

2. Case studies on the way to a preventive culture: What are the needs of vulnerable communities/people at risk and how can we reach them?

The following three case studies from Kenya, Mozambique and the Phillipines vary according to the types of recurrent natural disaster situations discussed, including slow on-setting phenomena (e.g. drought) and rapid on-setting phenomena (e.g. flooding). The authors also come from different organisations and different backgrounds. Their countries differ a lot in how much experience they have in disaster prevention and preparedness. But it is interesting to see, that they draw many similar conclusions and give similar answers to the questions, asked: What kind of disaster preparedness was successful, what wasn't? What worked to raise awareness, to act, to advocate? What didn't - and why? What are the next immediate steps to be done to improve awareness for disaster preparedness? What are cornerstones of a preventive culture?

To drink and sit in jail - cornerstones for a preventive culture?

It is May 8, 1902, the Day of Ascension. The cathedral in Saint Pierre, the capital of the Caribbean island Martinique, is overcrowded. Nearly no one has evacuated the city out of fear, after the small eruptions of the nearby volcano Mont Pelée in the last weeks. Around 7.45 h the volcano explodes, causing lava to overwhelm the city and all the life that inhabits it. Burning rum from the storehouses flows into the sea and sets ships afire. Everyone on land dies, the total being a good 29,000. Only the docker Augustus Ciparis survives. Due to Drunkenness, he had been sitting in jail. The following case studies show, that there are more promising ways for disaster preparedness.



Frank Miller, Keep the Memory Alive, SZ-Magazine, 05-05-06, 14ff.

2.1. Case study one - Kenya : First steps to disaster preparedness

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Introduction:

Since 1950, Kenya has experienced over 15 serious droughts and a significant number of flood events that seriously affected livelihoods, natural resources and the economy as a whole. Despite the frequent occurrences of these hydrological disasters, their management has remained largely reactive until recently when disaster preparedness schemes, including seasonal forecasting, started gaining prominence. Strengthening disaster preparedness among local communities may help in reducing the extent of damage and the need for disaster relief.

2.1.1. How communities have coped with drought in Kenya

Kenya, like many parts of sub-Saharan Africa, remains highly vulnerable to hydrological disasters, such as droughts and floods, due to its geographical location, high levels of poverty, dependence on natural resources and over-dependence on rain-fed agriculture. Climate variability is already affecting large parts of arid and semi-arid lands (ASALS) which account for over 80% of the total land area in Kenya. The ASALS are experiencing increased occurrence of drought and related risk of famine. The highly variable and unpredictable climate and global warming could worsen the situation with an increase in the intensity and frequency of extreme events such as droughts. A number of approaches, ranging from the traditional coping strategies to the more recent disaster relief activities, have been applied with mixed degree of success as described below.

2.1.2. Community Level coping Strategies

Local communities have coped or lived with climate variability over the years using a number of strategies. The strategies adopted by individuals or households, to cope with extreme events, depend on the type of resources, economic activities and social networks that can be accessed. Strategies ranged from migrating to other areas, collection of wild fruits, depending on remittances, switching to non-farming activities or in extreme cases, sale of assets (Orindi and Murray, 2005).

Box 1: The role remittances in reducing household's vulnerability to drought.

In Kitui District, Eastern Kenya, households receiving remittances from employed family members, relatives or friends are not usually affected to the same extent as those who don't receive. The money received is often used to buy food stuff or start petty business. The money may also be used to buy different kinds of seeds or livestock hence facilitating their recovery. In poor households that do not receive any remittance, women are found to spend increasingly more of their time away from the house engaging in income generating activities. This reduces the time spent on child care. School attendance is also affected by drought. School going children often stay at home while hungry; may engage in casual employment or petty trade to generate income. This is one of the reasons while school feeding programme was introduced in the drought prone areas of Kenya.

Source: Eriksen, 2000.

Mobility has been a key feature of the dry land pastoral systems. Use of rotational grazing in the wet and dry seasons not only avoided overgrazing but also ensured the continued productivity of grazing lands. Appropriation of wetter areas and water resources for cultivation and loss of dry season grazing areas due to establishment of conservation areas have undermined mobility and put pressure on subsistence herders, increasing their vulnerability to drought, for example. Pastoralists also split and distribute their stock among relatives and friends in other places as an insurance against total loss in case of a disaster. Such arrangements help households restock after drought by facilitating a speedy recovery. Other strategies include maintaining female dominated herds, diversification of livestock species, keeping herd sizes large, unregulated breeding resulting in the birth cycle of livestock during all phases of drought and the use of ethno-veterinary remedies (Aklilu and Wekesa, 2002). Of late, pastoral groups have also adopted crop farming when faced with the problem of decreasing grazing areas.

Among the farming communities, mixed cropping has been used as a form of insurance against rainfall variability or pest attack. Having different crops in the same field or various fields with different crops, reduce the risk of complete failure in the case of drought. Traditional irrigation, practised mainly for subsistence, has

been used to compensate for unreliable rainfall conditions in many places. Irrigation allowed out-of-season crops to grow, which ensured food availability throughout the year. But a number of changes, including formalization of land and water rights, have reduced the ability of subsistence farmers to access such resources as they have interfered with the way such resources had been managed. In many places where traditional irrigation was practised, both land and water resources were owned and managed communally. Formalization of land and water rights has partly contributed to the increased vulnerability of some of the subsistence irrigators who now find it increasingly difficult accessing land and water resources..

Increased reliance on wild fruits and the collection of forest products (honey, fuel wood) for sale during drought also enabled households to survive the difficult periods. Indigenous fruits are regarded highly because they do well in drought conditions. In addition, any household member can harvest them. Some households do reduce the number of meals per day to ensure whatever is available lasts for a *longer* period of time.

Other strategies that are becoming equally common include starting petty business and taking loans from traders. Loans gives households the opportunity to engage in alternative activities, diversify their stocks or crops. People have also been found to sell household goods, crop harvests or, in extreme cases, land to pay off debts. But the sale of productive assets, like land, does not only erode the asset base but also compromise households' longerterm livelihood security and ability to cope with future extreme events.

The living conditions and, by extension, the coping strategy adopted by households or communities were informed by their knowledge of the environment (Indigenous Knowledge-IK). Traditional knowledge helped people cope with day to day challenges, detect early warning systems of change and know how to respond to challenges. Communities had their own early-warning systems for disasters, which depended on traditional indicators such as flowering of plants, direction and movement of winds, animal behavior, call of birds and position of stars (Aklilu and Wekesa (2002), Kihupi et al, 2003)

Box 2: Some of the traditional indicators used in parts of east Africa

A. Poor Rains/ Drought Indicators

Storm, thunder and lightning during the first few rains
 Immature dropping of fruits
 Lower than normal ambient temperatures especially at night
 Increased libido in donkeys
 Migration of large swarm of butterflies or bees
 Occurrence of army worms

B. Good Rains

Higher than normal flowering of mangoes
 Higher than normal ambient temperatures especially at night
 Mushrooming of ant-hills which are moist

Migration of large swarm of bees was an indication of drought requiring pastoralists to migrate in search of grass and water in the dry season grazing areas. Forecast information and early warnings were not documented but passed on informally using many different strategies. Forecasts information were shared as people work together in farms, in evenings around the fire place and also during cultural events. Warnings against impending disasters were issued through *cries, horn blowing, drum beatings, smokes* etc.). Such knowledge systems had the advantage of being easily understood and widely accessed by the majority of community members. Traditional institutions, norms and taboos, being pre-emptive in nature, also played a role in disaster reduction. People, for instance, were prohibited from settling in disaster-prone or ecologically sensitive areas. Because indigenous knowledge is more experiential, it still has a place in informing today's disaster management practices. IK should be strengthened through testing and establishing relationships with the the modern scientific knowledge.

It is important to note that most of the coping strategies are aimed at dealing with known events and, only a few aimed at dealing with long-term impacts of climate change may exist (Orindi and Eriksen, 2005). Some of the coping strategies will therefore become inadequate with the increased frequency and intensity of hydrological disasters expected with climate change. But they nevertheless provide important lessons that can be used to strengthen adaptation strategies and effectively manage climate related disasters. Building on indigenous knowledge also ensures that the disaster relief provided is appropriate. Otherwise in-appropriate disaster relief is no better than inappropriate development.

