



Major activities

- ★ Assessment of program municipalities in terms of Earthquake Risk and vulnerability
- ★ Preparation of Guidelines and training manuals
- ★ Preparation and dissemination of IEC Materials on earthquake awareness and safe construction practices
- ★ Capacity Building Trainings on Earthquake Resistant Design / Construction of Buildings for architects, engineers, sub engineers, professionals from the project municipalities, DUBBC and local consultants/designers
- ★ Public Education and Awareness (PEA) on Earthquake Safe Construction Practices in Program municipalities
- ★ Preparation of reports for update of Nepal National Building Code, Review of existing government and municipal policies on earthquake risk reduction, preparedness and response
- ★ Structural Vulnerability Assessment, Design and Seismic Retrofitting Construction Works of Public Buildings in Program Municipalities

Major Achievements

I. Preparation of Reports and Guidelines

- ★ Municipal Profiles in terms of Earthquake Risk and Vulnerability of program municipalities
- ★ Report on Impact of settlement Pattern, land use practice and option in high risk areas of program municipalities
- ★ Seismic Vulnerability Evaluation Guideline for Private and Public Building (For pre disaster vulnerability and post disaster damage assessment)
- ★ Review report on Existing Government and Municipal Policies on Earthquake Risk Reduction, Preparedness and Response
- ★ Recommendation report for updated of Nepal National Building Code

II. Demonstrative Seismic Retrofitting Works

- ★ Structural Vulnerability Assessment, design and cost estimation of five public buildings one in each Program municipalities for demonstrative seismic retrofitting works completed
- ★ Demonstrative seismic retrofitting construction works of public buildings in program municipalities are in progress

III. Preparation and dissemination of IEC Materials

- ★ Posters and Booklet on Earthquake Preparedness Planning for Family
- ★ Technical posters on Earthquake Safer Building Construction
- ★ Project Caps and T-shirts

III. Capacity Building Trainings and Awareness Programs

- ★ 136 masons trained on earthquake resistant construction of buildings (including 10 female)
- ★ 65 supervisors trained on Earthquake resistant construction of buildings
- ★ 60 engineers and architects trained on Nepal National Building Code and its implementation strategy

- ★ 62 Engineers trained on Structural Analysis and Earthquake Resistant Design of Buildings Using SAP 2000 and Nepal National Building Code (including 3 female)
- ★ 265 local Community people including municipal staff , local political leaders sensitized on earthquake risk reduction and preparedness
- ★ 148 engineers, architects, sub-engineers participated in sensitization programs on earthquake risk reduction and preparedness
- ★ 350 Municipal Engineers, Technical Persons, House Owners including Community Members and Municipal Staff participated in Public Education Awareness (PEA) on Earthquake Safe Buildings, Recovery Preparedness and Orientation on Municipal Profile / Land Use Practice in terms of Earthquake Risk and Vulnerability
- ★ Logistic and equipments provided to focal desk of municipalities

Major Learning

- ★ As Municipalities have low level of awareness on earthquake risk, programs should be focused on to enhance awareness level of municipal staffs and community people that will make ease to implement the project activities effectively and support for the incremental safety
- ★ The program municipalities are in different status in accordance to topography, geographical boundary area, density of population, infrastructures development as well as to financial strength and technical capacity. Hence strategies on earthquake risk management should be based on the level of municipalities and their absorption capacity
- ★ More Capacity building trainings to municipal technicians and other staffs are necessary
- ★ Sensitization and Public Awareness Programs to community people, house owners, school children on earthquake preparedness and safe construction practices should be carried extensively in coordination with municipalities
- ★ Local trained masons should be involved in earthquake resistant construction of new buildings and seismic retrofitting construction of existing buildingh to upgrade their skills

Challenges

- ★ Lack of technical capacity of municipality to implement National Building code is the big challenge for reducing earthquake hazards to rural and urban livelihoods and infrastructure
- ★ Low level of awareness on earthquake risk and preparedness among decision makers including municipal officials, board representatives of political parties, other stakeholders and community Tole Lane Organizations, is another challenge for the project

ERRRP Project Team

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Government of Nepal
 Ministry of Physical Planning and Works

Earthquake Risk Reduction and Recovery Preparedness Programme for Nepal



- Zone 0 MM V and Below
- Zone 1 MM VI
- Zone 2 MM VII
- Zone 3 MM VIII
- Zone 4 MM IX and above



"Let's construct strong and quality buildings by applying earthquake safe technology based on Nepal National Building Code and lets join hands to build earthquake safe communities"



Overview of the ERRRP Project

The program is designed in the context of the International Recovery Platform (IRP) for the fulfillment of the Hyogo Framework for Action (HFA) 2005-2015: Building the resilience of nations and communities to disaster. Taking into account (HFA) 2005-2015, the South Asian Association for Regional Cooperation (SAARC) has developed risk reduction strategies based on the recommendation of HFA. The UNDP/BCPR (Bureau of Crisis Prevention and Recovery) with the support of Government of Japan initiated an Earthquake Risk Reduction and Recovery Preparedness (ERRRP) program in five high risk South Asian countries: Nepal, Bhutan, Bangladesh, India and Pakistan.

