Preparing for disaster

A community-based approach

THE PHILIPPINE NATIONAL RED CROSS

Danish Red Cross

Preparing for disaster – A community-based approach

First edition published by Philippine National Red Cross, Manila, 2002
Second revised edition published by Danish Red Cross, 2005
Publication supported by DANIDA

Editor: Knud Falk, Danish Red Cross, Copenhagen

Co-editors (first edition): Lasse Nørgaard & Joanna MacLean

Contributions (alphabetical order):
Mr. Danilo Atienza, Programme Coordinator, ICDPP-HQ, Manila
Mr. Eric Bacariza, GIS Manager, ICDPP-HQ, Manila
Ms. Jane L. Epi, ICDPP Manager, Benguet
Dr. Knud Falk, Disaster Preparedness Adviser, Danish Red Cross
Mr. Jørgen Kristensen, Danish Red Cross Regional Representative for Asia
Ms. Catherine J. Larracas, Project Manager, ICDPP-Palawan
Dr. Emmanuel M. Luna, University of the Philippines, Diliman
Mr. Rosauro Malibiran, former ICDPP Programme Coordinator, ICDPP-HQ, Manila
Mr. Albert Muñoz, Community Development Officer, ICDPP-HQ, Manila

Illustrations:
ICDPP/Philippine National Red Cross
Knud Falk/ Danish Red Cross
Jørgen Kristensen/Danish Red Cross
Lasse Nørgaard
NOAA

Design: Paramedia, Copenhagen [0965]
Printed by: Handy Print

CONTENTS

4 FOREWORD

4 Disaster preparedness and mitigation helps

5 INTRODUCTION

5 A storm in paradise

6 A turning point

9 ICDPP

9 The six steps model

11 COMMUNITY-BASED DISASTER PREPAREDNESS STEP BY STEP

12 STEP 1 Site selection criteria and process

14 STEP 2 Partnership with Local Government Units

16 STEP 3 Formation and training of Community Disaster Action Teams (CDAT)

18 STEP 4 Risks and resources mapping

20 STEP 5 Community Mitigation Measures

26 STEP 6 Long lasting effect: Sustainability

27 LESSONS LEARNT

27 The Philippines – a special case...?

28 Experiences and ideas

31 Spreading the idea

32 ANNEX I-IV

32 ANNEX I The ICDPP model flow chart

33 ANNEX II Main elements of the CDAT training

34 ANNEX III Sample Community Disaster Action Plan

35 ANNEX IV Glossary

Disaster preparedness and mitigation helps

Development, earned over decades, can be destroyed by disasters in a matter of hours. During the past decade less people have died in natural disasters, but more and more lives and livelihoods are affected by the negative consequences of them. The increase is steep, triggered by more frequent extreme weather conditions with twice as many affected only in the last five years. Poor development, unplanned urbanization, non-enforced building codes, weak environmental management, and effects of poverty and vulnerability exacerbate the situation.

The International Federation of Red Cross and Red Crescent Societies has shifted its emphasis from disaster response to disaster management, taking a more pro-active preparedness and mitigation-focused approach. Disaster response will always be needed, but the possibility to prepare for disasters at the international level as well as in the smallest community, is crucial to curb the rising figures of disaster-affected.

The International Federation's World Disasters Report 2002 and 2004 provided powerful evidence that investing in disaster preparedness and mitigation helps combat human and economic losses in disasters. Reducing risk is an urgent priority.

Disaster preparedness is one of four core areas in Red Cross and Red Crescent work. National Societies play an important role in recognizing the local coping and mitigation strategies of the populations most at risk and help them to find appropriate and sustainable solutions in preparation for future disasters. Raising community awareness and carrying out public education in high-risk areas is a priority, and implementing mitigation measures is a crucial element in reducing the impact of disasters.

"To improve the lives of vulnerable people by mobilising the power of humanity" is the mission statement in Strategy 2010, the global strategy of the International Federation of Red Cross and Red Crescent Societies for the first ten years of the 21st century.

Preparing for disasters – A community-based approach is a practical lesson in "mobilising the power of humanity" at the community level, rich in lessons learnt and best practice from the Philippine National Red Cross.

Eva von Oelreich
Head of Disaster Preparedness and Response
International Federation of Red Cross and
Red Crescent Societies, Geneva

A storm in paradise

Lugsongan is a small fishing community on Limasawa Island in the central Philippines. The 215 families live in a few rows of houses stretching along the rocky and sandy beach where small fishing boats – 'bancas' – are pulled ashore when not in use. A steep slope rises up behind the narrow beach area. When a tropical cyclone hit the central Philippines in 1984, the combined effects of storm surge and pounding waves devastated the community. Many of the first row of houses and most of the fishing boats were crushed, and 23 people were killed.

This tragedy was a deciding factor for Philippine National Red Cross (PNRC) in selecting this particular place as one of a series of test areas for a new approach to curb disaster impact: Community-based Disaster Preparedness.

With support from the Red Cross, the community of Lugsongan recruited and established a 10-member 'Disaster Action Team', and public meetings were held to identify which households were most vulnerable to natural hazards. Discussions at the meetings revealed that although the community most feared typhoons and the resulting storm surge, the community was at risk from landslide and poor access to safe drinking water. The community made a plan for how to improve their safety, and agreed first to invest volunteer labour in building an evacuation centre on the hill behind the village. Red Cross funded key construction materials and facilitated discussions with the municipal government, which provided engineer support and covered transport costs of building materials. Then the community built the centre themselves.

In 2001 another typhoon threatened the central Philippines. In Lugsongan the 20 most vulnerable families along the coast retreated to the safety of the evacuation centre, and stayed there for two days until the typhoon subsided. The local Disaster Action Team helped organise the evacuation and arrange food supplies. Although this typhoon luckily caused no direct damage to the village, the evacuation centre had served its purpose. In addition to offering security in time of disaster, the building is also used on a daily basis as a health and day care centre. The Disaster Action Team continues to provide first aid training, and remains prepared to coordinate response in the community should disasters occur.

The community is now ready to address their next priority in their Disaster Action Plan: a safe drinking water system.

On a calm day the fishing village Lugsongan on Limasawa Island appears as a tropical paradise, with fishing boats pulled ashore on the shallow beach. But in 1984, 23 people were killed here by the storm surge and pounding waves of a typhoon.

A turning point

The story of Lugsongan captures the essence of the Integrated Community-based Disaster Preparedness Programme, ICDPP, in the Philippines. Between 1994 and 2004, Disaster Action Teams – with a total of nearly 2300 trained members – were formed in 64 communities, Disaster Action Plans were developed and more than 100 "mitigation measures" have already been implemented. The programme is now being taken up by other communities.

This project marks a turning point in Red Cross disaster management in the country, moving from a largely post-disaster response-oriented approach towards a more pro-active preparedness and mitigation-focused attitude. Media focus on images of volcanic eruptions, earthquakes, typhoons and landslides gained the Philippines the reputation of being one of the most hazard-prone nations in the world. As a positive outcome of this coverage the public and non-governmental agencies have, over the last decades, focused on their ability to provide help and rescue people affected by disasters.

The Philippines National Red Cross is very active in such post-disaster response, and is recognising the need to enhance pre-disaster preparedness capacity and start working directly with the affected communities. The ICDPP was born as a pilot programme to seek new ways to supplement the existing preparedness schemes in the organisation.

With simple means

Fortunately, a relatively small proportion of the people affected by a disaster die; the majority suffer from damage to their health, homes or livelihood. But with relatively simple means a great deal can be done at the community level to lessen the damage caused by many of the natural hazards. The ICDPP seeks to mobilise people in the communities to participate more fully in protecting their lives as well as the resources they depend on. The ICDPP primarily addresses the many "small" risks that individual families or local communities face – damages that may escape official statistics, but that nonetheless affect a large number of people.

After ten years of testing and gradual expansion in the Philippines a great deal of experience, good and bad, has been gained. Many of the lessons learned are generic, and potentially useful in many other local settings around the world. Therefore, the Philippine National Red Cross and its partner, Danish Red Cross, want to share the key lessons learned from ICDPP with other agencies engaged in disaster preparedness as well as with the donor community. The ambition is to stimulate other organisations to focus on reducing risk from natural hazards through Community-based Disaster Preparedness. Taking local conditions into account, a similar approach can be applied in most physical, cultural and political settings.

1 Recent disaster events

Between 1994 and 2003 an average of 2.1 million people each year was affected by natural disasters in the Philippines – and about 650 people died annually. The typhoons (called cyclones or hurricanes in other parts of the World) and all their side-effects such as landslides, storm surges, and flash floods, are the most frequent and devastating events in the country. Occasionally, serious earthquakes and volcano eruptions cause large losses and damages. Of the many people affected, usually fewer than 0.1% are reported dead, missing or injured.

2 Three implementation phases

The ICDPP has been going through three phases (see map):

PHASE I

The concept was first tested in a pilot phase in a mountainous area (Benguet province), where the training modules for Community Disaster Action Teams (CDAT) were developed, and a number of mitigation infrastructure projects implemented together with the selected communities.

