The realization of virtually all disaster risk reduction is essentially local in nature – and that requires community action.

A sustained programme of sharing information between knowledgeable residents and external specialists is essential. Over-reliance on technical experts and one-way communication is ineffective and marginalizes women and other groups disadvantaged in the professions and technical specialties relating directly to disaster risk management. As sharing information with both women and men at the community level becomes more important, capturing women's knowledge of local ecosystems, vulnerabilities and capacities remains a continuing challenge.

In every community, knowledge, professional abilities and experience fashioned from adversity can be found, but seldom are these resources called upon or fully utilized. A special effort is required to recall locally-valued traditional coping mechanisms and strategies. These can sit comfortably alongside modern technology.

Case: Norway

Snow and slush avalanches are a natural hazard to local communities in many parts of Norway, but especially in the vicinity of deep fjords along the coast. They cause human fatalities and significant damage to houses and infrastructure every winter.

Geiranger is an area in the municipality of Stranda on the West Coast of Norway with a high exposure to snow avalanches. As relocating the 1,000 residents was not realistic, energies were instead devoted to finding acceptable means by which they could live with minimized risks. The community took an initiative in 1996 to have an expert evaluation of the hazards. The assessment concluded that any structural mitigation measures could not be justified because of the very high cost set against the low frequency of possible events. Instead, a more attractive approach was proposed to apply an early warning arrangement together with a preparedness plan based on community actions.

The following are the major elements of the plan undertaken by the community:

- engage in technical assistance to conduct detailed hazard zoning in the avalanche-prone areas;
- organize a local avalanche group consisting of representatives from the political and technical leadership in the community, the police, civil defence agency and the people living in the hazard zones;
- prepare criteria for hazard evaluation including installation of meteorological equipment;
- prepare an action programme for different hazard levels, including procedures for warning and evacuation; and
- hire external assistance for training the local avalanche group about the nature of the hazards.

The system was put to a real test on 4 March 2001, when the weather conditions were extreme. As the hazard level was judged to be high, 32

people were evacuated to a hotel in a safe area. An additional 180 people were trapped between two avalanches because of an impassable road along the fjord but were successfully evacuated with the use of a ferry to a safe place on the opposite side of the fjord. Because of the well-developed preparedness plan, all operations were successfully carried out without the loss of life.

The learning experience from the Geiranger case is very positive. Several other communities along the western coast of Norway, exposed to similar risks, are now adopting the Geiranger approach.

Case: Uganda

Preventive landslide management is one of the most appropriate approaches to minimize landslide disasters in hilly and mountainous areas. This was demonstrated by a one-year landslide mitigation project involving the local community in Sironko district of Uganda. It was initiated by the disaster preparedness department in the office of the prime minister.

Until recently landslide management in Sironko was reactive. Government and humanitarian agencies responded to the effects of landslides when they occurred by providing victims with basic relief supplies, temporarily alleviating their suffering during the rainy season. As such efforts do not address the actual cause of the problem they do not save lives or protect property from loss or damage.

While landslides have long been perceived as natural events with no remedy, authorities only considered responding to them as they occurred. The local communities in the areas of unstable terrain were aware that they were prone to landslides but their fatalism contributed to a sense of helplessness.

With support provided by the German Agency for Technical Cooperation (GTZ), the department of disaster preparedness commissioned a study to establish the causes and to consider the impacts and possible mitigation measures that could provide a long-term solution to the problem. The report was presented to a stakeholders' workshop in Sironko district. An action plan was developed which led to the establishment of the Sironko Landslide Mitigation Project.

The research established that while it was clear that landslides resulted from a number of natural factors such as geology, soil type, slope of the terrain, drainage, rainfall and land-cover conditions, it was primarily the human activities that actually triggered the landslides in the area. This implied that the landslides and the losses associated with them could be reduced or averted altogether by altering the land-use practices.

The inception of the project was a turning point in the management of landslides in Sironko. The district and community adopted a preventive approach to landslide management based on reducing the risk by identifying and zoning risk-prone areas and then planning the most appropriate use of land; encouraging people settled in hazardous areas to relocate to safer areas; preventing new settlements in risk-prone areas; integrating landslide prevention measures into road construction contracts, establishing early warning systems; and implementing slope stabilization practices such as afforestation, reforestation and agro-forestry projects.

At a policy level, the authorities of Sironko district have adopted landslide prevention planning and management strategies by integrating landslide issues in district and sub-county development plans supported by a budgetary framework. By being aware of the root causes of landslides and seeking to address them, the local communities are also encouraged to avoid landslide-prone areas and to minimize destabilizing activities.