2.1.3. Conventional approaches to dealing with drought in Kenya.

Despite the many drought events together with the associated impacts on human health, economy and environment as a whole, the disaster management in Kenya has largely remained reactive with emergency food relief being the first line of response. In an attempt to reach as many people as possible during such crises, grain food, for example, has been extended to areas not usually affected by drought. Even though food relief remains important in such situations, the blanket distribution of food aid ignores the fact that people or households are not affected in the same way by disasters. Lack of targeting or the blanket distribution of food grains and other forms of relief aid not only reduces the amount of help that the neediest individuals or households can get but may also erode local initiative, coping capacity and create a dependency syndrome. Among the pastoralists, for example, food aid has been found to disrupt migration routes, while water interventions, in some cases, have led to environmentally-damaging concentrations of herds and water-related conflicts (Aklilu and Wekesa, 2002).

Seeds, as another form of relief, have been given to disaster-affected farming households to help in the recovery process. The *conventional* approach of supplying affected households with seed relief starts with sourcing for the seeds, mostly from commercial seed dealers, followed by transport, storage and distribution using existing government structures/institutions. Under this method of seed aid distribution, affected communities remain passive recipients of seeds. In addition, they are usually supplied with *what is available* from commercial seed dealers (more often limited variety of hybrid seeds) rather than *what they need*. Apart from being bureaucratic and time-consuming, the approach has been blamed for weakening the farming systems of drought-affected regions by providing only a limited variety of seeds (mostly hybrids) - killing local initiatives and capacities to supply well adapted seeds. The use of hybrid seeds not only requires inputs, such as fertilizers, which households can rarely afford, but also makes the farming system more vulnerable to future disasters due to its uniformity. Moreover, it ignores the fact that diversity was the hallmark of dryland farming in many parts of the world. Despite this background, the use of Seed and Voucher Fairs (SVF) in emergency seed relief has gained popularity in the recent past. Seed fairs are one day events organized to bring together seed-selling farmers on the one hand, to display their seeds and seed-seeking buyers on the other hand, to purchase seeds they need in time for the next planting season . Prior arrangements to seed fairs include setting the date and venue, identifying exhibitors, judges, and seed needy households in a participatory manner and issuing them with vouchers to be used in purchasing seeds.

This approach has been supported by the Kenya Food Security Group (KFSG), bringing together government, civil societies, relief and development partners since the 1999/2000 drought. Apart from being faster than the conventional approach in distributing seeds in emergency situations, SVF also ensures that much of the help/resources remain within the affected areas, thereby strengthening local initiatives (community seed systems) and their economy. The fact that farmers can access the type and quantity of seeds they want also helps in maintaining the diversity of the farming systems, hence reducing their vulnerability to extreme events or pest attacks that is associated with monocultures in production systems. As seed fairs goes on, a lot of information and experiences are usually exchanged- a social capital that the conventional system of seed aid distribution lacks. Above all, SVF ensures that only the neediest cases get seeds as the selection is participatory, with members of the local community (who knows each other better) having the final say as to who may benefit from the relief.

Initiatives that can maintain or support the local productive systems, for example the creation of markets in areas where de-stocking is necessary, have higher chances of succeeding in making disaster affected households and communities more resilient and less dependent on external aid. In deed the development NGOs like Intermediate Technology Development Group (ITDG) have been promoting Seed Diversity Fairs (SDF) as a way of strengthening dry land agriculture. SDF are cultural events aimed at creating markets for locally produced seeds while SVF is an approach used in distributing seed relief.

Box 3: The CRS Seed Fairs

Following the successive crop failure between 1999 and 2001, CRS/Kenya and partners using \$ 286 000 organised 65 seed fairs in parts of eastern Kenya which reached 38, 275 households. Vendors in the seed fairs consisting of individual farmers, grain traders in markets, local shopkeepers, seed stockists, companies, research institutes and church organisations totalling 2, 444 in number sold 937 MT of seeds. Varieties of locally adapted seeds which are not usually available with commercial dealers were brought for sale. Using the Seed Fairs approach, CRS and partners were able to identify the seed-needy households, mobilise the seed suppliers and ensured that farmers got the seeds in time for planting.

Source: Omanga, 2004:62

With the realization that relief aid alone is not effective or adequate in meeting the needs of disaster affected households, early warning and drought preparedness schemes are now being given increased attention. Attempts are now being made to disseminate weather forecasts to users even though the coverage or reach of such information remains limited to those having access to the form of media used such as newspapers, radios, television sets and so forth. Since not all poor people, who also happen to be among the most vulnerable, have unlimited access to information passed through the media, the majority of them are still caught “unaware” and remain seriously affected by drought. The early warnings and forecasts information rarely reach the poor and vulnerable households; however even when they receive it, it is often too late, not easily understandable and rarely gives guidance on what the local people can practically do with such information. Forecasts and early warnings should be disseminated in time and provide guidance on what the different livelihood groups can usefully do in anticipation of the impending disasters.

Despite their limited coverage among vulnerable groups, including the poor and rural areas, the media can still be used to effectively and widely disseminate weather and disaster warning information in a timely manner for the benefit of local communities. What is needed are perhaps ways of ensuring that such information reaches the most vulnerable and a format easy to understand to allow households to make necessary adjustments. This will require synthesizing available information and interpreting or presenting it in a manner that will be of maximum use to the different livelihood groups. There is need therefore to train journalists/reporters on how to effectively present such information. The media also has a role to play in mobilizing local resources for disaster relief operations, such as Kenya's recent drought experience demonstrate. *In 2004, the nation media group helped in raising roughly 45 million Euros towards relief supply in drought- affected areas* Contributions from locals are important in managing disasters considering that they are likely to increase in frequency and intensity; governments and development partners have limited resources that cannot meet the demands of disaster-affected population; and even worse, these resources have to be shared with other sectors. There is a need to sensitize the media on the importance of giving prominence to disaster preparedness and early warnings as they currently do to relief efforts.

2.2. Case study two - Mozambique: First Lessons from Community Based Disaster Preparedness

The Mozambique Red Cross Society and Community Based Disaster Preparedness

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Introduction

At independence in 1975, Mozambique was one of the world's poorest countries. Centuries of Portuguese colonial rule and a violent civil war after independence marked the country, and by the end of the civil conflict, had destroyed much of its physical and social infrastructure. Political stability since the first multi-party elections in 1994 has led to improvements in the country's growth rate, but despite the outstanding development in the latest years, the country continues to face enormous development problems and challenges with major impact on human development. It remains one of the poorest countries in the world, ranking in the Human Development Index 2005, 168 out of 177 countries (UNDP, 2005). In 2005, it is estimated that 56.7% of the population is illiterate, being 71.2% women. According to the Government data, 54% of the population lives in absolute poverty and 71% of the population lives in rural areas. An estimate of 58% of population does not have access to basic sanitation and 42% use water from unprotected boreholes.

Like other countries in Southern Africa, Mozambique is prone to a wide range of natural disasters with devastating impact on the people, livestock, property and infrastructure. In Mozambique, the situation of disasters is aggravated by its location in a geo-climate region characterised by extreme climate phenomena. The country's coast forms nearly the entire western perimeter of a very active tropical cyclone belt - the Southwest Indian Ocean Basin. Each year, this basin alone produces almost 10% of the entire world's cyclones. Tropical cyclones originating from this basin hit Mozambique once a year on average, while less-magnitude tropical disturbances hit three to four times per year.¹

Flooding in Mozambique is caused by a number of factors, including heavy localised rainfall, tropical cyclone activity, and the poor management of upstream dams and wetlands in other parts of Southern Africa. The worst floods in people's memory hit the country in the years 2000 and 2001. These floods caused considerable disruption and devastation in the southern and central regions. The international community played a major role in mobilizing financial assistance to support the reconstruction and recovery programme. In 2003, Mozambique was once again hit by two cyclones.