PHASE II

In 1997 the pilot project expanded to a low-lying coastal area (Southern Leyte) with new types of natural hazards. During Phase II, major changes in programme set-up and administration took place and in 1998 two more provinces were included (Palawan and Surigao del Norte). The main changes included more efficient procedures to select target areas (Box 4).

In Phase II health aspects of hazards mitigation gained a higher profile because some CDATs identified unsafe water supplies as the main hazard in their communities, and relevant mitigation included ensuring safe water supply as well as the training of Health Workers. Phase II implementation continued in all four provinces from 1998 until 2000.

PHASE III

Finally, focus was on testing the concept in urban settings – the most challenging hazard environment – and at the same time gradually transforming the programme into a regular and self-sustaining service of the National Red Cross with support from local government units in the target provinces. The urban test area was the 'suburban' dwellings at Manila's main city dump, where many families survive by collecting and sorting garbage and sell it for recycling.

Phase III covers 2001 – 2004.

Hazard types depend very much on the landscape. ICDPP was first developed in areas with mountain hazards like landslides, river and slope erosion, and flash floods.

People in coastal areas – especially poor fishing communities – are vulnerable to storm surge, strong wind and wave action, and tsunamis.

Urban areas attract many people from the countryside. As landless they often become the poorest and most vulnerable people in towns: In the megacity Manila, ICDPP was introduced to people depending on the garbage dump site Payatas.

The six steps model

The approach is called the Integrated Community Disaster Planning Programme (ICDPP) because it works directly with affected people to reduce their vulnerability to natural hazards.

The key objective is to provide communities with adequate knowledge on disaster management in relation to their local risks. A model implemented through six closely-linked steps applied in all the project areas achieves this objective.

Training and education is an important "tool" applied in all six steps.

The six steps, which will be described in more detail in this publication, are:

STEP 1

Site selection criteria and process
Effort must be focused on most vulnerable areas. Selecting target areas based on some type of Vulnerability and Capacity Assessment is a critical first step. The initial reason for selecting a target community must be in mind when the Community Disaster Action Plan is drafted – and, in particular, when mitigation measures are agreed and implemented.

STEP 2

Partnership with municipal and province government units
It is imperative from the very beginning to ensure collaboration with local authorities in order to firmly ground the preparedness concept in local planning, to gain technical and financial support for implementing step 5, and to ensure long-term sustainability (step 6).

STEP 3

Community Disaster Action Team (CDAT) formation and training:
At the heart of the programme is the group of community volunteers who receive training in hazard management, spread information, and work with the whole community to prepare a Community Disaster Action Plan, which is the basis for deciding how to improve the safety of community resources.

STEP 4

Risks and resources mapping
It is necessary to map the most important local hazards, showing who and what they are jeopardizing. The maps are used in the community discussions to identify suitable mitigation measures to protect the community, and also handed over to the local government units for land use planning.

STEP 5

Community mitigation measures
Based on the Disaster Action Plan (or Risk Reduction Plan), the community establishes some kind of mitigation measures to reduce the impact from relevant natural hazards. Mitigation measures may be physical structures such as seawalls and evacuation centres, health-related such as water supply, or less tangible elements such evacuation plans etc.

STEP 6

Long lasting effect: Sustainability
The last step is linked to step 2 – the long-term impact can only be ensured by fully integrating the ICDPP concept in the Local Government Units (LGU). This includes taking hazard preparedness into account and incorporating the main Disaster Action Plan recommendations into LGU land use planning and annual budgeting. Sustainability also implies regular CDAT update training.

3 Disaster Management in the Philippines

The official system

The Philippines is a democratic republic headed by a president. The local government is organised into Local Government Units (LGUs) made up by 79 provinces, 82 chartered cities, 1525 municipalities, and approximately 42,000 communities (called 'barangays' in the Philippines). The barangays typically encompass between a hundred people in some rural areas to about 5000 in towns, but in dense urban areas can reach 100,000 (see map example of Southern Leyte province with municipalities and baragays in Box 4).

Public disaster management is in the hands of a hierarchy of 'Disaster Coordinating Councils' (DCCs) from the national level out to the Barangay level. However, since they have no public budget, the DCCs mainly serve as advisory bodies, prepare plans for the responsibility of various sectors in case of disaster, and gather disaster impact and loss statistics. At the national level, the Office of Civil Defence organises disaster response.

The LGUs at various levels can allocate budget for disaster preparedness and mitigation activities through their 'development funds' making up 20% of local tax revenue. In addition they control a 'calamity fund' of 5% which can only be released when disaster strikes. PNRC is advocating for releasing some of this funding pool for pre-disaster mitigations projects.

The role of the Red Cross

The Philippine National Red Cross (PNRC) has its national headquarters in Manila and a unique network with a total of 86 Chapters in the 76 provinces and some metropolitan areas. PNRC serve important auxiliary functions to a number of government structures. It is a member of the Disaster Coordinating Councils, usually out to the municipal level, and often undertakes much of the on-the-ground relief and rehabilitation in disaster situations. For this reason, Red Cross has established the Disaster Management Services (DMS), which is one of its most "visible" departments, and in many areas PNRC is mainly known for its relief operations.

Apart from monitoring the local impact of disasters and responding accordingly by providing rescue and relief goods from relief stocks strategically spread over the country, DMS emphasises the vital importance of information dissemination and the training of volunteer Disaster Response Teams at the Chapter level. The ICDPP extends DMS services to the community level – and focuses more on preparedness and mitigation than on response preparedness.

Philippine National Red Cross staff and volunteers assist in many disasters each year – here in landslides that hit a series of communities in Southern Leyte in 2003.

Community-based Disaster Preparedness step by step

Site selection criteria and process

The ICDPP staff conducts a series of meetings with representatives from the target communities to gauge local hazard awareness and plan for implementation, including the capacity building needs and volunteer support.

Selecting provinces and Red Cross Chapters

The first step was the selection of pilot areas across the country with 86 active Chapters. This was done by means of a simplified Vulnerability and Capacity Assessment (VCA, although not the standard process of IFRC). From the outset, it was established that the ICDPP areas should be:

- especially hazard-prone
- with a local Red Cross Chapter with the management capacity to carry out the project
- representative of different geographical terrain in the country – such as mountains, lowland and coastal areas – in order to gain experience with the various types of communities and hazards in the country.

The PNRC started the search by reviewing the hazard statistics to identify the most hazard-prone provinces. Using the above criteria, the province of Benguet was chosen as the pilot area for mountain hazards, while Southern Leyte and Surigao del Norte, and Palawan were later chosen to represent the coastal and lowland areas.

In choosing the project provinces, the interest and capacity of the Red Cross Chapters in pursuing and supporting the project was a high priority.

Selecting municipalities and communities

In selecting municipalities and communities within each province, a VCA with the same criteria was applied:

- according to local disaster statistics and Red Cross experience, the areas were vulnerable to hazards, and
- the local officials in municipalities were willing to enter into a partnership with the Red Cross.

However, different approaches have been applied in the initial selection of the target communities; see Box 4 for lessons learnt.

The CBDP process often leads to constructikon of physical mitigation measures, and the LGU should, preferably, contribute technical expertise and materials, while the community invests volunteer labour.

4 A change in selection procedures was needed

In the earliest years of ICDPP, target communities (barangays) were identified through a survey of all communities in several municipalities – and then selecting only the one community in each municipality for project implementation. The intention was to screen large areas and select the most vulnerable communities based on standardised data.

The map shows the project municipalities in Southern Leyte (orange colour, and municipality names) in which the small red areas indicate the selected coastal pilot communities where the ICDPP was first introduced (Phase II).

However, this procedure had several disadvantages:

- conducting community meetings in all communities caused a lot of raised expectations that turned into disappointment in all the communities that were not picked out for actual support
- the many meetings were a waste of time for communities and the Red Cross volunteers involved
- an enormous pool of data was collected, causing bottleneck problems in the data analysis, and
- working in communities scattered around the province created difficulties in transportation for the ICDPP staff.

For these reasons a new procedure was identified: the most vulnerable municipality was identified from disaster data records in the provinces, and then ICDPP was implemented in all (or most) of the communities in that municipality. In the Southern Leyte case on the map this latter approach was applied in Libagon municipality when the ICDPP moved from the pilot phase and started to spread to neighbour communities (white with orange crosshatching). A great advantage of this change was that the ICDPP project staff needed only to collaborate and establish agreements with one municipality.

Partnership with Local Government Units

Partnership with the local government is a 'must' since the ultimate goal of ICDPP is to reduce vulnerability by improving the capacity of the communities and the local government units to prevent, mitigate and prepare for disasters.

ICDPP staff claimed it had been a challenging task to gain trust from the administrative and political system. In the beginning, the local officials were hesitant, gauging the capacity as well as the sincerity of the staff when the ICDPP concept was presented. Some officials considered it unrealistic and others were reluctant to allot some of their budget to support mitigation measures. Most officials considered it impossible to mobilise volunteers for large initiatives.