Following community sensitizing activities in local workshops, community meetings and electronic and print media, public perceptions about the causes and possible mitigation of landslides are slowly changing. Achievements can be seen in the following ways:

- The level of public awareness about the causes, impacts and management possibilities of landslide risks is now very high.
- The local population now appreciates that landslides are mainly triggered by human activities, and they can be reduced through better-suited activities.
- People living in landslide-prone areas were temporarily relocated to safer areas during the time of heightened El Niño threats during 2002, with no fatalities being recorded as a result.

- Risk prevention planning is done at district and sub-county levels as landslide management issues are included in district and sub-county development plans.
- An integrated approach to planning has been adopted in which all departments having interests in the landslide-prone areas plan their programmes together, taking account of the landslide risks.
- Afforestation and reforestation have been adopted as major slope stabilizing measures, with the use of fast growing trees, those helpful for other crops or which have additional value as timber.

Additional challenges also remain, often with primary implications for sustainable development policies. Although communities are being encouraged to relocate to safer areas on a permanent basis, as Sironko is one of most populated districts in Uganda there is likely to be only a limited amount of land for resettlement. Prevalent conditions of poverty are also likely to limit the opportunities for relocation of people to safer areas, with little funding for resettlement. High population densities in Sironko can threaten the sustainability of afforestation or reforestation activities. Although Sironko district and sub-counties are integrating landslide issues into their development plans, there is a general lack of funds to implement the intended plans within local government activities.

The positive start that has been made suggests important follow-on policies. There is need for the government to institutionalize preventive landslide planning and management in all districts experiencing landslides. This could productively be accomplished by encouraging landslide planning and management to be taken into account by all institutions having interests in landslide-prone areas so that individual activities do not increase the risk of landslides. For example, the construction and maintenance of roads should strive to reduce the risk of landslides, rather than contributing to their later occurrence. Where it is feasible or the potential loss is great, there are instrumentation mechanisms that can monitor landslide risks or otherwise provide early warning of impending destabilization.

NGO and volunteer activities

Experience demonstrates that NGOs involved in disaster risk reduction are focused primarily on public awareness activities and advocacy programmes, although it should be noted that there are also other examples of their commitment found throughout this global review. In particular, many NGOs seek to encourage a shift in emphasis from emergency disaster response to local community participation in planning, assessing vulnerability and implementing risk management practices.

Some countries, including Bangladesh, India and the Philippines have elaborate policies and operational mechanisms to accommodate the participation of NGOs and community-based organizations in all aspects of national development. However, the extent to which they have embraced risk reduction activities is still modest.

In the Americas, there has been a recent spurt of interest in the subject but concrete policies are yet to be fully realized. In Africa, a handful of initiatives seem more a consequence of current or continuing threats than motivated by a fundamental shift in policy awareness or local community commitments.

Case: Philippines

In the Philippines, the Citizen's Disaster Response Network (CDRN) is a national network of 14 NGOs that promotes community-based disaster preparedness work. Since its inception in the early 1980s it has conducted advocacy work to help reduce the impacts of hazards.

By working together with communities, CDRN has developed strategies to enhance people's capacities, forming disaster response committees in villages, developing local early warning systems, organizing rescue teams and diversifying livelihoods. Receiving little external support from donor agencies, it has reached hundreds of villages and initiated community-based disaster mitigation initiatives.

Case: Bangladesh

CARE Bangladesh has adopted a community-based approach to reduce the vulnerability of flood-prone communities in the Tongi and Gaibandha municipalities of Bangladesh. This has been

accomplished by working in collaboration with partner NGOs in the municipalities and with the Disaster Management Bureau of the government of Bangladesh.

As part of the Bangladesh Urban Disaster Mitigation Project, the activities were funded by OFDA/USAID and managed by AUDMP. The project began by motivating community volunteers to conduct baseline surveys and vulnerability assessments. Different community groups recognized the importance of their joint community efforts mobilized by these initial activities, and how each could contribute to practical risk reduction activities.

This project emphasized the importance of promoting hazard and risk awareness among community groups. It sought to involve collaborators in other subject areas by placing community-based disaster risk management issues on the political agenda.

Since 1998, the government of Bangladesh has designated the last working day of March as National Disaster Preparedness Day in order to promote community awareness about the value of disaster risk reduction. In 2001, this national day was organized jointly by the Tongi and Gaibandha Municipality Disaster Management Committees, CARE Bangladesh and other partner NGOs.

