

6 RISK MITIGATION AND AWARENESS

6.1 Introduction



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Need to Protect Vulnerable Future Generation

Of the 250,000 people who die every year because of natural disasters 95% live in countries that are on the road to development. It is necessary to reduce this number by transferring knowledge and by raising awareness.

The recovery process after major earthquakes, tsunamis, storms, floods or other disasters offers the unique chance for settlements to turn their disaster vulnerability into disaster resilience. Therefore risk reduction and mitigation measures should be integral part of the recovery. Raising of public awareness towards potential dangers should be fostered.

Recovery provides the physical opportunity as well as a collective mindset to introduce changes in structural and non-structural risk reduction elements, and these need to be coordinated in an integrated manner. The obstacles to the introduction of safety measures are: the additional costs, the need to train designers and builders in new ways of building, the need to educate the public concerning their own behavior, the development of enhanced safety legislation, such as building by-laws and land-use planning controls. Risk reduction also needs to be mainstreamed into the central flow of government policies and

planning. Disaster recovery may provide the catalyst for such changes.

6.2 Mitigation and Awareness Issues

Core issues for risk mitigation and awareness are:

- The integration of disaster risk reduction into sustainable policies and the planning of recovery
- Development and strengthening of institutions, legal mechanisms and capacities to build resilience to hazards throughout the recovery process
- The systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programs
- Building risk reduction into the reconstruction of new buildings and infrastructure
- Community responsibility in all aspects of the recovery in order to build capacity for risk reduction and disaster mitigation

After the disaster there should be the following priorities in terms of disaster risk reduction and mitigation:

- Raise public awareness of the risks posed by earthquakes, floods tsunamis and other disasters and introduce the possible measures to manage these risks.
- Help communities identify practical measures to reduce their risks of natural disasters
- Train NGOs presently working in earthquake, flood, and tsunami prone areas on preparedness and mitigation
- Train engineers, local builders, social and community leaders in earthquake preparedness and mitigation
- Provide training on village and settlement level for housing beneficiaries

As described in Chapter 4, community responsibility is crucial for the engagements in recovery, even more so in all efforts related to risk reduction and disaster mitigation. If the community is actively involved in the planning of risk reduction and disaster mitigation measures it will directly lead to a reduced



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Improving Construction Methods

number of dead and injured people and there will be less damage in social structures and material assets in a potential new disaster.

The entire community will become able to cope with disasters in a quick and effective way. Every human and material resource will be most effectively mobilized in cases of emergency. Clear procedures will ensure close cooperation between the community, local and international NGOs and government institutions on all levels.

6.3 Work with the Communities

Detailed risk reduction and disaster mitigation measures to be taken based on the Community Action Planning concept, elaborated in Chapter 4, are:

6.3.1 Community Based Risk Assessment (CBRA) of the Local Situation

- The CBRA starts with the assessment of hazards, their type, nature, frequency and magnitude. It follows the assessment of vulnerability
- The community members determine the factors of risk affecting their community, as well as the causes of these factors
- During the vulnerability assessment it must take the differences within the community regarding sex, age, social- and material- status into account
- Finally the community must assess its capacities. This is the process of analyzing and defining what local people can do in an emergency situation in order to mitigate the effects of hazards as well as to ensure their sustainable livelihood. Here the community can learn from the experiences of local people and the analysis of available resources

6.3.2 Aspects of a Hazard, Vulnerability and Capacity Assessment

Material aspects:

- Situation of assets of the population, poor housing and infrastructure etc.

- Provide training on village and settlement level for housing beneficiaries
- Food security
- Availability of basic services, i.e. education, health care, water supply and sanitation, etc

Social and institutional aspects:

- Poor relationships between community members
- Discrimination against community members in terms of race, gender, social position, religion, ideological system, etc
- Lack of local organizations and institutions or poor organizational capacity

Aspects of motivation:

- The community is passive or pessimistic about its future
- Lack of solidarity, cooperation and unity

6.3.3 Preparation of a Disaster Preparedness Plan

Facilitate the community to establish a Disaster Response Committee (DRC). This body, which must be equally composed of women and men, must be assisted to create a disaster preparedness plan. The plan should fulfill the following tasks:

- Identify safe shelters in the settlement
- Identify the evacuation routes leading to safe shelters
- Identify emergency communication systems (who and where to call)
- Establish emergency communication and information dissemination networks among the DRC members
- Establish communication networks between and among communities
- Store food and drinking water
- Mobilize emergency rescue equipment
- Mobilize volunteer teams for emergency rescues and assign responsibilities
- Notify community of evacuation plans (especially those who will need to be evacuated)
- Organize disaster preparedness exercises (rescue, evacuation, etc.)