Droughts are historically more frequent and affect more people than floods in Mozambique. Currently the food security situation in the southern and central parts of the country is serious after three to four years of crop failures causing serious implications for the economic base of the rural population. Since subsistence agriculture employs the vast majority of the country's workforce, the destruction of their main source of subsistence and monetary income by disasters is particularly problematic. Southern Africa is currently affected by a drought very similar to the one that provoked the 2002-2003 food insecurity crisis. The World Food Programme (WFP) estimates that more than ten million people are in need of food assistance. The worst affected countries in the region are Zimbabwe and Malawi, followed by Zambia, Lesotho, Swaziland Namibia and Mozambique, where according to data from the Mozambique's Technical Secretariat for Food Security and Nutrition (SETSAN) the number of affected people is 1.142.250.

Knowing that more disasters are likely to happen due to climate change, it is important to strengthen the capacity of disaster programmes in Mozambique, as well as raise awareness about climate change to improve ongoing risk management initiatives that depend on community participation, including early warning and food security projects.

The Government's role in Disaster Management in Mozambique

The Mozambican Government approved its National Disaster Management Policy in Resolution 18/99, which sets the objectives and priorities aimed at fighting poverty and established the National Disaster Contingency Plan, with emphasis given to the local levels. During the years 2000 and 2001, the Government Disaster Management Department (INGC) established departments in each of the 11 provinces as well as in the districts most prone to disasters. A Disaster Management Law has been approved but lacks clear regulations for its effective implementation. Also, the role and place of the Red Cross in the country's disaster management interventions, as an auxiliary to Government capability, has yet to be defined.

2.2.1 The Mozambique Red Cross Community Based Disaster Preparedness Programme

The Mozambique Red Cross Structure

Mozambique Red Cross Society (CVM) is the largest and farthest reaching community-based organization in the country. It operates in various fields (Disaster Preparedness (DP) , HIV/AIDS, health, water and sanitation and social support to vulnerable groups) and has an office in Maputo, the capital city, where the National Head Quarters office (NHQs) is based. It has 170 contracted staff in the 11 provincial delegations (one in each Province). In each province there are several districts, totaling 140 in the whole country. At district level CVM operates in 110 districts, through CVM District Commissions composed of volunteers, responsible for the supervision of 5,100 active volunteers who implement the activities in the field.

The volunteers are selected from the same disaster-prone communities where the activities are carried out, and are therefore vulnerable themselves. They are often peasants, young people out of school and small traders. Most of them have received some training in first aid, basic health care and water and hygiene issues. To carry out the activities, they receive some basic equipment, which includes T-shirts, bicycles, pens, exercise books, Red Cross first aid bags and other well-needed materials. On a quarterly basis they also receive in-kind incentives according to their suggestion, which vary from soap to clothes, food and so forth. The comparative advantage of this organization is that it is rooted in the communities. This enables the Red Cross to have a better understanding of issues concerning the vulnerability of the communities,- local practices, beliefs and their history. It also helps to empower the communities by training and developing skills of the volunteers. They gain persuasive powers towards their fellow community members and can therefore act as role models and influence behaviour change more easily. This is what stakeholders frequently seek from the CVM.

In 2000, CVM defined in its three years strategic plan two main priorities: Disaster Preparedness & Response and HIV/AIDS. Prior to this definition, in regards to disaster management, the capacity of CVM had been in response. There was only a focal point for disaster response at National Head Quarters which coordinated the

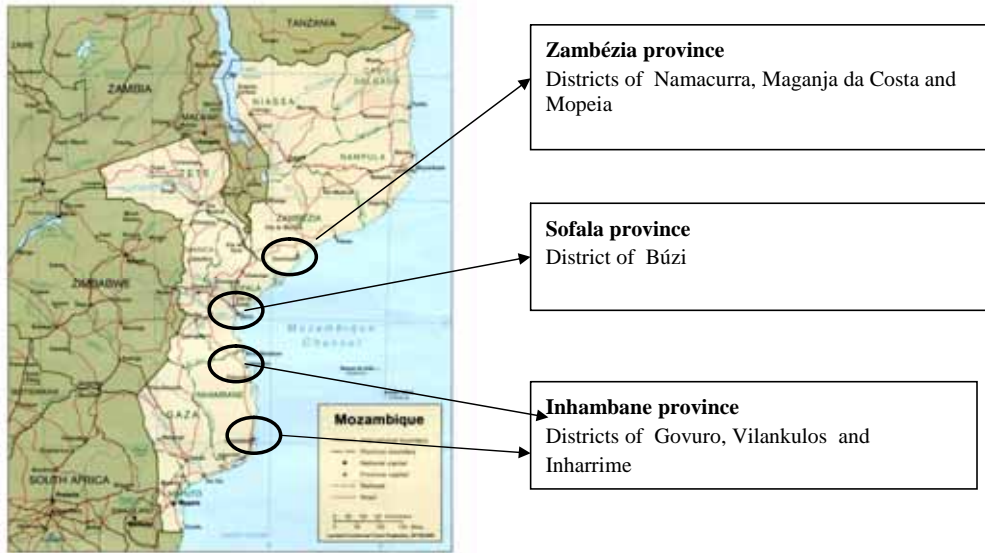
¹ Evaluation report on the Mozambique Red Cross/Danish Red Cross Community Based Disaster Preparedness Programme, Reimer, D., Brownley, K., Lunde G. and Dengo, I., Maputo, June 2005

interventions across the various departments each time a disaster occurred.

Community-Based Disaster Preparedness – The Pilot Phase (2001).

As a follow-up to the relief and rehabilitation assistance provided during and after the 2000 and 2001 floods, and in light of the frequent disasters that affected the country, CVM decided to introduce Community-Based Disaster Preparedness (CBDP) activities.

CVM started up with two CBDP pilot projects, the first occurring in 2000 in the Inhambane province (transferring experiences gained in the Philippines) with support from the Danish RC, and the second, in 2001 in the Zambézia province, (based on a CBDP model from Latin America) with support from the International Federation of Red Cross and Red Crescent Societies- (IFRC). Based on these experiences, CVM developed a Disaster Preparedness concept. It defined CBDP as: “a participatory strategy configured into the local context. The CBDP aims at improving the coping mechanisms at grass-root level towards hazards and disasters in such a way that individuals and communities are better prepared to meet such situations, knowing what to do, and how to secure their lives, belongings and sources of income. The main idea is to enable the local population to take mitigation measures against the destructive effects and through that, minimise the risks of the most vulnerable populations²”.



The pilot phase aimed at collecting data and testing out activities to enable CVM to design a longer term CBDP program intervention. During this phase, CVM received technical support from the Program Coordinator of the Philippines' Red Cross, who had worked with the organization for three months in Inhambane. CVM also benefitted from technical support of a IFRC expert with vast Disaster Management experience in Latin America.

The activities in the pilot phase consisted of the training of 50 CVM volunteers, four provincial Department officers and two national Headquarters officers in community mobilization and participatory rural assessment (PRA) in order to facilitate CBDP processes in local communities. In the Zambézia province, the training included additional topics related to motivation of local authorities/community leaders, shelter and “safe household” (personal and community hygiene, water and vector-borne diseases, HIV/AIDS and first aid).

CVM volunteers, after having received training in community-based techniques, became excellent facilitators that were very well prepared to mobilize communities for DP activities. The members of the communities, as a result, became well aware of health and environment hazards in their surroundings and what is required to prevent them. They managed to list their problems, to identify solutions for them and were able to design their own CBDP activity plans, showing a lot of motivation to integrate CBDP in their daily work³.

² Programme Document, Community Based Disaster Preparedness Programme 2002 - 2005, Mozambique, 2002

³ Baeh, Ivan, Community Based Disaster Preparedness Programme in Inhambane, Pilot Phase final Report, 2001

2.2.2 CBDP interventions at community level:

A. Community-Based Disaster Preparedness in Inhambane and Zambézia Provinces 2002-2005:

As a follow-up to the pilot phase, a long-term project funded by Danish RC was initiated in January 2002, running until 2005. A project document was produced based on the lessons learned from the pilot phase. Immediately after the pilot phase the project activities started. The first year of the implementation of the project had been primarily spent on preparing the program and establishing local capacity to implement the activities, including the development of a CBDP curriculum for the training of volunteers. This was preceded by an internal evaluation of the pilot phase.