Through persistent follow-up visits, the ICDPP staff managed to overcome the initial doubt. A series of meetings and consultations clarified issues and convinced the LGUs to finally join the programme, and the collaboration was defined in a Memorandum of Agreement (MoA).

The formal collaboration between the Red Cross and the municipality is established by signing a Memorandum of Agreement. Here the Surigao del Norte ICDPP team signs an MoA with Mayor Robert Dulpina in the municipality of San Isidro in the presence of the municipal engineers that will provide some of the technical assistance to designing mitigation measures.

In a recent impact assessment many LGU partners admitted that the new approach and collaboration with Red Cross had been very rewarding. The main political gain has been the good PR in contributing to projects that were popular among people in the community – indeed it would have been bad publicity if it had appeared that the local government did not "care about the local people's safety" and left it to Red Cross to support local disaster preparedness initiatives. At the same time the ICDPP helped boost the government system of Municipal and Barangay Disaster Coordinating Councils (see Box 3).

The benefits of cooperation

One of the objectives is to secure support from the local government units amounting to at least 10% of expenses of implementing mitigation measures. LGUs control local 'development funds' that can be used for this. In some municipalities the support to mitigation projects exceeds 50 percent, and in other cases the local officials are tapping provincial and other funds. The LGU contributions normally support:

- materials
- transport
- some special machinery and equipment for the construction work
- salaries of the skilled workers hired to provide professsionel support to the volunteers

The LGUs also help in construction design and some technical supervision. In addition, the LGU staff participate in Disaster Management training and help in conducting community meetings.

Lessons learnt
An impact evaluation of the ICDPP showed that the active involvement of LGUs created greater awareness on disaster prevention, mitigation and preparedness among staff and political leaders.

Partnerships prove most effective when the LGUs are involved from the very beginning, rather than being involved during a subsequent "hand-over" of plans and responsibilities. At the onset of the programme, the municipal and provincial government units were not sufficiently involved, making it difficult to later attract their attention and active contribution. However, in Phase II when the ICDPP was introduced in more provinces, the LGUs were involved from the very start, and typically they agreed to contribute with technical assistance as well as financial support to many of the projects. In eight cases more than half of the costs (up to 79% – including the value of engineer assistance) were covered by the municipality, or jointly with the barangay, in addition to volunteer labour. Some of the most costly projects also received support from the province's Congressman.

5 First doubt – now close cooperation

An example of how the interaction between the ICDPP and the Local Government Units worked comes from the municipality of San Isidro in Surigao del Norte Province. San Isidro is home to 6,650 people in 12 barangays, where the main problems were inadequate water supply. The people relied on rain catchment for their drinking water, and during heavy rains the supply was often polluted and became a health hazard.

The ICDPP Community Development Officer consulted municipal government officials, including the Mayor and the Municipal Planning and Development Coordinator, to discuss their interest and capacity to collaborate with Red Cross on disaster preparedness. But for a small municipality it was difficult to commit to a partnership that required direct support. In addition, the officials expressed doubt about the ICDPP's ability to implement local projects based on volunteer work.

However, with further explanations regarding the ICDPP approach, the LGU realised the potential benefits and decided to join the programme. Soon LGU staff participated in the ICDPP training, and also assisted in the local hazard mapping. Subsequently, when the LGU prepared their Annual Investment Plan it included a budget for supporting the ICDPP mitigation projects which were identified in the Community Disaster Action Plans. These funds were a significant contribution to the implementation of the mitigation projects in each community.

It is noteworthy that the mitigation measures identified by the communities (in their CDAPs) were taken into account by the decision makers at the municipal level – an example of a participatory approach in DP planning.

Following the successful implementation in most of the communities, a close relationship has been established between the LGU officials and the Red Cross staff and volunteers. The main challenge for ICDPP now is to keep the good relationship without being considered a part of, or too close to, the current political leadership – which could change with the next election.

The aim of helping protect the most vulnerable people convinced local governments to support the community-based disaster preparedness.

Formation and training of Community Disaster Action Teams (CDAT)

The members of the Disaster Action Team discuss with the community how best to mitigate against disasters, and they draft their Community Disaster Action Plan (see example in Annex III).

Community participation in ICDPP relies on finding local people who are willing to commit themselves and form a Community Disaster Action Team (CDAT). The team consists of volunteer residents representing various sectors of the community (see Box 7).

The volunteers are elected by the community, and undergo a community-based disaster management course that includes disaster management orientation, first aid, hazard recognition and mapping, and practical planning for disaster mitigation (Annex II).

Since the ICDPP training programme is comprehensive, live-in courses are organised to ensure full participation. The ICDPP takes care of the food and accommodation, which serves as an incentive for some participants to attend. If timed to the local seasonal calendar, most rural communities are able to find periods of free time, when a live-in training like this is a welcome activity.

The Community Disaster Action Teams serve as ICDPP partners in the implementation of the projects in the community. In the long run, they are expected to do the planning and implementation of disaster mitigation projects, respond to emergency situations in the community, and to conduct local community training in first aid and hazard awareness.

What does the CDAT do?

The functions of CDAT members include:

- Recruitment of volunteers for hazard-preparedness activities
- Information dissemination – "spreading knowledge"
- Hazard mapping and needs analysis
- Assisting in the planning of mitigation projects
- Mobilisation of people to implement the project on a volunteer basis in the community
- Monitoring the implementation of mitigation measures etc.
- Maintenance and operation of the mitigation projects.

During emergency situations such as typhoons, the CDATs:

- Help spread warnings and instruct the residents to prepare for the approaching storm events
- If evacuation is needed, the CDATs manage the evacuation centres or ensure that those concerned are properly evacuated
- They also assist in rescue operations.

Lessons learnt

After the first thrilling year of training activities and implementation of the first priority mitigation measures, the CDATs tend to loose a little momentum, and the teams gradually loose members due to migration etc. For this reason the CDATs in each community need "maintenance": a core of ICDPP staff in each province Red Cross Chapter needs to provide training of new volunteers, encourage new awareness-raising activities, and help to revise the Community Disaster Action Plan and ensure it serves as an active 'to-do-list' for risk reduction in the community. Long-term support to the CDATs seems to require quarterly visits to each community, and annual re-fresher courses.

6 Awakening the "help-your-neighbour spirit"

"Before, I thought that Red Cross only meant relief operations" said a 61 year old mother Dominga Camhit, who is a village midwife. However, her association with the ICDPP from 1994 changed her perception. The ICDPP organised training sessions and implemented several micro-projects in her province, Benguet, through volunteer work. Not only did they learn disaster awareness and improved their first aid skills, the ICDPP also sparked the re-awakening of volunteerism – called 'Bayanihan' – in the community. 'Bayanihan' is a voluntary collective help-your-neighbour spirit manifested in times of need. When many hands are needed, such as when establishing community facilities, planting and harvesting rice, or preparing for social events such as weddings, people come to contribute their help.

"This practice has long been a part of our tradition, especially in the building of houses, but it started to fade with our building style change from the old thatched houses to the use of modern materials" Mrs. Camhit said. When she retired as a midwife in 2000, she became the chair of the CDAT and spearheaded the disaster information activities in schools and churches. Her husband is elected Municipal Councillor and he is advocating the ICDPP concept in other communities in the municipality.

Another volunteer is 62 year old farmer, Mr. Retonio Saguid, from a community named Gusaran where he has served as a Red Cross volunteer for seven years. *"People tend to forget what happened in the past, until they are reminded by new painful events"* he says, referring to their experience during the typhoon in 1990, when half of the village was deluged by a mudflow claiming two lives. *"The preparedness thinking should really be strengthened at the community level"* he says. Within the framework of the ICDPP the community has raised local hazard awareness, and constructed several small-scale mitigation measures through volunteer work and with limited contributions from the Red Cross programme.

Help each other: The community mobilises volunteers to help construct mitigation structures protecting vulnerable parts of the community.

7 ICDPP is multi-disciplinary and multi-sectoral

Disaster management relies on support from all parts of the local community, so the ICDPP is:

Multi-sectoral: People from different existing "groups" in the community are engaged as the volunteers. Those who become Community Disaster Action Team members represent various sectors, for example: Barangay Council, the Women's or Fishermen's Organizations. Some people may represent more than one sector.

Multi-disciplinary: The ICDPP collaborates with many different line agencies of government to implement the local projects. Among the local line agencies involved are the Department of Social Welfare and Development, the Department of Environment and Natural Resources, the Bureau of Fire Protection, and the local government offices such as the Municipal Planning Office, and the Municipal Health Office.

Risks and resources mapping

Hazard mapping is a way to remind the community: 'don't forget the hazards'. Before a community can plan how they can best reduce their vulnerability to natural hazards, it is necessary to pinpoint what are the most important local hazards – perceived or real – and who and what they are jeopardizing. Therefore, the ICDPP staff team assists the CDATs in producing hazard maps of the community, showing:

- general map of infrastructure and topography (the landscape with coastline, rivers, roads etc.)
- which areas are, or could be, most affected by disaster situations relevant to the local area
- which private homes, community resources (schools, churches etc.), or important productive units (farmland, shops etc.) are located in the dangerous zones.