Case: Zimbabwe

The Community Drought Mitigation Partners' Network is chaired by the local NGO Southern Alliance for Indigenous Resources (SAFIRE). It aims to promote and strengthen drought mitigation in Zimbabwe. The current members are Environmental Development Action in the third world, the Organization of Rural Associations for Progress, Zimbabwe Freedom from Hunger Campaign, World Vision and Zimbabwe Projects. They all strive to implement joint community-based risk reduction projects, conduct public debates on drought mitigation, and produce and distribute the *Living with Drought* newsletter.

Their efforts seek to share the benefits of their experience and to circulate the results of recent scientific research related to disaster reduction. Meetings are also convened between scientists and innovative farmers.

An anticipated Southern African Drought Technology Network represents the idea for a similar regional network that can address the needs of the rural poor. It intends to facilitate information-sharing among small-scale farmers, NGOs and community-based organizations in the areas of rural food security, agricultural research and extension, as well as relating the role of agribusiness in fostering drought-coping strategies.

Community-based disaster risk reduction initiatives are well developed in Zimbabwe, but documentation of successful practices can be improved. It will be important to complement this with further research to feed into the further elaboration of national disaster management plans and strategies.

Case: Germany

The Community Action Group for Floodwater in the Old Community of Rodenkirchen is a non-profit association in a district of Cologne, founded after the severe flooding of the Rhine River in 1993 and 1995.

This community group promotes the interests of more than 4,000 residents in matters of local flood protection. It strives to achieve a balance between the legitimate protection of the population and the aims of a sustainable floodwater policy which also must include the rights of downstream inhabitants and the river ecology as a whole.

"We are convinced that protection against flooding can only be successful in the long term if all inhabitants along the river perceive themselves as a community working in solidarity with each other. As we ourselves have experienced with our own considerable efforts and the many setbacks we have suffered, acting together does not come naturally but, rather, it is a product of knowledge, experience and conviction, mediated through communication – and this is best achieved through personal contacts."

Source: Community Action Group for Floodwater in the Old Community of Rodenkirchen, Cologne, Germany.

This means, for instance, that while the group supports the construction of polders on the upper reaches of the Rhine and its tributaries, it also expects the city of Cologne to undertake its own efforts to ensure that any natural retention areas which are sacrificed as a result of structural protection measures are compensated by other environmental considerations or practices for flood management in the municipal area.

Building local self-reliance: sharing resources, building partnerships

Disaster reduction depends on the conscious commitment of individuals and communities. This requires understanding and accepting the values of changed behaviour, having access to the necessary technical and material resources, and accepting personal responsibilities to carry through the efforts involved.

Communities are frequently inattentive to the hazards they face, underestimate those they identify, and overestimate their ability to cope with a crisis. They also tend not to put much trust in disaster reduction strategies and rely heavily on emergency assistance when the need arises.

These viewpoints underline the need for tools to create a culture of prevention against all forms of hazards within communities. This requires the knowledge of practical and low-cost methods to address likely hazards that can be conveyed to a wide variety of participants including community groups, merchants, wider commercial interests and local government employees.

Case: Indonesia

In recent years, Bandung, Indonesia has suffered repeated floods. The communities most affected have been low-income populations. They seldom had ready access to warning information or emergency equipment that would enable them to evacuate to safer areas or protect their possessions. Efforts to reduce the risk of annual floods through strategic planning have become necessary.

In 2000-2001, the government of Indonesia asked the Bandung Institute of Technology (BIT) to implement a community empowerment project in cooperation with the Asian Disaster Reduction Center (ADRC). Following the Great Hanshin-Awaji Earthquake in Japan in 1995, ADRC learned that community participation is indispensable to enhance disaster management capabilities.

Thus the Bandung project aimed to help local residents cope with flood risk. Two flood-prone districts were selected as test cases for town-watching. Local residents walked around their communities with BIT experts to discuss specific factors that could improve their capacity to live with risk. As a result, local residents proposed measures such as road improvements, the construction of protective embankments and better definition of natural watercourses in order to reduce future risk factors.

Case: UN Centre for Regional Development in India, Indonesia, Nepal, and Uzbekistan

The UN Centre for Regional Development (UNCRD) Hyogo Office was established in Kobe, Japan in April 1999 to promote disaster mitigation activities in developing countries. It provides advisory services to vulnerable communities, especially in ways that can improve the safety of primary community facilities such as schools and hospitals.