Preparatory Phase:

Before introducing the activities in the community, the program was discussed with the provincial branch (Provincial Secretary and staff) and the CVM District Commissions. Securing an active Red Cross network in the program has been an unforeseen, yet necessary task, in order to facilitate a participatory approach and sustainability. It also furthers communication with the government structures at provincial level as well as discussions with traditional leaders and authorities in the local communities. Although this process was time-consuming, it paid off. Currently CVM is well received in the communities and volunteers and local disaster committees are well recognized by the authorities.

Currently the program has two main components:

- I) Community-Based Disaster Preparedness
- II) Early warning

I. Community Based Disaster Preparedness activities

The project cycle is based on the following steps:

1. Carry out a Vulnerability Assessment for the identification of project sites
2. Target community identification
3. Training of CVM volunteers and provincial staff
4. Identification and establishment of local disaster committees
5. Assignment of responsibilities and training of local disaster committee members in each community
6. Conduct Participatory Rural Appraisals (PRAs) for the identification and prioritization of micro-projects /mitigation measures
7. Production of community disaster plans
8. Implementation of risk reduction/mitigation and micro-projects/mitigation measures
9. Evaluation of the project

In each of the above described steps the following activities have been carried out:

1. Vulnerability Assessments

PRAs have been conducted in all project sites. The PRAs made use of community mapping to guide discussions on how the community normally reacted to repeated disasters. Simple hand-drawn maps were used in planning with a community.

2. Target Community Identification

The selection of provinces, districts and communities was based on two criteria: poverty and vulnerability to disasters. When designed, the project was very ambitious and had to be revised in the course of its implementation. It initially aimed at targeting 45 communities in Inhambane and Zambézia provinces and reaching 45,000 beneficiaries. In April 2003, the first internal review of the project recommended that the coverage should be reduced from 45 to 30 communities. In September 2004, the second internal review resulted in a further reduction of the planned communities from 30 to 21. Currently the activities are implemented in 6 districts of both provinces (3 in each) for a target population of approximately 26,250.

3. Training of CVM Volunteers and Provincial Staff

With the help of a local consultant, a training curriculum was developed. In both provinces 110 volunteers received basic training (Red Cross principles, First Aid and Community-Based Disaster Preparedness). CBDP training had made a difference in the understanding of disaster preparedness and in the motivation of volunteers when comparing the volunteers in communities that had received CBDP training, and those in other districts that had not.

4. Identification and Establishment of Local Disaster Committees

Local disaster committees have been established in 21 communities. The members of the committees have been identified and mobilized by the pre-existing structures, which were set up in the context of local traditions. The facilitating role of MRCS in the communities seems to be well understood and accepted by the members, who appeared motivated to take a pro-active responsibility to secure their own livelihood and the environment.

5. Assignment of Responsibilities & Training of Local Disaster Committee Members

The local disaster committee is composed of 6 members, each with the following responsibilities:

- a) **Radio** – taking responsibility over the community-owned solar-powered wind-up radio (distributed by the CVM to all the created local disaster committees), listening to the weather warnings and disseminating the information to other people in the respective community.
- b) **Early Warning (EW)** – informing about an incoming disaster, disseminating the alert systems for tropical cyclones, which might be either conventional (coloured flags) or traditional (drums).
- c) **Evacuation** – coordinating the identification of escape routes, ensuring that everybody knows them well and may lead the evacuation during the disaster.
- d) **Water transport** – taking inventory of available means of transport (boats) which can be used immediately when needed, training community members for water rescue operations and maintaining the boats.
- e) **Land transport** - identifying and keeping records of people with local resources (cars, bicycles, motorbikes etc.) and developing a plan, with the owners, for the utilization of these resources on behalf of the community.
- f) **Shelter and preparedness materials** – identifying, in coordination with other entities, the buildings and free spaces, which can be used as collective accommodation centers for shelter and provision of food and health care as well as looking after the preparedness materials allocated to his/her community.

According to the plan, workshops meant to guide the CBDP planning process at the targeted communities-including a detailed training on the above mentioned tasks of the local disaster committee members- should have been carried out since 2003. Following this, should have been the development of community disaster plans in each committee and the implementation of the agreed upon activities.

Due to various constraints related to the program design and definition of concepts, the development of **community disaster plans, the identification and prioritization of micro-projects/mitigation measures** and the **implementation of risk reduction/mitigation micro-projects** have not yet been realized in these two provinces. Although no “formally agreed upon” mitigation projects have been developed, CVM has been mobilizing the communities where it works for the construction of traditional food storage places and for an increase in the level of food reserves traditionally made. Examples of traditional food conservation methods are drying edible leaves or roasting cassava to preserve it. Another activity undertaken by the volunteers in their work with the communities is the mobilization for the construction of houses on higher grounds, due to the fact that people who live in river basins tend to have their houses in the lower and more fertile grounds and are often easily affected by the floods. The construction of a second residence on higher, safer grounds has started in some parts of the country and this practice has been disseminated to all CVM target communities.

6. Evaluation of the Project

The project has undergone three internal reviews (2003, 2004) and one end-of-phase external evaluation in April 2005. The recommendations of the reviews have been the basis for the various adjustments introduced during the implementation of the project. The recent recommendations stemming from the last evaluation, will be subject to a major workshop to define the way forward as regards to the CVM approach to CBDP.

B. The Disaster Risk Management Project in Sofala Province, Búzi District 2002 -2003:

This project focused on the floods and cyclones and was a partnership between CVM and GTZ – Proder in Sofala province. It aimed at reducing the level of vulnerability amongst populations living in the Búzi river basin (one of the most severely affected areas during the floods of the year 2000 and 2001). The project reached some 13,775 people in nine communities of two administrative posts (Búzi e Estaquinha).

During the first phase (2002), the activities consisted of the selection of target communities with involvement of local and district authorities, meetings with influential community members to explain the objectives of the project, planning with community involvement (including EWS), development of maps of risk areas, identification of the most vulnerable populations and distribution of solar powered radios in partnership with FEWSNET Mind. A local disaster committee has been established in each of the target communities and the members trained in issues concerning disaster mitigation.

The second phase of the project (2003) aimed at implementing the defined disaster risk reduction activities. The role of the local disaster committee members was clarified, and the disaster committees received relevant training, also provided to CVM volunteers and provincial officers. Some dissemination materials and disaster awareness messages were produced, and water measurement devices have been placed in various points of the river. As part of the project simulation exercises on water rescue and community evacuation schemes, involving partners from the government and other institutions, were carried out.

The training consisted of motivation workshops for CVM leadership at provincial, district and local level, local authority representatives and community leaders. (Inhalt?) PRAs and SWOT analysis were also taught, involving the various stakeholders. The management of provisional accommodation centers was subject to discussion during the workshops and was followed by dialogues at the targeted community. The training of CVM staff and volunteers also included water rescue operations facilitated by the local naval marine experts (including boat management and maintenance), disaster risk management and risk mapping.

A basic community preparedness kit has been distributed to all target communities. It is composed of: whistles, megaphone, life jackets, raincoat, stretchers, wate coats, resistant ropes, first aid bags, lanterns, torches, machetes, shovels and pick axes.

One of the results of the workshops, carried out with the communities, was the development of community disaster plans where different micro- projects were identified in each of the targeted communities. Examples of these projects are: the construction of houses and storage places on high grounds, the building of small dikes and bridges with local material to facilitate the evacuation as well as putting up signs to define escape routes.

The change in the CBDP strategy from GTZ – Proder led to the closure of the project after a year of implementation.

C. The CBDP pilot drought project in Maputo Province: 2004

Based on the fact that drought is a disaster affecting Mozambique more frequently than floods and that it is an issue of concern raised by the communities in which CVM works, the review carried out in 2004 aiming at assessing the possibilities of including activities for drought and food security in the CBDP project funded by the Danish RC, recommended to have a feasibility study to identify exactly what role CVM could play. The role of CVM had to match any support from other agencies, since drought is a type of disaster which may require many different parallel initiatives to have any effect and dry land agriculture is not a Red Cross expertise. The area selected for this study was Moamba District in Maputo Province. The Ministry of Agriculture and the World Food Programme were already active in the area, but the study should have also given indications if any other agencies would need to be included to address all critical aspects of improving living conditions in the dry areas. A draft feasibility report was delivered to CVM in mid 2004, but was inconclusive. Identifying what are the relevant components for CVM to take care of in the spectrum of interventions needed are in order to improve long-term livelihood in the dry areas has been considered the central issue. Due to it not having been addressed adequately, the project was never started up.