- Prepare for disasters with a well-designed logistical emergency plan and prearranged modes of transportation
- Set-up/re-check early warning systems (radio, megaphone, public address systems etc.)
- Ensure current water supply sources are protected, i.e. from contamination

6.3.4 Orientation for population how to react before, during and after a disaster

Facilitators should inform the community members what personal measures they can take in order to reduce their risk before a disaster and in order to protect them during and in the immediate aftermath of a disaster. As an example, in the case of earthquake risk, the following instructions should be provided:

1 Measures before an earthquake incidence:

- Know the safe place in each room.
- Know the danger spots: near windows, mirrors, hanging objects, unsecured furniture and shelves holding heavy objects.
- Know local safe places outdoors.
- Identify exits and alternative exits – possible ways to evacuate the house and work place during an emergency. Ensure that these exits are never blocked.
- Know the location of the on/off switches/valves for electricity and water and learn how to operate them
- Learn first aid.
- Keep large, heavy objects and breakables on lower shelves to prevent serious injuries caused by falling objects.
- Store all flammable or hazardous liquids outside the house, in their proper containers and away from structures.
- Hang heavy items such as pictures, mirrors, etc. away from beds, couches and anywhere people sit.
- Brace overhead light fixtures to prevent them from falling during an earthquake.

- Close shutters or draw curtains as protection from flying glass
- Ensure that a stock of food, drinking water, first-aid material, essential medicine, a flashlight with extra batteries and a radio with extra batteries is in the house

2 Measures during an earthquake incidence:

- If possible, get outside and move to an open space. Keep safe distance from trees, signs, buildings, electrical wires and poles
- Do not use elevators, use only stairs
- Beware of objects falling down in the street
- If you cannot get out: position yourself under a sturdy table or cot so that you are not hurt by falling objects; protect your head with a pillow or soft protective material; open the door; turn off cookers, electric supplies, gas cylinder etc.; move away from windows, doors tall cabinets and heavy objects that could fall

3 Measures after an earthquake incidence:

- Check yourself for any injuries
- Protect yourself from broken objects by wearing long pants, long-sleeved shirts, sturdy shoes and gloves
- Check others for injuries. Give first aid and cover the seriously injured with blankets to prevent shock
- Check the building for damages. You may have to leave the building if it is seriously damaged or prone to collapse in an aftershock
- If there is fire, try to extinguish it, call fire service – if possible, and leave the house immediately
- Clean up spilled medicine, gasoline or other flammable liquids immediately. Leave the area if you smell gas or fumes
- Be prepared for aftershocks. Plan where you will take cover when they occur



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Practical Training

6.4 Training of facilitators

In order to work with the communities local facilitators need to be trained in conducting awareness raising campaigns on disaster preparedness and mitigation. The training of trainers should be based on a written guideline and have the following objectives:

- Enhance the knowledge and capacity of the trainers and facilitators on disaster preparedness and mitigation issues
- Guide them to deliver/facilitate training and awareness raising sessions
- Guide them to facilitate the development of a Community Action Plan (CAP) for villagers who are specifically at risk of earthquakes

6.5 Training of the communities

The facilitators should learn to apply the following principles:

- Encourage the participation of everybody, especially women, and respect the points of view of all participants

- Emphasize important points
- Put the participants in a situation of success
- Make comprehension easier by using simple words and visual supports
- Stimulate interest by giving concrete examples that are relevant to the situation of the village and by varying the activities
- Ensure the understanding of the participants and do not hesitate to repeat and reformulate when needed
- It is extremely important women participate in the process, since they may be able to identify risks that men would not necessarily consider. They are often the ones who take care of vulnerable people (children, the elderly, disabled people, etc.). If required the facilitators should hold separate training sessions for men and women and later synthesize the results into a common vision

Facilitators should be taught how to conduct a workshop to raise awareness, reduce risks and teach mitigation measures.



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Distribution of Visual Materials on Earthquake Resistant Techniques to Raise Public Awareness