These programmes help to develop disaster-resistant communities by linking socio-economic considerations with physical hazards in urban development work at local levels. The ultimate goal is to attain safer and more sustainable livelihoods. To achieve this, the initiatives focus on community development and empowerment activities.

Specific programmes such as the School Earthquake Safety Initiative formulate new approaches to integrate disaster mitigation components into urban development work through school activities. The programme is being conducted in India, Indonesia, Nepal, and Uzbekistan with the overall goal to empower communities with know-how and technology for safer earthquake construction, and to build disaster-resilient and self-reliant communities.

To achieve this, specific focus has been given to schools. The vulnerability of the school buildings is evaluated and affordable retrofitting techniques are then recommended. There are five project objectives:

- evaluate the vulnerability of school buildings in each of the selected cities;
- recommend designs and affordable means of strengthening vulnerable schools;
- retrofit one or two demonstration schools using appropriate or improved traditional technology;
- provide training to local construction workers who build schools and residential dwellings; and
- prepare disaster education materials for school children, teachers and communities and use them for training and education purposes.

Case: India

More than one year after the earthquake in Gujarat, most of the affected families were still struggling to put their lives together. While in some places aid agencies had built and handed over houses to villagers, the experience of a local community in Patanka shows how community-led rehabilitation can yield results.

Patanka, a village of about 250 families, suffered extensive damage during the earthquake. About 170 houses collapsed and the remainder were badly damaged. Since it lies in an area beyond the reach of most relief teams, it received less attention from aid agencies. Even distribution of government compensation, as everywhere, was taking time.

Kheemabhai, a village leader from Patanka, learned about a Delhi-based disaster management NGO called the Sustainable Environmental and Ecological Development Society (SEEDS). He contacted SEEDS and explained that the inhabitants would like to reconstruct their village, themselves. Although SEEDS had been working in the area, this was the first time it was approached by a community keen to reconstruct itself. The village only requested logistical support from the NGO.

A meeting was organized with the district government to ensure speedy distribution of compensation so that the villagers could start rebuilding their homes. After a visit to the village by the district official, the enthusiasm he found convinced him of the opportunity the people represented. Patanka became a hive of activity.

People began rebuilding their homes; getting building materials from a special depot and collaborating with engineers on technical details about seismic-resistant construction. Entire families became involved, with women and children seen curing the masonry work with water or ferrying material to their sites.

Everyone contributed to the partnership approach. The initiative was truly led by the community. The SEEDS team helped the villagers obtain building materials, including limited amounts of cement and steel. The villages supplied their own stone, bricks, wood, roof tiles and labour. Architects and engineers from SEEDS trained the masons, labourers and the villagers on earthquake-resistant technology through on-the-job training and workshops.

Patanka is an international example of good practice in community-led rehabilitation. Two master masons from Nepal's National Society of Earthquake Technology came to teach their Gujarati partners how to build safe houses. They developed a very good rapport with all the villagers and expressed considerable respect for the abilities of the local masons.

While there were many external supporters, the decision-making was done by the people of the community itself. Each family determined its own home design, the material they would use and then initiated the construction. Now, there is a pool of trained masons in the village able to help neighbouring villages to rebuild.

Recognizing the strength of this community-led rehabilitation model, organizations including UNCRD, Gap Inc. and the Earthquake Disaster Mitigation Research Centre in Japan all supported and promoted the Patanka project.

In Patanka, there was not only excitement about building a new village, but a great sense of ownership and pride among the villagers. They did it themselves, paid for it themselves, and accomplished it in a technically safer way that will protect their homes in the future.

SEEDS and UNCRD recently published *The Sustainable Community Rehabilitation Handbook*, based on their experience in reconstruction following the Gujarat Earthquake.

Case: South Asia – Bangladesh, India, Nepal, Pakistan, Sri Lanka

Duryog Nivaran, the Network for Disaster Mitigation in South Asia, sponsors a project called Livelihood Options for Disaster Risk Reduction. The project recognizes that for millions of people in South Asia, living with disaster risk is a fact of everyday life. Therefore, the project is community-based and identifies the links between livelihoods and disaster risk reduction.