II. Early Warning System (EWS) activities

A key component in the flood-prone areas covered in this project is an early warning system and the ability to respond properly to disasters. In November 2002, the government set up a simple cyclone warning system that is transmitted over the radio when cyclones build up. The objective is “to set up a simple and practical system to disseminate to the largest possible number of people alert signs and messages, so that they take the necessary precaution measures”⁴. There are 5 categories (1: moderate tropical storm and 5: intense tropical storm) to describe the severity of the cyclone, based on the plan of action agreed upon for the whole southeast region of the Indian Ocean. Messages and leaflets of an alert sign in different colours have also been produced, (blue for 24 to 48 hours before the cyclone materialises, yellow for a 24 hour period, and red for a 6 hrs warning).

To sensitize the communities, CVM volunteers distribute posters to make the population aware of the existing warning system. Through early warning activities, the project seeks to raise awareness and readiness among the local population to meet disastrous situations by focusing on evacuation schemes, information sharing and securing of belongings in target communities. The CBDP project attempts to ensure that the EWS reaches the remote communities when the warnings are issued. The CVM district offices, built as part of the project, have a

⁴ In Plano estratégico para o novo sistema de alerta de ciclones em Moçambique (Broadbridge L. W.)

central function since the district commission members are the ones alerted by the public local radio station over HF radio and are responsible for contacting the trained volunteers in the communities. Alongside the conventional Early Warning (EW) signs, CVM encourages the communities to use traditional EW methods in a more systematic way, matching them to conventional messages in the eminence of a disaster. An example of a common practice in Sofala and Zambézia provinces is the gauging of river levels and potential floods with sticks.

Other important aspects of the CVM CBDP project to take into consideration are:

2.2.3 Main challenges faced

Institutional level:

- In the pilot phase of the project, two disconnected provinces were chosen to test the community-based disaster preparedness approach and implementation strategy. Since these provinces were far from each other, the potential knowledge sharing between them was limited. The capacity of the two provinces was also very different. It is therefore important when developing community selection criteria to take into account a good match between the objectives of the programme and the capacity of the organization on one hand and the community needs and interests on the other.
- It needs to be emphasized that before making a choice of what project area should be selected, especially when the organization is starting a new approach at different levels (HQs, Province, district and community), thorough attention has to be paid to the capacity of the province RC staff and volunteer network.
- Mitigation micro – projects and community plans in the 21 target communities have not been completed due to the lack of clarity of which main activities should be carried out (as micro-projects). Another contributing factor is the lack of shared view among people involved in the project concerning the essential objectives, results and activities. In order to avoid that the impact of the project on community vulnerability reduction is decreased, these concepts should be clearly defined before a project starts and explained to all stakeholders (Head quarters and provincial staff, volunteers in the field and community members) and the relevant staff. Volunteers should also be trained in the planning and implementation of mitigation projects.
- Training materials should be translated into local languages to enable a better understanding of the contents of the disseminated messages both regarding EWS and disaster preparedness issues.

Community level:

- At the beginning of the project there has been no tradition in Mozambique for local communities to take on responsibility for risk-reduction measures, to identify root causes and to take part in local development planning. This is partly seen as a consequence of the turbulent colonial and post-colonial history. A few local practices were common but these do not normally respond adequately to extreme events.
- To enable local population to integrate CBDP into their daily work, there is the need of applying local expertise and knowledge about the significant features of disasters and effects. It is equally important that the community is capable of using the data and findings for the analysis of their situation more thoroughly. This can only take place by involving the community members in basic training in topics such as risk analysis, inter-cause analysis and problem tree analysis.

2.2.4 Lessons Learned:

- The use of external advisers has proven to be a good approach to start up with CBDP activities where there is no previous experience, especially if the experts come from countries with many similarities to the one where the project is implemented. This has been the case for Mozambique in using an experienced staff member from the Philippines RC and another expert with a background in the CBDP model used in Latin America.
- When working with communities the RC provincial staff and the volunteers expressed difficulties in disseminating the preparedness approach to disasters. People are used to service delivery after a disaster. CBDP involves future planning and is a long-term step without any visible immediate output. In order to create commitment, it is even more important that the participatory approach is secured by involving traditional leaders and authorities in the communities.
- Another important lesson is the fact that CBDP and community mobilization requires considerable time and effort during the preparation phase. In the particular case of CVM, it took significantly more time than what was expected when the project had been designed. In order for an organization to be able to mobilize the communities for CBDP it needs to strengthen its structures closest to the communities and sensitize the key members of the community as well as involve local government structures. Only if this is realized, the project will be well-accepted and be able to sustain itself even after it comes to an end.
- Active involvement of the communities and participatory approaches have proven to be essential to bridge the gap between the capacity of a given organization and the needs and expectations of the

communities. When consulting the communities about the activities they want to see implemented, they may come up with some suggestions that do not fall within the mandate or expertise of CVM. To avoid raising false expectations when training volunteers to undertake community-based processes, CVM needs to define its role and make very clear what the organization can or cannot do.

- This also leads to the need of CVM to strengthen the role of advocacy and to clarify its role towards co-operation with external stakeholders. This way it is easier to define what kind of community-based suggestions for activities can be met through the assistance of CVM, which suggestions cannot be met and which would then require assistance from external stakeholders (local government, national and international agencies, etc.) for the implementation of mitigation micro-projects.
- Traditional preventive measures should be systematized and used as complementary to more conventional methods.

2.2.5 Main recommendations

- One of the major difficulties in the CBDP work in poor countries is the ability to motivate people to implement Disaster preparedness measures. Community members tend to talk about the difficulties they face in making a livelihood or about the lack of health and care facilities. This is explained by the poverty in which they live. CBDP should include vulnerability reduction strategies addressing various needs of the communities where the projects are being implemented through an integrated approach, including health, water and sanitation, HIV/AIDS or other interventions. For an organization based at a grassroots level, the concept of community-based interventions has to be clear and uniform. The volunteers or community workers should use the same methods to interact with local leaders and influential groups in order to facilitate and ensure community development.
- The sustainability of projects after the withdrawal of organizations from a concrete area of intervention is a key issue. A clear exit strategy should be defined in a project document before the project is implemented. The long term nature of activities to be carried out should also be taken into consideration to avoid short term projects that do not guarantee sustainability and do not allow the communities to work on CBDP concepts and adopt them in the long term. The role of the organizational structures at district level is very important: by coaching the groups of volunteers and community workers these structures address important aspects of long-term sustainability. The training applied to community volunteers and the establishment of community disaster management committees should be long-lasting to ensure some basic effect of the program even after its formal termination by external funding. In training volunteers for the dissemination of EW messages on natural hazards to the public, it is crucial that these volunteers provide additional interpretation to the simple public cyclone warning system in place.

The importance of this is best illustrated by the cyclone – “Japhet” that hit the Inhambane province in early March 2003 (and spread over the continent causing flooding in Zimbabwe and Zambia) – and arrived at the Mozambique coast around the town of Vilanculos. After the initial strong winds had ceased, most people thought the danger was over and some fishermen immediately went out to the sea. However, the calm period was just the “eye” of the cyclone, and soon far stronger winds hit the area – causing the disappearance of at least one fisherman. Had the local Red Cross volunteers been able to warn the surrounding area on how the cyclone was likely to behave when its eye passed Vilanculos, the chance would have been that more people would have been aware of the special risks in this particular hazard event. To meet this need, a course in basic natural hazard knowledge to provincial technicians and key district volunteers (“team supervisors”) should be organized⁵.

- The CVM project has promoted the Cyclone EWS developed by the government agency for disaster management (INGC) and the National Institute of Meteorology (INAM). Even if questions remain about the effectiveness of the colour-coded system, its promotion benefits the community and contributes to CVM’s role within the national EW System. So far very few organizations have joined the dissemination of the EWS within the communities. In many places CVM is to only one. This, on one hand enables the organization to have an exclusive role as a partner to the government entities for the targeted communities in one hand, and in the other limits the number of people reached by the system and leaves a gap as far as the monitoring of the effectiveness of the use of this system is concerned. More advocacy towards mobilizing more organizations to work in this field should be made by the CVM to guarantee an effective national EWS adjusted to the reality and needs of the communities in Mozambique.