During the mapping process, possible ways to mitigate the effects of hazards are also identified – and added to the final map if it is a physical feature or an evacuation route etc. Hazard mapping is a way to compile the accumulated experience of a community so that, for example, the extent of flooded areas during different storm surge cases can be plotted. However, some hazards are less obvious – especially if they have not caused trouble previously. Therefore, the ICDPP staff has some basic hazard recognition training, so they can assist in assessing previously unrecorded risk situations. For example, the ICDPP team might observe a steep, denuded slope showing signs of erosion, and bring the risk of a local landslide to the attention of the CDAT, who may then add the risk zone to the map. Usually the whole Disaster Action Team, a number of local officials and sometimes municipal engineer personnel – and a lot of spectators – are involved. In this way, the mapping session is also important for dissemination of hazard awareness in the community: the process is important!

The mapping process starts with a community meeting where everybody can tell about their knowledge and memory about local risks. The information is added to a joint hand drawn "spot map" of the community – which serves as the basis for the actual field mapping together with the ICDPP team.

It is important to note that the ICDPP staff does not include engineers, geologists or other specialized technicians, so in some cases they may recommend to call in specialist to provide a professional assessment of a potentially critical situation.

The mapping process

The hand drawn maps are enough for the community to prepare their Community Disaster Action Plan. But in order to better have the plans adopted by municipal planners, the ICDPP has drawn maps to scale by using ruler, compass and GPS (Global Positioning System), and produced computer-generated maps by a GIS software (Geographic Information System). The final printouts are handed over to the community and the municipal planners.

Lessons learnt

- In the local community, the mapping process is important: the fieldwork serves to consolidate local knowledge, and facilitate discussions about ways to prepare and mitigate against main risk situations. For this purpose, simple hand drawn maps are sufficient.

- However, the map products are effective in communicating indigenous hazard knowledge to land use planners in the municipal administration, and to advocate for community mitigation priorities to be included in the official land use plans. Providing GIS maps may help open doors to municipal/provincial governments, which in some areas are adopting this technology themselves.

- Mapping to scale is technically challenging. So if the simple hand drawn maps are not enough, the core staff needs thorough training in practical use of maps, compass and GPS, along with an introduction to natural hazard recognition (at least 10 day course). It proves highly effective to have a skilled mapping team from the national headquarters to assist in providing on-site-training of local staff/volunteers in practical mapping skills.

- The community maps cannot replace professional and large-scale mapping of invisible features such as earthquake fault zones, soil structures posing landslide risks etc. These limitations must be realised by the local community and land use planners, and specialist agencies contacted where needed.

- Unless GIS maps are going to be a primary tool applicable to several other functions of the implementing organisation, it is too challenging to invest in the necessary facilities in terms of technical and human resources.

- Coordinate or seek partnership with national/ regional government agencies with mapping needs and skills related to land use planning – many important details are already mapped.

8 maps – the layers of information

The hand drawn maps, and later the GIS maps, typically consist of three "layers" of information:

(a)

A base map with main landscape features; this is used as a base for field mapping

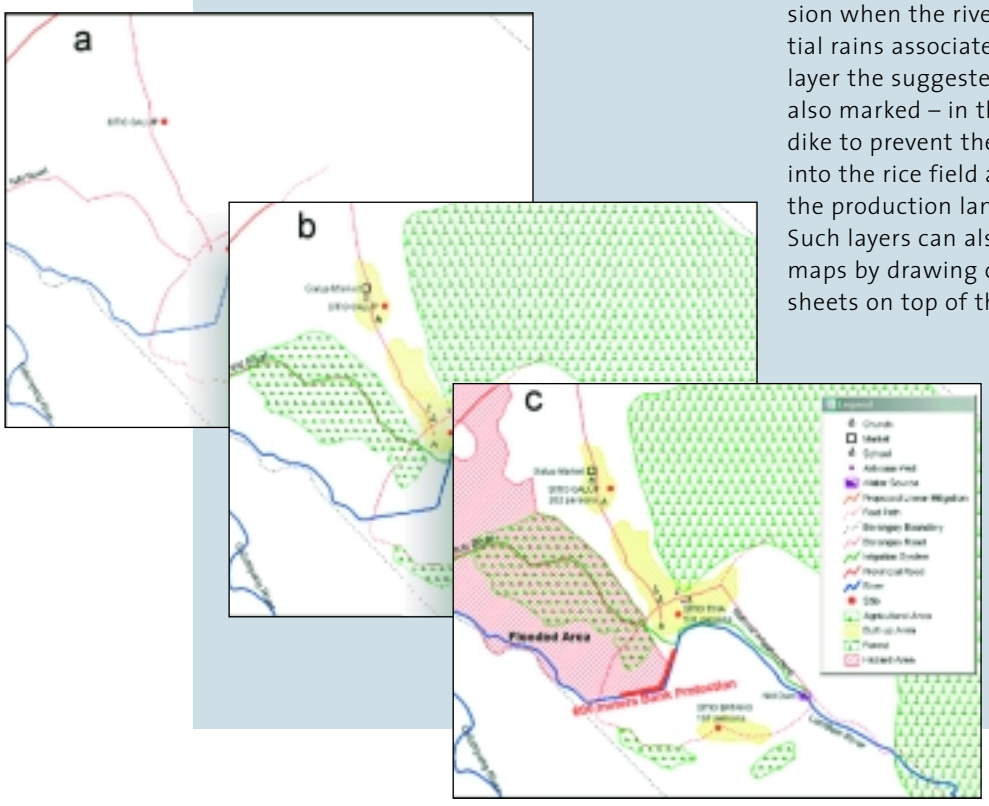
(b)

The ICDPP team and the community plot their 'resources' on top of the basic map.

Resources include important public facilities- such as schools, church, health posts, drinking water supply units etc. as well as production units like farmland areas, shops, boat-builders' yards etc.

(c)

On a separate "layer" of the map the hazard zones are marked. In this example the red area shows areas subject to floods and erosion when the river overflows during torrential rains associated with typhoons. On this layer the suggested mitigation measures are also marked – in this case a bank protection dike to prevent the river from cutting more into the rice field and reduce water influx on the production land.
Such layers can also be made on hand drawn maps by drawing on transparent plastic sheets on top of the base map.



Community Mitigation Measures

One of the tangible outputs of the ICDPP is the implementation of the community mitigation projects. They serve to reduce the impact of natural hazards as well as training the people in planning and project implementation.

An important type of "mitigation measure" in all communities is hazard awareness raising and other training such as health awareness and first aid. In addition to these "soft measures", the ICDPP has completed about 124 physical mitigation measures in the four provinces. The table shows a wide variety in types of projects. There is a clear difference between the mountain area, Benguet, with many foot trail systems installed, compared to the other – mainly coastal – areas where seawalls, evacuation centres etc. are common features.

Health care related measures (water supply, toilets, health posts) are being implemented in all areas, and represent 43 percent of all projects. A further breakdown of mitigation projects shows 25% is infrastructure-improvements (hanging bridges, foot trails), 20% flood/river control measures (seawall, erosion dikes), 5% evacuation/ multipurpose centres, and 6% is environment rehabilitation (reforestation).

9 "We need a sea dike, but we want a basketball court"

The volunteers work on building the protection wall along the beach front.

In any particular community, disaster situations may be too rare to get priority in local development plans, and more immediately convenient infrastructure projects may be higher on the 'wish list'. There is a good example of this from Southern Leyte where the barangay officials first of all pushed for having the old basketball court renovated after it were damaged by a storm surge during a recent typhoon.

The ICDPP staff worked with the Disaster Action Teams to clarify the fact that improving sport facilities might be a popular initiative, but would not reduce the risk of future damage to the community. Instead, they suggested that maybe a protection seawall along the most vulnerable sections of the coast could serve as a wave breaker to minimize the physical impact of repeated storm surges and typhoon events.

"We had informal conversations with the community leaders regarding disaster preparedness objectives, and it took us three assembly meetings before an agreement was reached. Finally, the community protected the coastal houses and other facilities by constructing a 160 meters long seawall. The barangay officials actually managed to obtain support elsewhere for repairing the basketball court" says the Programme Coordinator, Danny Atienza. In July 2001 the community experienced another storm surge. Due to the seawall there was no damage to the houses along the beachfront – and the new basketball court was spared too!

	Number of projects in each province					
Type of mitigation measure	Benguet	Palawan	Southern Leyte	Surigao del Norte	Quezon City	Sum
Drainage system		4		2		6
Flood control dike	2	3	6	1		12
Seawall			5	1		6
Evacuation Center		1	1	4		6
Foot bridge	2	5				7
Foot trail	24					24
Health centre		4			1	5
Health equipment	1					1
Toilets (115 households)				1		1
Public toilet	2					2
School toilets	1					1
Septic Tank	1					1
Water distribution	11	14	8	9		42
Water source protection	1					1
Reforestation	3		5			8
Rescue equipment	1					1
Total	**49**	**31**	**25**	**18**	**1**	**124**

Hazard mitigation
– or convenient development ?