Only by strengthening livelihoods and building more effective coping capacities within communities can a viable foundation for disaster risk reduction be created. Supported by the Conflict and Humanitarian Affairs Department of the UK's Department for International Development (DFID), the project has the following goals:

- conduct research to identify the implications of disaster risk on livelihoods;
- formulate strategies that strengthen livelihoods and reduce risks;
- develop the capacities of stakeholders through community-based approaches to disaster management;
- undertake pilot demonstrations of risk reduction strategies;
- advocate policies to influence a paradigm shift that recognizes disasters as a part of the development process; and
- empower communities to take an active role in building resilience to hazards and to minimize future exposure to disasters.

<http://www.duryognivaran.org>

Case: Maldives

Community awareness of vulnerability is common in the Maldives. The country's landmass of low-lying coral atolls is particularly threatened by rising sea levels. From 1998-2000 there were five damaging storms that affected 43 islands and five atolls.

In June 2000, severe waves lashed the resort island of Bolifushi causing US$ 1.3 million in damage. To prevent such hazards from becoming future disasters, local communities and NGOs have worked together planting trees on the beaches and constructing sea walls to prevent beach erosion. This has minimized the impact of waves on the islands.

Case: Central American communities

The Central American Community Risk Management Network was inspired by the impact of Hurricane Mitch. Feeling as though they had been excluded from the reconstruction process, community-based organizations worked to develop grassroots approaches to risk management and disaster reduction. The network was formed in Nicaragua in May 1999 with the support of CEPREDENAC, GTZ, UN-HABITAT and the IDNDR.

The network works through existing community organizations by providing training and technical advice. It has focused its attention particularly on the popular understanding of the relationships that exist between disasters and development. It stresses the need to strengthen existing community-based development organizations rather than creating new local disaster organizations. Member communities of the network have participated in early warning projects and training activities.

Dynamics of local collaboration

With the proper motivation, local communities are receptive to new ideas. However, the full participation of local inhabitants is only possible to the extent that efforts are based on mutual trust, a clear definition of the decision-making process and transparency in the management and financing of the activities. Politics and financial disparities exist in most villages and neighbourhoods, so it becomes important to identify shared values and concerns.

Scientists and engineers need to translate their research findings into concepts and language understandable by communities. Administrators must devise risk management practices that protect residents' interests and assets.

More often than not, successful community action hinges on low technology approaches that are easily and economically adopted by local people. Community action must be associated with a larger national strategy in which local efforts play a crucial part. Importantly, it must be recognized that localities are not unitary or one-dimensional but reflect communities of interest based on economics, location, gender, ethnicity and other factors.

If local capacity is to flourish, community collaborations must be inclusive and working relationships developed or strengthened among worker associations and unions, environmental groups, women's groups and other community associations. Successful outcomes depend on community involvement in planning and implementing activities so that local residents feel that the work of reducing risks has relevance to their lives.

They are crucial in both risk mapping and resource assessment, as too often the needs and resources that already exist within a community are overlooked or discounted. If these assets are harnessed and developed from the beginning, they form a valuable part of the process.

The IFRC Disaster Preparedness Appeals Analysis Mapping for 2002-2003 has indicated that a significant percentage of the sample group of 32 National Red Cross and Red Crescent Societies included community-based disaster management activities in their programmes. The IFRC learned that successful participatory planning needs to define a distinctive methodology with clear aims and objectives. It needs to involve

Box 3.21
The benefits of experience in community participation

The following is a list of the benefits and limitations of community participation in risk management observed by the International Federation of Red Cross and Red Crescent Societies.

Benefits:

- Participatory rapid appraisals provide relevance, increase ownership, and motivate self-initiated projects (Nepal).
- Bridges the gap between relief and rehabilitation (Mozambique).
- Increases the number of volunteers – the formation of Red Cross and Red Crescent community groups increase capacity at the local level.
- As mitigation components increase, so does resilience at community level, encouraging partnership processes.
- Action planning and identification of vulnerability become more problem-oriented (India).
- The development of community disaster plans creates a more organized response; they become a unifying force (Peru).
- Integrating community-based disaster preparedness with health programmes promotes development and income generation, increasing resilience to disasters.
- Establishing networks with local government leaders (Papua New Guinea).
- Community originated empowerment supported by Red Cross and Red Crescent through moral support rather than hardware, for example by encouraging the identification of risks by communities.
- Integrating disaster preparedness into health workshops merges similar programme interests and aids cooperation within volunteer training of civil protection agencies, the Ministry of Health, and the National Red Cross and Red Crescent Society (Syria).
- Creating regional awareness for community action and promoting HIV/AIDS as global disaster and health issues (North Africa).

