3.3.5 Lao PDR

Empowering the Community for Disaster Risk Reduction through a Community-Based Disaster Management Project in Champasack District, Champasack Province, Lao PDR

Background

Champasack district in Champasack province is located about 70 km south of the capital Pakse in a tract of land between the Mekong river and the Thai border in the southern part of Lao PDR. Champasack district covers 800 km^2 and is home to over 50,000 people. The majority of the population of the district consists of lowland Laos. Every few years the eastern half of the district is inundated with destructive flooding while the western half suffers short periods of drought and flash flooding. Apart from a community development project started by World Vision Laos in 1998, the needs of these communities have been largely ignored as disaster risks are seen as small-scale annual events.

The National Disaster Management Office and the Ministry of Labour and Social Welfare, in conjunction with World Vision Laos, implemented a three-year project funded by AusAID entitled "Champasack Community Based Disaster Management (CBDM)" between April 2001 and March 2004.

The Champasack CBDM project was designed to meet the distinct but related needs of people living in the two regions of Mekong and Nongtae. The project sought to introduce a new approach to assist people to learn to live with disaster risk and mitigate the effects of flooding while at the same time maximizing flood benefits. It required a socio-economic rather than a physical view of disaster risks. This approach regards flood and drought as risk factors whose effects can be exacerbated by inappropriate human activities and responses. The project sought to help people realize that they are not helpless victims of hazards and that by adapting their behavior they can reduce the disaster risks.

Project Objectives:

- Develop and promote environmentally and socially appropriate early warning systems and community awareness of disaster risks and response options.
- Promote agriculture production practices that are more appropriate to the local environment and will improve security at the family and village level.

The project used a participatory approach to build sustainable institutional capability of provincial and district level government agencies to assist villages to develop community-owned organizations, systems and processes to mitigate, prepare for, respond to and recover from the effects of drought and floods. It had three significant program outputs.

- Early warning and response capacity were enhanced.
- A system of small rain catchment weirs was constructed.
- Diversified flood- and drought-resilient agricultural practices were established.

Activities Undertaken and Major Achievements

1. Training

A total of 4856 individuals from 39 villages directly benefited from training. Of these, 2,136 were male and 2,182 female. The target beneficiaries comprised hydrology officials, members of Village Disaster Protection Units, regional, district and provincial-level government officials from departments of education, health, agriculture, planning, labour and social welfare and Lao women's union members, teachers, students, village health workers, and farmers. The training covered skills development in the areas of early warning, preparedness and risk reduction from the community to district-level, such as measurement of precipitation, water level gauging/recording, early warning, participatory hazard and vulnerability mapping, preparedness planning, community-based first aid, community-based disaster management, weir management and dry season cultivation.

2. Raising Awareness

The work of raising awareness focused on school children and villagers. The VDPUs conducted village-level awareness activities in some cases. A total of 3904 individuals, including school children and villagers, benefited from interventions to raise awareness. The topics covered included flood and drought risks, protective actions for these two hazards and water and land-use planning.

3. Group Formation

The project established groups at the village level in order to enhance the preparedness capacity of the communities and enable them to reduce risks of food insecurity. The groups formed in this regard were:

- Village Disaster Protection Unit;
- Farmers' Group;
- Weir Management Committee;
- Village Health Workers.

PLA Data collection

Capacity and vulnerability mapping

4. Infrastructure Development/Weir Construction

Weirs have been constructed in three villages out of four. They have allowed people to carry out small-scale dry season cultivation and support their livelihoods, either by consuming the produce directly or through its sale.

Weir constructed for villages in drought zone

5. Mapping

Each village has a Hazard Map, which is kept in the village temple (Wat), except for Phanoneua village, where it is kept in the village head's house. The map provides information on hazards, low-lying areas, vulnerable families and resources to cope with disaster risks.

Major Achievements

The project has achieved its objectives in the Mekong region. These included the establishment of socially appropriate early warning systems and increased awareness of risks. An integrated and effective early warning system is in place. The system comprises gauging of water levels and recording by hydrology stations, issuance of warning information to radio and television stations, receiving information by the Village Disaster Protection Unit (VDPVs) and the issuance of warnings to villagers by the VDPUs. The VDPUs would then organize community level evacuations, if required. Communities provide information to the district about risks and vulnerabilities. The district authorities collect information on rainfall and water levels in the rivers and pass it on to the provincial authorities.

The achievement of the objective of raising awareness of disaster risks has been partially achieved in some villages, while in others it has been achieved fully. The people who have benefited from the process of raising awareness on disaster risks include the VDPU leadership, members of farmer's groups, school children and teachers.

- **Total Budget**
  US$420,000

- **Contact Details**
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3.3.6 Malaysia

Mitigation and Management of Flood Disasters in Malaysia

The most severe climate-related natural disasters in Malaysia are monsoon floods and flash floods. These floods are common hydrological phenomena in Malaysia, on average affecting an area of 29,000 km^2, more than 4.82 million people (22% of the population) and inflicting annual damage of RM 915 million.

Flood Mitigation Policy and Strategy
Structural measures consist of controlling flood flows, whereas non-structural measures such as land conservation regulate human activities to mitigate the impact of flooding. Another indispensable non-structural measure is the adoption of a flood forecasting and warning system. With this in mind, policy guidelines for implementing flood mitigation measures will include the following:

(1) Implementation of structural flood mitigation in terms of engineering and socio- economic environment,
(2) Implementation of complementary non-structural measures,
(3) Implementation of non-engineering measures where there is no engineering solution, and
(4) Continuation on strengthening flood forecasting and warning systems.

Flood Mitigation and Management
In 1982 the government conducted a National Water Resources Study on structural and non-structural measures for flood mitigation and management. Subsequently, a number of flood mitigation projects were completed, such as canalization of rivers, raising river embankments and multi-purpose dams.
The financial involvement for such projects was increased in Malaysia's five yearly development allocations. Such escalating expenditures require the government to be more proactive in finding ways and means to address the flood problems in a holistic manner. Government machinery allows the Economic Planning Unit of the Prime Minister's Department to coordinate all aspects of planning, design and implementation of water resources in the country.

Flood Disaster Relief and Preparedness Machinery
After the disastrous flood of 1971, the National Disasters and Relief Committee was formed to be responsible for planning, coordinating and supervising relief operations during floods. Most of the committee members are governmental departments/agencies and social organizations that are able to provide shelter, rescue, food and medical supplies. Through the nationwide State Security Committee, police, the armed forces, social and welfare departments and various voluntary organizations, the task of rescuing and evacuation of flood victims to predetermined relief centers could be organized effectively.

Flood Forecasting and Warning System
To date, the following infrastructures for flood forecasting and warning systems have been installed:

- 233 telemetric rainfall stations;
- 190 telemetric water level stations;
- 256 manual stick gauges;
- 84 flood warning boards;
- 217 flood sirens;
- real-time flood forecasting and warning systems in nine river basins.

The Department of Irrigation and Drainage Malaysia (DID), responsible for providing flood forecasting and warning service to the public, has established an Internet-based National Flood Monitoring System known as Infobanjir (http://infobanjir.moa.my), via which rainfall and water level data can be collected for the whole country.
The government has been working closely with the Canadian government to establish the GEOREX Monsoon Flood System for the Kelantan River Basin, a flood monitoring system integrating remote sensing, hydrological model and geographical information systems (GIS).
This system allows the merging of hydrological data, such as river water levels and potential flooded areas, with geographical data on demography and transportation infrastructure.