The ICDPP project facilitated discussions in the community to identify and prioritise the problems of the community risk reduction projects. There have been a series of challenges: sometimes people could not agree on a mitigation measures project due to a conflict of interest, or differences in their perception of the risks. There are great differences in the perception of "disaster mitigation measures" as well as problems in recognizing the borderline with general community development projects.

For example, during natural disaster situations there is nearly always an acute lack of safe drinking water. Therefore, many of the mitigation measures have addressed this need, which is a good example of the 'grey' area between hazard preparedness and traditional primary health care and water/sanitation projects. However, if the normal water source is inconveniently placed outside the community, it may often be a local priority to establish piped water into the community – even if the existing water system is perfectly safe from contamination also during floods/heavy rains. In such cases the water project does not improve health, but allows convenient access on an everyday basis. A fine community development project, but not "real" risk reduction.

Similarly, it is difficult to judge when an improved footpath systems or hanging bridges should be considered general infrastructure development, or regarded as important routes for evacuation or access for relief teams.

It is often a challenge for the Red Cross staff working with the communities to help assess if there might be other more "relevant" risk reduction measures than those first proposed by the community. Careful analyses and discussions with the community are required to identify the best preparedness tools – in each specific case.

The construction of low seawalls in Son-ok II and Libagon Southern Leyte, prevented damage to fragile houses along the beachfront during typhoons in 2001 and 2003.

Risk reduction works!

Although natural hazards occur often in the Philippines, many years may pass between dangerous events in any specific community. Therefore, only a few of the mitigation measures established during the lifetime of the ICDPP have proved their worth in real hazard situations. In addition to the Limasawa evacuation centre example reported in the introduction, other cases include:

- In Southern Leyte a river had been eroding the banks and threatened the houses and adjacent rice fields in barangay Catublian. So, in 1998 the community improved and expanded a concrete flood control dike along the most critical parts of the river. During heavy rains associated with a typhoon in February 2001 the dike prevented the powerful river from cutting further into the banks – protecting an estimated 100 hectares of rice fields and sparing 200 farmers from damages.

- In Gusaran – in the mountainous area of Benguet – the main potable water supply comes from a well. Every year typhoons bring heavy rains to the area, causing wastewater to flow into the well and contaminate the water. The community erected a simple concrete wall to divert the surface runoff so wastewater did not flush into the well. Since the concrete wall was established in 1996, it has proved effective several times – and the community now has far fewer cases of serious diarrhea during the rainy periods.

A "multi-purpose evacuation centre" was built in Matin-ao to serve as an alternative school building during annual floods when the old school is not safe. Between floods, it is used for health dissemination and as a clinic when doctors visit the community.

Protecting water systems helped reduce water-borne diseases in four communities at Coron Island.

- Similarly, people in four communities at the Coron Islands of Palawan Province every year suffered during rainy seasons due to contaminated drinking water. Before, diarrhoea and parasites ranked high among the 10 leading causes of morbidity in these communities, but one year after the community had improved water systems with ICDPP support, these illnesses were no longer on the top-10 list. These are good examples of mitigation projects in the interface between a natural hazard (typhoon/rain) and health problems.

- The construction of low seawalls in Son-ok II and Libagon, Southern Leyte, prevented damage to fragile houses along the beachfront during typhoons in 2001 and 2003.

- In Surigao del Norte, a local school is placed in a level area, where annual rains cause a high water level in a schistosomiasis-infected area (bilharzia). To prevent the children from contracting the disease, the school was often closed for extended periods. Through their Disaster Action Plan the community identified higher ground where a plot of land was acquired (donated by owner) and an evacuation centre was built as a mitigation project. The building now serves as a multipurpose centre – and as a school during periods when access to the old school is a health risk.

- On the island of Coron, Palawan Province, local warning systems have been established. When the radio announced a storm, the Disaster Action Team members went from house to house, advising households on how to secure their houses, organising manpower to protect the fishing boats, and establishing an evacuation centre in the local school. After the typhoon passed, the team members assessed the damage and negotiated a plan with the Municipality to support the affected households.

So far, none of the mitigation measures introduced have failed to serve their purpose. However, since most of the physical structures constructed are small-scale, there may come a time or events where the magnitude of the impact exceeds the capacity of the mitigation measures. They have not been constructed to withstand the rare large-scale disaster situations, but to reduce the risks in relation to frequent hazards.

Foot trail in the mountainous province of Benguet, the pilot area for ICDPP.

10 A seawall by all

In Surigao del Norte, two communities of the Burgos municipality are facing the Pacific Ocean. When the communities drafted their Community Disaster Action Plan they gave the highest priority to improving their safety by erecting a seawall to serve as a wave breaker against typhoon-generated storm surges – and possibly smaller tsunamis.

The CDAT prepared a project proposal in collaboration with the municipal engineer, who helped define the technical aspects such as the design, materials and manpower needs etc. When the resource needs were identified, the ICDPP staff and the CDAT called a community meeting where

Community volunteers work in shifts, so each group only needs to allocate one day per week to the construction work.

different working committees were created: A 'mobilisation committee' was in charge of identifying volunteers in the community, and arranging work plans; the volunteers were divided into six groups – each group working on the construction work just one day a week. A 'logistics committee' took charge of organising construction material supplies and food for the working teams.

Concrete slabs for the seawall were moulded and hauled manually by the volunteer working groups.

The Red Cross supported the cost of building materials (cement etc.), and during the construction work days provided food for the volunteer workers.

Aside from providing the manpower, the community also contributed local resources available in their area, such as boulders and gravel. The municipal government assisted by allocating engineers to construction design, and by providing the skilled operators and machinery required to position the heavy concrete modules used for the front of the seawall.

The ICDPP staff and the local Mayor inspects the progress.

Long lasting effect: Sustainability

Cooperation with local goverments has been strengthened by including local officials in CBDP training, and mapping the hazards.

Sustainability is about a "long lasting effect" and the "survival" of the culture of preparedness. This step is very much dependent on step 2 in the ICDPP model: During the close collaboration with the local government units in all steps of implementation, the ICDPP concept becomes somewhat embedded in the local administration. Key elements of the Community Disaster Action Plan from each community are incorporated into official land use plans – and often included in annual budgeting. Long term land use planning is also facilitated by the hazard maps prepared as a basis for the Disaster Action Plans in each community.

However:

- Keeping LGUs committed and focused on preparedness requires regular follow-up advocacy. Therefore, after the initial high-profile implementation of mitigation projects the local Red Cross Chapters must retain some skilled ICDPP staff to keep LGUs alert to hazard preparedness, and to assist in planning further mitigation projects.

- At the community level, sustainability implies "maintenance" of the Community Disaster Action Teams. A key long-term task of the ICDPP staff in each province is to provide follow-up support to the CDATs – including regular visits, organising refresher courses, and assist revising the Disaster Action Plans so new mitigation priorities can be set. Improving safety should be a continued process.

Training and education

Cartoon/comics book are popular, and effective in spreading messages about natural hazards and ways to reduce risk. It was used in the training of volunteers, who again used it as their tool to further disseminate hazard awareness in communities.

As a "tool" in all 6 steps, information and awareness raising is crucial. Promotion of a "culture of preparedness" requires good information material and training skills. ICDPP deals with training and awareness-raising at different levels.

- For the CDATs and community leaders the purpose is to enhance the people's capability in disaster mitigation and preparedness.
- For the local government staff, the training focuses on enhancing skills in planning and mobilising resources for disaster management. Popular awareness raising materials such as comic books and posters are very effective for disseminating information on disaster management. These are written in Filipino language – simple and colourful, with contents and situations familiar to the local people.

(11) Spreading the knowledge

Can the ICDPP concept and idea survive and spread to other communities? That was the question posed to a group of mayors from some of the municipalities involved in ICDPP who gathered at a 'sustainability workshop'. They pledged that they would continue to support the local communities and Disaster Action Teams in hazard management and in implementing new mitigation measures. And there are good reasons to believe it.

"Some of the best examples may be from the province of Southern Leyte. At the municipal level, the mayors have helped undertake some of the other priority projects identified by the communities in the Disaster Action Plan even though there was no cash support from the Red Cross programme" says Albert Muñoz from the ICDPP. *"It seems like the commitment shown by the volunteer labour from the local community has been convincing to the politicians; they know they support popular projects if people are willing to invest their time in them."*

In addition, the general hazard awareness and preparedness attitude and understanding appear to be spreading. *"By 2004 more than 2000 people are trained as Disaster Action Teams or Health Volunteers in the target communities. They are now conducting training in neighbouring communities, especially on disaster management and first aid,"* Albert explains.