Limitations:

- Sometimes there was misunderstanding with local authorities, who saw the programme as a threat to maintaining a sense of dependency by the local population.
- Inadequate capacities of the local Red Cross and Red Crescent to support activities at the community level. However, community-based disaster preparedness approaches progressively are resulting in increasing Red Cross and Red Crescent capacities at national, branch and community levels of activity.
- Poor planning processes in some areas.
- Insufficient efforts to ensure sustainability after initial funding period.
- Roles can sometimes clash with those of local authorities, especially in the absence of an inclusive planning process.
- Lack of community-based disaster preparedness and management was a serious detriment in gaining public response at local level (Turkey).

Source: International Federation of Red Cross and Red Crescent Societies, 2002.

the government, technical agencies, NGOs, community leaders, UN and other international agencies. In addition careful thinking is required for a reliable funding strategy that can ensure sustainable commitments.

There is a need to identify performance indicators and criteria for success if a sense of public value is to be sustained. In this regard, it can be important to define local roles within the larger context of other national programmes. The experiences of the national societies in Bangladesh and Philippines demonstrate positive relationships between integrated participatory planning and enhanced levels of local self-reliance.

Traditional community coping mechanisms at stake

In many places, land use in local communities is based on traditional practices which help to cope with phenomena such as drought and floods. Both land tenure and seasonal uses and resources are often based on communal interests, frequently reflecting long considered environmental conditions. In many communities in Africa, island states and particularly fragile ecosystems such as arid lands, these practices may be respected more by local inhabitants than national juridical law.

Increasingly, traditional ways are being replaced by dominating modern economic interests, often increasing vulnerability and exposure to hazards and weakening coping capacities. Examples can be found in the Brazilian rainforest, where the interests of indigenous groups are being superseded by external economic interests. In some places forest is being replaced with pastoral land, causing land degradation, increasing potential drought and flood conditions and creating circumstances of social exclusion among the traditional or settled inhabitants.

In just one example that is not unique, urban migration in Pacific island states results in radical lifestyle changes for many islanders. Urban immigrants frequently lack knowledge about local hazards and urban risks, and are seldom familiar with appropriate behaviour to minimize potential losses in their adopted habitats.

More importantly, in terms of a social cohesion that is essential for self-reliance, they are often marginalized politically and frequently lack the social network of kin. Such a network supplies vital support and can be relied upon for information and communal responsibilities in most villages.

The process of urban adaptation involves a shift away from community self-reliance and shared knowledge towards an expectation that official government organizations will provide protection, warnings, support and relief. These are considerations yet to be seriously accommodated in national strategies of disaster reduction and risk management.

Future challenges and priorities
Community action

It is crucial for people to understand that they have a responsibility towards their own survival and not simply wait for governments to find and provide solutions. A meaningful link needs to be fostered between the development of national policy direction and the use of mechanisms that can translate disaster reduction principles into sustained and flexible locally-based activities.

Community participation is something that is understood differently in each cultural or political context. Following are some challenges and priorities for consideration:

Increasing social cohesion and community empowerment at all levels

- Local communities, civic groups, traditional structures and public services should be encouraged and financed as they can reduce vulnerability and strengthen local capacities.
- Existing community-based organizations, including women's organizations, should be reinforced.
- Mechanisms for community participation in information, decision-making and resource management to reduce risk should be strengthened in ways that include all community groups, and both women and men equally.
- The involvement and participation of people in all technical, developmental and policy-related projects need to be encouraged by creating inclusive discussion forums. In this way, people can evaluate, explain and discuss their own needs, as well as maintain a dialogue with scientists, politicians and other skilled people about what can be done to reduce risks.
- Externally determined policies should be re-evaluated by local people to ensure they are compatible with their community needs.

Enhancing local technical skills

- Transfer of expertise at local level should be enhanced, such as early warning procedures particularly suited to small-scale requirements.
- Transfer of local experiences and their application within various communities must be developed.
- Traditional knowledge or means of anticipating and managing risk factors should be recorded and as needed, taken into local consideration.
- Better communication is required among authorities and community leaders.

Ultimately, the success of risk reduction pertains emphatically to sustainable development, and both endeavours require the widespread participation of an informed and committed public. As the sustainable development context encourages participatory processes through community efforts, these should also be applied to disaster risk reduction practices.

As effective risk reduction must draw on traditional strengths, collective experience and local skills, they must all be pursued conscientiously over a period of time and supported with necessary resources, long before an immediate threat of crisis.