⁵ Falk, Knud Internal Review Report on the Community Based Disaster Preparedness Project, 2003.

2.3. Case study three - Philippines: 20 Years of Creating a Culture of Disaster Prevention and Preparedness CDRC and the Community-Based Disaster Management (CBDM)

Prepared by: *Rosalinda Crescini-Tablang, Executive Director, Citizens' Disaster Response Center with contributions by Armie Almero, CRREED*

Introduction:

The Philippines is one of the most disaster prone countries in the world. In 2001, coinciding with the end of the *International Decade for Natural Disaster Reduction*, the Philippines placed 8th in the top ten countries in the world affected by disasters.

Over the last ten years, the Citizens' Disaster Response Center has observed increasing number of disaster events and growing number of persons affected by disasters. In its 2004 *Disaster Statistical Report (CDRC, 2004)*, CDRC recorded 440 disaster occurrences where more than 10,463,612 persons were affected. In terms of the number of population affected, the figure is 59 percent (59%) higher compared to the recorded figure of 6,251,635 affected person in 1994. At the start of the new millennium, from an average of 7 million Filipinos affected by both natural and human-induced disasters in the 1990's, the average of number of population affected by disasters rose to 9 million by 2001. Fire incidents, typhoons, floods, internal displacements due to armed conflict and landslides topped the list of disaster types in terms of frequency and population affected in the last ten years.

The geographical and physical attributes of the Philippines and the poor and disadvantaged socio-economic situation of the majority of Filipinos are the two main important why the Philippines are very prone and vulnerable to disasters.

The Philippines is geographically located in the Western Pacific Basin or the typhoon belt which explains the average number of 20 typhoons visiting the country yearly. It is also part of the Circum-Pacific Seismic Belt and is between two major tectonic plates (the Eurasian Plate and the Pacific Plate) thus, according to the Philippine Institute of Volcanogy and Seismology, we experience an average of 5 earthquakes. The country is also located at the Pacific Rim of Fire -- we have 220 volcanoes where 21 of which are active.

The socio-economic condition of the majority of Filipinos made us very vulnerable to disasters. More than 75% of the population lives below the poverty line. As of April 2005, the country registered its worst ever unemployment and underemployment rate in history --- 4.5M Filipinos have no job while 8.4M are underemployed. The daily cost of living for a family of six in the entire Philippines was pegged at P513.20 yet the daily minimum wage is nailed at P325. Inflation rates rose to 8.5% as of April 2005 from 6% in 2004.

Year in, year out, Filipinos withstand the fury of at least 20 typhoons; grieve over deaths and ruins of fires that raze an average of 7,300 houses; provided food relief and temporary shelters to the hundreds of thousands of internally displaced brothers in especially in Mindanao who are driven out of their homes due to armed conflict. Major disasters like the 1990 killer earthquake, the Mt. Pinatubo eruption, the Ormoc flashfloods in 1991 and the Payatas "trash slide" in 2000 jolted us with the intensity of destruction and lives lost. These are harsh Philippine disaster realities.

2.3.1. The Community-Based Disaster Management (CBDM) WAY

In the early 1980's, an alternative approach to the country's relief-centered and emergency-focused disaster management system – the *citizenry-based, development-oriented disaster response* emerged. This approach was later called the *Community-Based Disaster Management* or more popularly coined as **CBDM** among its consistent practitioners.

Modesty aside, the community-based disaster management framework in the Philippines was born the same time CDRC was established in 1984. The Citizens' Disaster Response Center (CDRC) was born in the aftermath of two very strong typhoons that devastated most parts of the country and the eruption of Mayon Volcano that greatly damaged the areas surrounding the majestic mountain in 1984.

At the height of these disaster events, cause-oriented groups, people's organizations and church-based organizations were practically flooded with requests and appeals for assistance from affected sectors because the

government fell short in responding effectively and efficiently to their needs. Why is this so? The question served as an eye-opener for cause-oriented groups to look deeper into the disaster situation in the country. The people were not only clamoring for a thoroughgoing disaster response and preparedness program but rather an alternative disaster response that is more comprehensive and "citizenry-based".

Thus, when it was established in October 1984, CDRC started a disaster response program that is community-based and development oriented, addressing primarily the question of disaster-vulnerability of the majority of the Filipino people. Together with CDRC, disaster management (DM) regional centers that are members of the Citizens' Disaster Response Network (CDRN) continue to give life to the CBDM approach.

CDRC just turned 21 years old in October 6 this year. Since its inception, CDRC has pioneered and continues to promote community-based disaster management in the Philippines. Twenty years and still counting, CDRC remains true to the principles of the community-based disaster management (CBDM) framework. In taking to heart the CBDM approach that seeks to assist at-risk communities in their efforts to develop disaster-resiliency, CDRC puts premium on:

- Strengthening the people's capacities to withstand the damaging effects of disasters
- Enhancing people's participation in disaster management
- Building organizational capacity of the vulnerable sectors through the formation of grassroots disaster response organizations
- Social awareness through education, and
- Building partnership between the vulnerable and less vulnerable sectors

2.3.2. How does CBDM works in raising disaster awareness, preparedness and prevention?

The effectiveness of community-based disaster management or CBDM as an alternative approach lies in its five above-mentioned features and principles. The CBDM features and principles are manifested through CDRC's program services and activities. Here are some of our experiences:

I. Saving limbs and lives through community-level Disaster Preparedness and Management Training Education

CDRC has developed a five-day ladderized Disaster Management Training (DMT) that consists of three modules – Module 1: Disaster Management Orientation; Module II: Disaster Preparedness; Module III: Community-Counter Disaster Planning and Community Evacuation Drill.

Since its inception in 1984, CDRC and its network partners in the Citizens' Disaster Response Network (CDRN) have conducted trainings at the community level. Community members who attended the training appreciated the training content particularly the last part where they are empowered to apply what they learned from the training.

The Disaster Management Training has in so many instances save the communities from harm and lessens the damage of disasters. The Disaster Management Training:

- ... taught the residents of many barangays in Pampanga to prepare and protect them from the dangers of lahar coming from the Mt. Pinatubo.

Building the organizational capacity of the vulnerable sectors through people's participation and formation of grassroots disaster response organizations

How the presence of grassroots disaster response organizations can save lives: the experience of Central Luzon

Manibaug-Liputad was considered as one of the high-risk areas for lahar flow coming from Mt. Pinatubo. In July 1995, CONCERN conducted a training combining disaster management orientation and disaster preparedness training. The content was: Disaster Update from Central Luzon, Capacity and Vulnerability Analysis, Disaster Response Management (includes hazard monitoring), Hazard Mapping, Damage-Needs-Capacity-Assessment, Evacuation Drill, counter disaster planning, and the citizenry-based, development-oriented disaster response framework.

Output of the three-day training: Community members formulated an evacuation plan, identified key people and agencies they could tap in case an evacuation is needed, and designed a warning system, particularly how the warning information would flow to inform everybody in the community. A barangay Disaster Response Organization (BDRO) was set up with five committees: the Evacuation Committee, Warning Committee, Health Committee, Information and Education Committee, and Relief and Rehabilitation Committee. It was the responsibility of the Warning Committee to monitor the lahar situation and warn the people of impending disaster. Each committee immediately recruited volunteer members from the village residents and oriented them in their responsibilities.

Three days after the training – it was still monsoon season – there was news of a typhoon expected to enter the area. Dark clouds were approaching the village and a light drizzle started at 4pm. The villagers started looking for the barangay captain but he had left the village. No word came from the municipal authorities.

The BDRO Warning Committee had posted men along the dike to keep watch on the rising lahar flow. The other barangay officials were glued to their two-way radio waiting for the instruction to leave the area. The BDRO Warning Committee informed the residents that water in the creek was rising and that they should prepare for an evacuation. The BDRO chairman returned from work at 5:30pm, instructed his son to cook for the volunteers monitoring the lahar flow, and went to the dike for briefing with the volunteers.

At past 6:00pm, rain was falling heavily and lahar mingled with the water in the creek which rose higher. Suddenly, the upstream portion of the dike started to erode. The BDRO chairman instructed the Warning Committee to evacuate the villagers immediately. They Warning Committee volunteers blew their whistles. They immediately mobilized members of the foot patrols who went from house to house to inform residents to leave their houses and to gather at the marketplace or in the school building (which were identified during the training as a pick-up point for evacuation). The villagers were transported to a safe evacuation site.