The Province Disaster Coordinating Council in Southern Leyte is rather active, and has used the Red Cross teams to train 'disaster preparedness' to their local government officials from at least three municipalities in Southern Leyte. As Albert puts it: *"This is because preparedness is now beginning to be considered more important. Up till now, the Disaster Coordinating Councils have been very focused on response."*

The challenge for Red Cross is now two-fold: on the one hand, to maintain and strengthen contact with the political system to hold their attention, and on the other hand, to support the existing Disaster Action Teams providing the necessary follow-up training and assisting in the recruitment of new members. *"Without maintenance of the CDATs the local drive will disappear"* Albert warns.

Therefore, the Province Red Cross Branches need to allocate some long-term resources to low-key coaching and "maintenance" to the Community Disaster Action Teams.

The Philippines – a special case...?

Whereas the six-step model for CBDP can be applied in all regions, there may be some special conditions conducive to implementing a programme like the ICDPP in the Philippines. Some of these conditions are:

A strong Red Cross Chapter network
The PNRC operates through local Chapters in various cities and provinces (Box 3). Each Chapter generates its resources by local fund raising, and normally is supported by a large group of volunteers. One of the regular components of each Chapter is the Disaster Management Services, and although traditionally focused on emergency response, it serves as a background for initiating new disaster management activities.

Volunteerism
The ICDPP is firmly anchored on the Red Cross/ Red Crescent principle of volunteerism. A cornerstone in the ICDPP success, apparently, is the availability of people who are willing to volunteer. In the Philippines, this is made possible by a well-developed collective 'help-your-neighbour' spirit (see Box 6). In addition, the country's democratic tradition, and its hierarchy of administrative units (Box 3), may be among a host of other conditions contributing to making Community-based Disaster Preparedness feasible – and involvement of LGUs possible – in the Philippines.

Philippines National Red Cross has a strong tradition and experience in mobilising volunteers in local communities.

Experiences and ideas

In the Philippines, the Community-based Disaster Preparedness has proven useful under different conditions: in mountains, coastal communities, and an 'atypical' urban community of semi-legal garbage-collectors.

The two most important elements of ICDPP are the empowerment of local communities and the advocacy for disaster preparedness in local planning:

- Although the conditions in the Philippines may be especially favourable for implementation, a much less ambitious approach can also work. A Community-based Disaster Preparedness programme can reduce vulnerability to natural hazards, and the ICDPP model can probably be introduced successfully anywhere as long as it is adapted to the local social and cultural settings.

- A good way to promote long-term risk reduction is to influence local land use plans: In ICDPP it was partly achieved by incorporating elements from the Community Disaster Action Plans into local government units' development plans. But much more can still be achieved by pushing disaster preparedness into local land use planning at a larger scale.

Community-based Disaster Preparedness is only a supplement to – not a substitute for – regional and national disaster response:

- CBDP is best suited for reducing the impact of small-scale local hazards, although elements of the approach may be adapted to alleviate the effects of larger-scale disasters as well – mainly through organising well-coordinated early warning procedures and contingency plans.

Strong local involvement is a key to success and sustainability:

- Organising community volunteers into a Community Disaster Action Team was a new approach that turned out to be the key to practical field implementation.

- Collaboration with local government units (LGU) from the very beginning is a prerequisite for long-term viability. The LGUs have also benefited from entering into partnership, even though they had to provide funds and other services as counterpart contributions. Local communities take notice when someone responds to their needs, and LGU involvement is good PR for the politicians.

- However, Red Cross personnel must carefully remain impartial, and not risk be considered direct part of the political establishment at any level. Also, the Community Disaster Action Teams must be established in a way so that they have the support of local political leaders, but are not associated with a particular political fraction which may loose or gain influence with change of administration. The specific set-up will depend on local and national political traditions and systems.

- The 'culture of preparedness' can be contagious, and once initiated in a municipality, it can spread with the CDATs to neighbouring communities with limited active support from the Red Cross at Chapter level.

- Although CDAT members are committed people, the teams require a little long-term "maintenance" to keep them busy and interested. Brush-up courses, and training of new members to replace those dropping out are necessary investments to sustain the CBDP process.

- The CDATs also may need regular coaching on revising their Community Disaster Action Plans so they use it to plan a continuous process to reduce risks to the community. It should, in principle, be an ongoing process to maintain mitigation measures, update evacuation plans, and make occasional drill exercises, and identify new mitigation priorities.

Mitigation measures are door-openers:

- The physical structures put in place to improve community security are tangible outputs made by volunteer labour; it created a community feeling of being able to fight local natural hazards.

- Many of the mitigation measures improved the daily life in the community, and were at benefit not only during hazard situations (improved water systems, evacuation centres served as schools or day-care facilities etc.).

The volunteers are recruited among the local population. They know their local problems and can easily work among friends, neighbours, and collegues.

Capacity is strengthened – in communities and in the Red Cross:

- At the national level, the "preparedness and mitigation" aspect of the Red Cross' Disaster Management Services has gained a higher profile, and has strengthened the organisation's capacity. PNRC is now using the ICDPP experiences to introduce community-based disaster preparedness in other parts of the country, partly supported by a range of international donors.

- The local PNRC Chapters participating in ICDPP improved their capacity in disaster management, and the staff acquired the new skills in the field of community development and project planning and implementation.

- The local Chapters became more visible and popular among the public in the provinces.

Procedures for selecting project areas must be chosen carefully:

- It is vital not to raise expectations in communities where the project may never materialise. So limit data collections to most relevant local communities.

- Public records – at province or municipal level – may often hold disaster statistics which can be used to initially select hazard-prone communities, where disaster preparedness programmes can be relevant. So it is recommended to identify sources for local disaster statistics – at the finest possible scale.

Capacity building of implementation team(s) must not be underestimated:

- A community-based disaster management programme requires staff skilled in community work, and with a thorough understanding of the causes, signs and effects of various types of natural hazards.

- The participatory skills are crucial everywhere. But even more so when working in urban areas – in particular among the most vulnerable urban dwellers such as landless, illegal settlers – where the main challenge is to apply a community-based approach in a community type, with social bonds less deeply rooted than in traditional rural communities.

Quality assurance of mitigation measures is difficult:

- Field staff should be aware of (experienced in) the dilemmas of prioritising between different proposed hazard mitigation measures – i.e. to help reach a solution in the "safety versus convenience dilemma" (see example in Box 9).

- There are no standard solutions when implementing mitigation measures against locally relevant hazards. Therefore, nobody can have the technical expertise to support all interventions. This limitation must be realised by the staff, which may help the community to judge when it is necessary to consult an external specialist. The Red Cross should try to establish partnerships with specialist agencies and facilitate the support to the target communities and LGUs. For instance, geologists may be needed to help verify landslide risk zones, or coastal zone management experts and botanists to help establish coastal protection by mangrove reforestation.

- Local government units are important local 'resources' of technical staff for planning some small-scale mitigation measures – LGUs provided much technical support in the Philippines programme.

- When deciding on a specific mitigation measure, it is important to think up some indicator(s) to document its effects and record a 'base line' before implementation. Again, since each case is special, there are no standard solutions.

It takes manpower to start up – less to carry on:

- At the HQ level, the ICDPP has been implemented by one HQ Programme Manager and 2-3 technical staff. The latter have been instrumental as 'flying technicians' providing support and training to the staff in the implementing provinces, especially during the hectic start-up. A flexible and experienced HQ-based team ready to travel from province to province will form the long-term backbone capacity to support new provinces in starting up CBDP.

- In each of the provinces, three local staff have been involved; most effort was required during the start-up in each community when meetings, CDAT training and hazard mapping all took place in rapid succession. When the Community Disaster Action Plan was prepared, the Community Disaster

Action Teams took on much of the responsibility for implementing the mitigation measures, and the workload of the ICDPP staff was somewhat eased.

- Once the routines are established, one experienced province staff (Disaster Management Services Officer with community experience) appears adequate to provide follow-up support to the CDATs, and help them gradually expand to a few neighbouring communities per year. However, additional CDAT training courses would still need HQ support and input.

Hazard mapping is useful – with or without high-tech methods:

- Hazards mapping is useful in capturing local knowledge about natural hazards, and in transferring the information to the municipal planners.
- The mapping process is most important to the community, and serves as one of the means to raise awareness of local hazard zones. Therefore, not only the trained volunteers, but as many community members as possible should be encouraged to contribute to the mapping by collating recent and historical hazard and disaster knowledge.
- Computer-generated maps (GIS) can be an efficient way to approach local government land use planners and have the Community Disaster Action Plans incorporated into local development plans – especially if the LGUs are themselves applying GIS. But for the communities, their own hand-drawn maps are better as a basis for discussing and planning mitigation ideas.
- Preparing hazard mapping to scale with any accuracy necessitates a comprehensive week-long course in the various techniques for the involved technical staff.