The situation in the community deteriorated very fast within two hours. At 7pm, about one kilometer of the dike collapsed. One foot of lahar swept through the northernmost houses but the residents were already out on higher grounds. Only some of the Warning Committee volunteers stayed behind, witnessing the rising smoking hot lahar. They were the last to evacuate after being sure no resident was left behind.

At 8pm, more than one meter of lahar had covered the upstream houses while two meters covered the downstream houses of the Manibaug-Libutad village. NO one was killed or hurt. The community depended on their strength and capacities. If they had waited for the official warning and announcement of the government, they could have been killed. (Heijmans and Victoria, 2001)

- ... empowered community members of Barangay Malanday, Marikina in identifying risks in the community, preparing and coping with constant floods whenever the Marikina River swells during rainy and typhoon season.

Bracing for Safety

Sitting beside the bank of Marikina River, Barangay Malanday is home to urban poor families. Residents have always had to contend with the dangers of the overflowing Marikina River especially when heavy rains pour during the monsoon season. Besides this, an earthquake fault, the -- Marikina Valley Fault⁶ or West Valley Fault also pose danger to residents of Barangay Malanday. In March 2004, the Japan-funded *Metro Manila Earthquake Impact Reduction Study* (MMEIRS) reported that the active phases of the Marikina Valley Fault is approaching and that the estimated magnitude will be around 7 or more (JICA, MMDA, PHILVOCS, 2004). These twin hazards come to mind when residents get to talk of disaster management.

After a severe flood in 1996, the community requested for relief assistance. CDRC responded to the request. Volunteers from the community, mostly members of the *Friends of Samar and Leyte* and a women's organization, were involved in the whole process of relief delivery – from damage, needs and capacities assessment, planning, beneficiary selection, relief distribution and post project assessment. Their participation in these activities served as prelude to learning community-based disaster management.

A year later, the floods happened again, finally making the residents realized that their yearly bouts with floods go beyond relief assistance. Through the initiatives of a mother's organization in the community, CDRC

conducted a disaster management orientation (DMO), disaster preparedness training (DPT) and leadership skills training in Barangay Malanday.

More residents joined the round of DMO and DPT conducted in 1998. This time, the training focused on making a hazard map and formulating counter disaster plan for the community. From the plan, committees were formed and were assigned tasks ranging from monitoring and warning, evacuation, security, relief distribution, networking etc.

Educational tours were also arranged with the Philippine Institute of Volcanology and Seismology (PHIVOLCS) and the Philippine Atmospheric Geophysical and Astronomical Administration (PAGASA).

In 1999, a big flood tested the community's preparedness to disasters. The community had put into effective use the risks and experience on disaster preparedness they have learned from the training and various activities they have undertaken. They conducted relief activities with minimum supervision from CDRC.

The experience is an encouraging episode for the community members. They noted that no lives were lost, damage to property was minimized and deterioration of health situation during disasters was arrested. However, they also admitted that they still have to improve on evacuating in an organized manner because some families evacuated individually.

Through the experience, the residents of Barangay Malanday realized that they can do something to reduce the risks and losses by disasters through the community-based disaster management approach. For them, doing disaster preparedness as a community makes the endeavor more worthwhile.

- Prepared community members in some of the "puroks" of Payatas for safety when the humongous pile of trash collapsed in July 2000.
- Enabled constantly displaced residents of war-torn barangays in Mindanao to read warning signs of possible displacements and evacuate in an organized manner whenever there are armed clashes

II. *Development-oriented Disaster Preparedness and Mitigation through Strengthening People's capacities*

As an alternative approach, CBDM aims to reduce the people's vulnerability and increase their capacity to prepare for, cope with and to mitigate the adverse effects of disasters. CDRC perceives disaster primarily as a question of vulnerability -- *a disaster occurs as a result of a hazard that strikes a vulnerable community of group whose inherent capacity is not enough to withstand or cope with the adverse effects and impacts*. With this, CDRC views its disaster response as a *process building the capacities of communities* not only in their upgrading technical skills but more importantly in building their economic and organizational strength of communities to better prepare and recover from the effects of disasters.

While CDRC cannot pride of totally eradicating the roots of people's vulnerabilities, it nevertheless can say that its disaster mitigation programs and services have somehow increased the economic capacities of the people and consequently reduced disaster risks. For the past 21 years, CDRC and its partner organizations have engaged in and implemented:

- Diversification of crops according to different planting season
- Diversification of livelihood sources
- Propagation of disaster-resistant crops
- Seed banks and nurseries
- Provision of post-harvest facilities
- Encourage proper land use management and sustainable agriculture practices
- Functional literacy classes
- Set up village pharmacies and training of community health workers

⁶ The Marikina Valley Fault lies northeast of Manila. It traverses the town of Marikina, Pasig City going to Muntinglupa up to the Southern part of Luzon.

III Building the organizational capacity of the vulnerable sectors through people's participation and formation of grassroots disaster response organizations

Whenever disasters strike, it is the community people that are first confronted with the task of responding to disaster emergencies. Thus, people's awareness and participation are crucial for the success of disaster risk reduction.

Community-based Disaster Management is people-based. It puts premium in drawing out the inherent sense of caring, action and cooperation among community members in all the different phases of disaster cycle – from assessing the disaster situation, risks, capacities and resources in the community, formulating and planning out community counter-disaster plan to the execution of appropriate response during disaster emergencies.

People's participation is at its optimum if it is done in a more organized manner. Organizing a community into a grassroots disaster response organization requires time and extra inputs (i.e. on organizational development or basic leadership training/seminar). The organizational expression of a grassroots disaster response organization may be wide-ranging. In some communities in Bicol, they formed the *barangay disaster response committees* (BDRCs) while in other communities they formed *disaster preparedness committees* (DPCs). Even the organizational structures have varied set-up. Some disaster response committees are part of the structure of government's local barangay units while others are committees of existing people's organizations in the community.

The BDRCs or DPCs that were formed in communities where CDRC and its network partners work take the lead in initiating and implementing disaster response activities. BDRC or DPC members actively inform and remind all the community members the community-counter disaster plan that was formulated. They lead in the monitoring of disaster threats, conduct community disaster drills and mobilization of resources for disaster risk reduction. They also issue timely warning in an organized manner so as not to create fear or panic among community members. In most instances, they are the ones who manage evacuation of the community members during disaster emergencies.

"Family cluster" is another form of organizational unity and readiness in the communities. Five to ten families in a community are formed into groups or "family clusters". A cluster head is chosen by the cluster members to represent them in the wider barangay or municipal meetings of community members. The family clusters help in disaster monitoring and in the implementation of counter-disaster plan of the community.

Family clustering was employed by CDRC, and three regional centers that were co-implementers of the El Nino Preparedness Project. Family cluster members appreciated their experiences in monitoring the El Niño Project. They shared that they were able to track down and understand the El Niño events that occurred in their communities in the past twenty years and record its damaging effects. They were also able to record and document how they responded and coped with these El Niño events.

IV. Linking the Less Vulnerable Sectors and the Vulnerable Sectors through volunteer formation and networking

CBDM underscores the solidarity of the less vulnerable sectors in the plight of the vulnerable sectors and the mobilization of their support in disasters and related development issues. Considering the very limited number of staff and resources of CDRC, its network Regional Centers and partner people's organizations, support coming from local less vulnerable groups, organizations, friends and supporters from abroad is very important.

Linking the less vulnerable sectors and the vulnerable sectors finds expression through partnership building among groups or organizations of professionals, academe, private institutions, small-scale businessmen, students and so many others. CDRC were able to forge unity and bring in much needed human and material resources to the disaster-affected population through networking and volunteer formation.

- Volunteer Formation

Forming volunteer groups and organizations is one sure way of drawing in broader participation and support toward disaster reduction and disaster resiliency. CDRC and its network Regional Centers value the contribution of hundreds of volunteers from different schools and institutions.

In schools, student volunteers are encouraged to form themselves into Disaster Volunteer Teams or DVTs for a more organized gathering of support for disaster-affected population. In other schools, students form Quick Reaction Teams or QRTs. These QRTs of students are on call and willing to provide urgent

assistance. Students from different universities in Metro Manila regularly offer help in soliciting goods and finances to the less vulnerable sectors (with or without disasters) in repacking goods and in distributing the repacked goods to the affected communities. CDRC volunteers upped their level of organization by setting up the Friends of CDRC or FCDRC in December 2002.

The constant exposure of the volunteers to at-risk communities and the Disaster Preparedness and Management Training that they attended deepened the volunteers' understanding of disaster realities and the Filipino people's vulnerabilities to disaster. These realities moved them to share and help in whatever form they can.

- Networking and Task Force Formation

Network building is also one of CDRC's ways in bridging the less vulnerable sectors to the vulnerable sectors. CDRC maintains a broad network of individuals, groups, organizations, foundations, institutions and even business enterprises and establishment to support its efforts towards building better prepared and disaster resilient communities.

Optimizing the help of its broad network, CDRC also initiates formation of Task Forces especially during disaster emergencies. Last December 2004, CDRC led the formation of *Task Force: Kalinga or TF: Kalinga* (Task Force: Care). Task Force: Kalinga is a tactical of formation NGOs institutions and individuals that bind together to combine efforts and resources to respond better and effectively to the disaster emergencies in many parts of Luzon brought about by landslides that were induced four strong typhoons in the latter part of 2004. Resource generation of the members of the *TF: Kalinga* was very successful that it was able to sustain emergency food relief provision to affected communities while bigger aid from international donors was being processed.

V. Raising Social and Disaster Preparedness Awareness through public information, advocacy campaigns and Education

Public information, advocacy and educational activities seeks to bring the issue of disaster vulnerability and disaster preparedness and other social concerns to the consciousness of the broadest possible audience in accurate and easily understood languages and popular forms. Through information dissemination, advocacy and education it is hoped that the less vulnerable sectors will be mobilized and more resources will be generated for the vulnerable sectors. CDRC effectively make use of the following program services and activities to raise the public's social and disaster preparedness awareness:

- Launch an advocacy and lobbying campaign for the *Creation of a Special and Separate Government Body for Disaster Management*. As a result of this campaign, House Bill 2768 sponsored by fourteen House Representatives was passed for deliberation.
- Launch special campaigns on peace and other disaster related issues in Schools.
- Mainstreaming Disaster Preparedness in Curriculum and School activities.

By actively seeking out the Department of Education (DepEd) and local school officials, opportunities like the integration of disaster preparedness topics or subjects to the educational curriculum and some school activities. DepEd for example endorses CDRC's Apoy, Bagyo, Kalamidad: Dibuhong Pambata (ABKD or Fire, Typhoons, Calamities: Poster-making Contest for Children) to public elementary schools. The winning artworks of the students are featured in the Disaster Preparedness Calendar published yearly by CDRC. A number of private elementary schools have also requested CDRC to help in conducting disaster preparedness drills in their schools.

Colleges and Universities like the De La Salle University, University of the Philippines (Diliman and Manila campuses) requested CDRC to facilitate their schools' National Service Training Program (NSTP). The school officials preferred CDRC's Training-Integration Program over the Reserve Officer Training Course or ROTC. CDRC's Training-Integration Program is a four-day training cum immersion program that aims to develop awareness among students the importance of disaster preparedness and encourage participation in assisting the vulnerable sectors' efforts in reducing disaster risks. Many students who joined the CDRC-facilitated NSTP programs later become volunteers and they initiate the formation of volunteer teams and quick reaction teams in their class.

- Community Education Meeting/Assembly

Community education meeting is also one form of public information and education activity aimed at raising social disaster preparedness awareness of community members. This kind of activity allowed the mothers and the rest of participants to gain additional knowledge and skills on the more relevant issues and concerns that confront them and the whole community.

Most of the community education sessions were held at the barangay hall while some were held at other public facilities in the barangay to accommodate more number of participants. On the average community education meetings gather together around 22 to 56 participants. This figure may be considered a good attendance considering that most of the community members are normally tied up to their domestic chores or farm work.

The topics discussed focused on particular hazards in the community or disaster events that happened in other parts of the country. Supplemental reading materials were also distributed every after the session. Topics that are often discussed in the community education meetings were the following:

1. Effects of the continuing environmental degradation
2. Review of CDPs and Hazard Maps of some barangays
3. Typhoons and landslides
4. Philippine Disaster situation

2.3.3. Future Outlook

For the past twenty-one years, the community-based disaster management approach is gaining grounds in the Philippines because of the consistent efforts and perseverance of disaster management organizations, agencies and individual practitioners committed to the principles of CBDM.

Efforts to promote and practice CBDM are perceived to have influenced government line agencies in disaster response like the National Disaster Coordinating Council (NDCC), Office of the Civil Defense (OCD), and the Department of Social Work and Development (DSWD. This can be gleaned from government policy papers, directives and development plans which have incorporated some CBDM concepts and principles” although much is still to be desired with the government’s claim to CBDM, but its use of the term gives recognition on the effectiveness of the CBDM as a framework.

Instilling a culture of disaster preparedness and creating better-prepared and disaster-resilient communities is really a BIG task because in the end, what we all – governments, NGOs, institutions, experts have to think about and do is to *address the roots of the people’s vulnerabilities*. And this is the more daunting task.

References:

- Aklilu, Y., M. Wekesa, 2002: Drought, Livestock and Livelihoods: Lessons from the 1999–2001 emergency response in the pastoral sector in Kenya. *Humanitarian Network Paper*, available at: www.odihpn.org/report.asp?ID=2502 (accessed April, 2005).
- Baeh, I., 2001: Community Based Disaster Preparedness Programme in Inhambane, Pilot Phase final Report.
- Broadbridge L. W., Jahr: Plano estratégico para o novo sistema de alerta de cyclones em Moçambique.
- CDRC Statistical Report, 2004: *Disastrous 2004*. Research and Public Information Department-CDRC, Quezon City, Philippines.
- CVM, 2002: Community Based Disaster Preparedness Programme 2002 - 2005, Programme Document. Mozambique.
- Falk, K., 2003: Internal Review Report on the Community Based Disaster Preparedness Project, Mocambique

Heijmans A., L. Lorna Victoria, 2001: Citizenry-based and Development Oriented Disaster Response – Experiences and Practices in Disaster Management of the Citizens. Disaster Response Network in the Philippines, Final Proof Printing, Quezon City, Philippines.

ISDR, 2004: Inter-Agency Secretariat of the International Strategy for Disaster Reduction (UN/ISDR)

Living with Risk, A global review of disaster reduction initiatives. www.unisdr.org;

JICA, MMDA, PHILVOCS, 2004: Earthquake Impact Reduction Study for Metropolitan Manila – Seminar on Community-based Disaster Management, Quezon City, Philippines.

Kihupi, N., R. Kingamkono, H. Dihenga, M. Kingamkono, W. Rwamugira, 2003: Integrating Indigenous Knowledge and Climate Forecasts in Tanzania. In: *Coping with Climate Variability. The use of seasonal climate forecasts in southern Africa*, Eds. K. O’Brien and C. Vogel, Ashgate, Hampshire.

Miller F., 2005: Keep the Memory Alive, *SZ-Magazine*, 6.5.05, p 14ff.

Omanga, P., 2004: CRS/Kenya: Experience with Seed Vouchers and Fairs. In *CRS Seed Vouchers and Fairs: Using Markets in Disaster Response*, Eds. P. Bramel, T. Remington, M. McNeil, CRS East Africa, Nairobi.

Orindi, V. A., S. Eriksen, 2005: Mainstreaming Adaptation to Climate Change in the Development Process in Uganda. *Ecopolity 15*, ACTS, Nairobi.

Orindi, V.A., L.A. Murray, 2005: Adapting to climate change in East Africa: a strategic approach. *Gatekeeper 117*, IIED, London.

Reimer, D., K. Brownley, G. Lunde, L. Dengo, 2005: Evaluation report on the Mozambique Red Cross/Danish Red Cross Community Based Disaster Preparedness Programme. Maputo.

UNDP, 2005: Human Development Report, International cooperation at crossroads, Aid, trade and security in an unequal world. New York, available at: <http://hdr.undp.org/reports/global/2005/>