12 Can the ICDPP be effective against all types of hazards ?

"Yes – but different components will have to be applied to different hazard situations" says Danny Atienza, the ICDPP Programme Coordinator. *"Until now we have focused on the small-scale hazard types where the community can actually identify and build some kind of mitigation measure to improve their safety. But of course we have no illusions that we can erect any physical defence against the effects of volcanic eruptions. In such a situation, community-based preparedness can never be more than a small, but crucial, addition to the national disaster response"* he adds.

The central component in ICDPP is the local Community Disaster Action Team, which Danny considers can make a difference also against violent hazards, for instance by:

- extending the public warning systems to the community level,
- training the community in appropriate response and evacuation procedures,
- being prepared to coordinate local response activities when disaster hits, or
- in built-up areas, local Disaster Action Teams could help long-term mitigation against earthquakes by advocating locally for adhering to earthquake-safe building codes.

"We have not yet tested these ideas, but I see no reason why community-based disaster preparedness could not be adapted to at least assist the preparedness towards any hazard type" Danny says. *"Increased local awareness and trained people will always be an added advantage in disaster situations".*

Although large-scale hazards cannot be mitigated, community-based preparedness can still be useful to prepare an organise evacuation plans and practise. Explotion of Mount Pinatubo, Philippines, 1991.

Spreading the idea

Disaster Preparedness is one of the focus areas for the Danish Red Cross International Assistance – as it is for the International Federation of Red Cross and Red Crescent Societies (IFRC). Since the late 1980's Danish Red Cross has been supporting DP programmes through partnerships with Philippine National Red Cross, and over the years the programmes have changed from a "working for the people" to a "working with the people" approach. *"Capacity building of the local people to prepare for and mitigate against the effects of natural hazards became the focus in the partnership, and we have been able to benefit from this experience elsewhere in the region and in the world"* says Jørgen Kristensen, Danish Red Cross Regional Representative for Asia.

"In Vietnam we have established a partnership with the Red Cross supporting the development of a coastal protection programme in the Red River Delta, and in Mozambique and Indonesia we have supported our local partners, the Mozambique and Indonesia Red Cross Societies, in initiating new DP programmes. In all cases the ICDPP has served as an inspiration – but the concept of course adjusted to the local context. Experienced staff from the Philippines have been involved in these international activities – assisting, for example, in programme review and training curricula development. This dialogue and exchange of experience has been a very positive exercise" Jørgen Kristensen explains. In Southeast Asia, Red Cross Societies implementing the programmes have established partnerships with regional or national research institutes and other DP resource centres. This inter-agency collaboration will facilitate knowledge-sharing and provide a professional dialogue for further development of the concept. *"We have seen a growing interest in Community-based Disaster Preparedness programmes. Not only within the Red Cross, but also among other main actors in humanitarian assistance and development work – and not least in the donor community. Long-term donor commitment is a precondition for initiating DP programmes like the ICDPP, since we are supporting a process of changing people's perception of how to deal with disasters. Danida, the main donor for the ICDPP-programme, has given the necessary flexibility and an extended time frame. Let's hope that other main donors to DP programmes will duplicate this attitude"* Jørgen Kristensen ends.

FURTHER INFORMATION

Philippine National Red Cross, ICDPP:
icdpp@redcross.org.ph
Tel : + 63 2 527 0864

Danish Red Cross
International Dept.
info@drk.dk
Tel : + 45 35 25 92 00

Danish Red Cross
Regional office for South East Asia
danishrc@laopdr.com
Tel : + 856 2121 9559

- Video-CD: As a supplement to this booklet, a Video-CD about the ICDPP in the Philippines is available. Copies can be obtained through any of the above contacts.

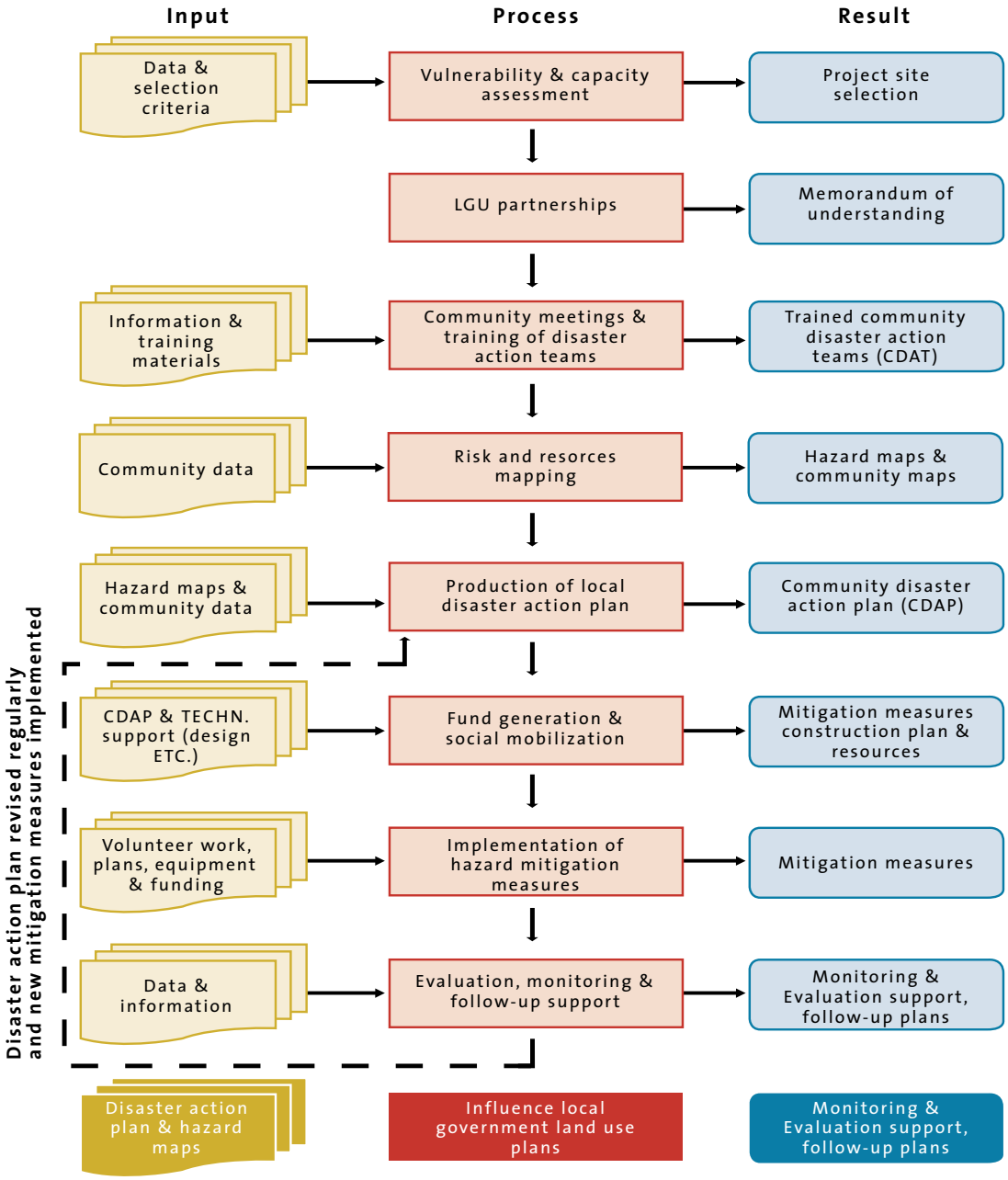
- A practical handbook is also available from Philippine National Red Cross: *Guidelines for implementing the Integrated Community-based Disaster Planning Model*, PNRC, 2003. 77 pp.

The ICDPP model flow chart

The ICDPP model is illustrated in the flow chart, while the general steps are described above. Implementing the ICDPP model means that the entire process leading to implementation of at least one kind of mitigation measure has been completed. However, 'mitigation measures' is a broad concept that implies that the community has taken some concrete action to improve their safety situation. Although some deviations from this standard flow process may occur – and levels of ambition vary within different elements – the whole process must be implemented in order to achieve short- and long-term impact at the community level.

It is important that the process does not stop after the first mitigation measures have been implemented – the Community Disaster Action Plan should be revised, and used to plan for the next risk reduction priority.

At the bottom of the flow chart is indicated the long-term and sustainable impact of ICDPP through the influence on municipal and province land use plans. Local and use planning is important so that the municipality and community can avoid putting important resources and structures in potential danger zones.



Main elements of the CDAT training

TOPIC	CONTENTS	TRAINING OBJECTIVES	TRAINING METHODOLOGY
Introduction (1 hour)	• Review of programme • Levelling of expectations	• Provide overview • Develop facilitator – participant relationship	• Lecture & discussion
Overview of Red Cross/ Crescent movement (1 hour)	• History and strategic direction of RC/RC	• To recognize the service rendered by the organisation, and its guiding principles • Visual aids	• Lecture • Discussion
ICDPP (3 hours)	• Overview of ICDPP • Objectives of programme • Roles and structure of Disaster Action Teams	• To become familiar with the ICDPP aims, and its special role at the community level • To understand the function of CDAT – and the participant's future roles in disaster management	• Lecture • Discussion • Workshops • Role play
Disaster awareness (10 hours)	• What is disaster • Kinds of hazards affecting the Philippines • Common causes and effects of natural and man-induced hazards	• To be able to identify and understand the general effects and impacts of hazards • Understand how a hazard can turn into a disaster	• Lecture • Discussion • Workshops
Emergency services and response (28 hours)	• What to do during emergencies • Evacuation options • Purpose of public information • Community basic first aid	• To be able to outline the major considerations which apply to response • To be able to understand the requirements for effective response • To identify the resources relevant to various aspects of response • Knowledge of basic first aid • Ability to train others in the community in basic first aid	• Lecture • Discussion • Workshop • Demonstration • Return demonstration
Disaster concepts (12 hours)	• What is disaster management – in general and especially in the Philippines? • The disaster management cycle • Standard operating procedures of RC disaster management • Needs assessments	• Understand disaster management in the community setting • Understand the concepts involved in disaster management • To be able to reduce or avoid human, physical and economic losses suffered by individuals, the society and by the country at large	• Lecture • Discussion • Visual aids • Workshops • Group discussions
Disaster management planning (10 hours)	• Spot mapping and field exercises • Identification of resources in the community • Capacity and vulnerability assessment • Problem-tree analysis • Objective-tree analysis • Ranking & prioritisation of problems Disaster Action Plan	• To be able to identify potential risks and hazards in their community • To be able to identify and recognise existing local resources • To help the community identify their capacities and vulnerabilities • To be able to assist the community in identifying existing problems through the methods introduced during the training • To be able to prepare a sample Community	• Lecture • Discussion • Visual aids • Workshops
Community organising (12 hours)	• What is 'community organising'? • Components and principles involved • Community organising exercises	• Understanding your community • Identifying the volunteers' roles in managing disasters • Determine how the community organising concepts can be applied in community disaster management	• Lecture • Discussion • Visual aids • Workshops

Sample Community Disaster Action Plan

This example on a Community Disaster Action Plan (CDAP) addresses the physical infrastructure projects (evacuation centre) and increased protection along coastline (mangrove planting), but also plans for increasing the awareness level (non-structural mitigation) and for long-term collaboration and resource allotment to mitigation work. Other CDAPs may include more health-related mitigation measures such as ensuring potable water supply during flooding situations.

Disaster Action Plan of Barangay Lugsongan, Limasawa Municipality, Southern Leyte

PROBLEM	OBJECTIVE	ACTIVITY/STRATEGY	RESOURCES NEEDED	RESPONSIBLE PERSON	TIME FRAME
Loss of lives and properties due to storm surges	People living in the coastal areas will be secured during occurrence of storm surges	Construction of evacuation centre in the elevated area	Design the centre Materials: Sand, gravel, hallow blocks, iron bars, cement and other bldg. materials	Municipal planning development coordinator, ICDPP Staff, LGU officials and CDAT	June 1 to Sept. 15
	Less damage of properties	Planting of mangroves / trees along the coast	Seedlings Technical support		June 1 to Sep. 15
No knowledge on evacuation management	Community people will be organised and trained in evacuation centre management	Conduct community-based disaster management training	Facilitator / trainor Training materials	ICDPP – PNRC Staff, Department of Social Welfare and Development	Sept. 20 to October 2
Lack of funds for disaster preparedness activities	Provide funding to be used for some disaster preparedness activities	Lobby to LGU and submit resolution for funding; fund raising activity; budget allocation from inter-nal revenue allot-ment; integration of the disaster action plan into the LGU development plan for regular budget allocation on disaster preparedness activities	Resolution, human resources	CDAT, LGU Officials ICDPP staff	Before the above

Glossary

Barangay
The smallest unit (~village) in the government hierarchy of the Philippines local government system

CDAP: Community Disaster Action Plan
The plan developed in the local community to prepare relevant hazard preparedness – including mitigation measures and awareness raising etc.

CDAT: Community Disaster Action Team
The local volunteers trained during the ICDPP in disaster management; active in hazard mapping, preparation of CDAP, and local capacity building

Capacity building
Improving the ability and capacity of communities, families and individuals to become less vulnerable and enjoy fuller and more productive lives (*)

CBDP: Community-based Disaster Preparedness
The core of ICDPP – the concept of organising the community to prepare, plan for and mitigate against natural disaster events. Opposed to province level disaster response systems normally in place (in the Philippines and many other countries)

Danida
Danish International Development Assistance

Disaster
A situation in which a threat exposes the vulnerability of individuals and communities to a degree that their lives are directly threatened or sufficient harm has been done to economic social structures to undermine their ability to survive *

DMS: Disaster Management Services
A department within Philippines National Red Cross responsible for disaster relief operations, disaster preparedness training, hazards statistics etc.

DRC
Danish Red Cross

DP
Disaster Preparedness: Activities that contribute to the pre-planned, timely and effective response of individuals to withstand or reduce the impact and deal with the consequences of a (future) disaster *

Disaster response
Coordinated activities aimed at meeting the needs of people who are affected by a disaster *

GIS
Geographical Information System: computer-based maps linked to a database, facilitating ad hoc map production and editing, spatial analyses of whatever data are maintained within the system

LGU
Local Government Units (municipal and province level) in the Philippines

Mitigation
Measures aimed at moderating or reducing the severity of the impact of a disaster, *
Mitigation can take place before, during or after a disaster, but the term is most often used (as in this booklet) to refer to actions against a potential disaster before it occurs. Mitigation measures are both physical/structural (such as flood defences, or reforestation), and non-structural (such as training, land use plans)**

MoA
Memorandum of Agreement

PNRC
Philippine National Red Cross

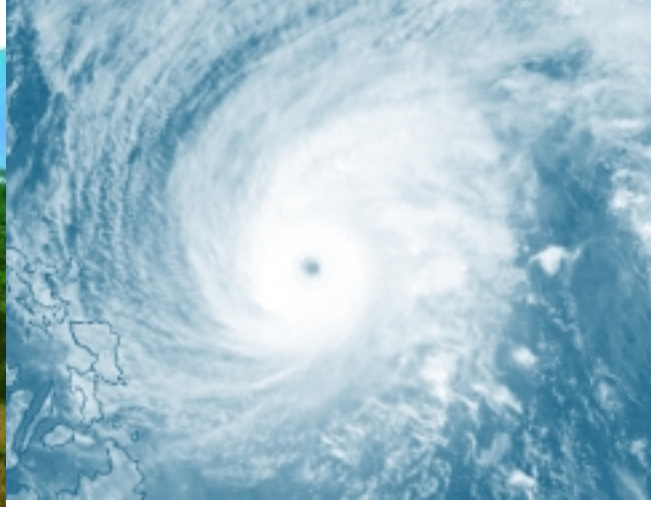
Risk
The likelihood of a specific hazard occurring and its probably consequences for people and property. **

Volunteer
An individual who freely contributes his/her services, not by a desire for material or financial gain or by external social, economic or political pressure, in the belief that his/her activities are beneficial to the community *

Vulnerable (person)
A person at risk from situations that threat his/her survival or capacity to live with a minimum of social and economic security and human dignity *

* = definitions according to IFRC Strategy 2010

** = supplementary notes from Twigg, J. (2004): Disaster Risk Reduction. Mitigation and preparedness in development and emergency planning. Good Practice Review no. 9, March 2004. ODI, Humanitarian Practice Network.365 pp.



Terms such as community-based and community participation are frequently used in project descriptions, and very often involving the community is a precondition for the success of a project or even an objective in itself. However, as most organisations would agree, this is easier said and written than actually done. To ensure a real involvement and the active support of a local community, and to maintain this interest and support long after the first initial, exciting and – often – donor financed period, is a challenge. This booklet describes a disaster prepareness programme carried out by the Philippines National Red Cross in four provinces and one urban area. The programme has managed to involve the local communities from the very outset in 1994, and in fact, it is the local communities who decide what to do, and when and how to do it.

The programme has been so successful that the Red Cross is gradually using the approach in other areas. Other national Red Cross Societies have visited the Philippines to study the programme in order to plan and implement something similar.

However, it should be recognised that the Integrated Community Disaster Preparedness Programme did not succeed without a certain number of problems and challenges. This booklet therefore gives an overview of the programme as well as adding an honest description of "lessons learnt" to each chapter. Furthermore, it provides a study of the special conditions in the Philippines and contains a section on experiences and recommendations to inspire anyone who would like to use this model for other community-based programmes and projects.

Further information about the ICDPP can be obtained from the Philippines National Red Cross and the Danish Red Cross at the addresses given below.

Bonifacio Drive
P.O. Box 280
Manila 2803
Philippines

Tel: +632 (0)572 0864
Email: icdpp@redcross.org.ph

Blegdamsvej 27
P.O. Box 2600
DK-2100 Copenhagen Ø
Denmark

Tel: +45 3525 9200
Email: info@drk.dk