The ERRRP project in Nepal is a part of the five country regional programme in South Asia that seeks to support regional cooperation through knowledge sharing and development of best practices in the context of the SAARC Comprehensive Framework on Disaster Management agreed in February 2006. The country programme is designed to strengthen the institutional and community level capacity to plan and implement earthquake risk reduction strategies and disaster recovery preparedness in Nepal, a country that stands at 11th rank in the world with respect to vulnerability to earthquake hazards (BCPR, 2004).

ERRRP Project is being implemented by the Ministry of Physical Planning and Works (MOPPW) in close coordination with Ministry of Local Development (MOLD), Ministry of Home Affairs (MOHA) and Programme Municipalities with the financial support of Government of Japan and UNDP-Nepal. ERRRP project has been carrying various activities related to Earthquake safe constructions, Earthquake preparedness and recovery planning in five municipalities of Nepal located in different development region.

Objectives:

Goal: To reduce the impact of potential earthquakes on seismically vulnerable communities in Nepal.

Purpose: To strengthen national capacity (institutional and community level) for pre-disaster preparedness and mitigation and post-disaster recovery planning with a focus on targeted earthquake-prone urban areas of Nepal.

Expected Outputs

Country Programme Action Plan (CPAP) Output: Capacities of key line ministries, local bodies, civil societies and urban/rural communities enhanced for planning and implementation of disaster risk management, emergency response and early recovery.

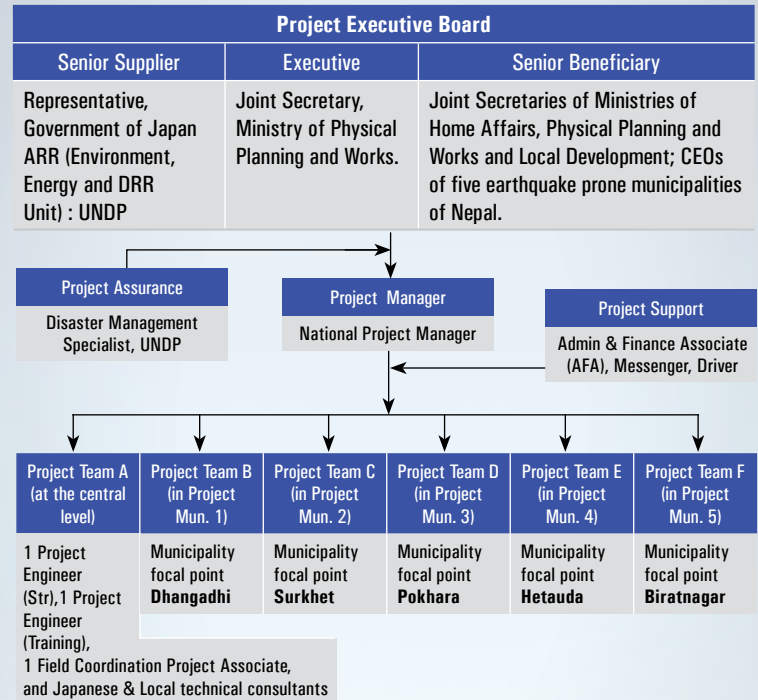
Expected Outcome(s): Risks of natural hazards to rural and urban livelihoods and infrastructure reduced, disaster risk management integrated into the livelihoods and infrastructure related sectoral plans of the government.

At the country level, the programme includes four key outputs

- (1) Earthquake risk, vulnerability and capacity assessment conducted in the project areas, especially from gender and poverty perspective, to support the government and communities;
- (2) Capacities of government institutions and communities living in high risk areas enhanced to adapt and implement earthquake preparedness planning and safe construction

- practice using appropriate earthquake resistant construction guidelines;
- (3) Capacities of the government strengthened in disaster recovery preparedness to support enhanced recovery operations in post-disaster situations;
- (4) Capacities of the government developed to implement national disaster management framework by supporting locally appropriate solutions for earthquake risk reduction proposed by Nepal.

Organizational Set up of ERRRP Project



Strategies

The basic principle to be followed is to work on a long term plan for risk reduction through comprehensive mitigation and also futuristic recovery preparedness planning.

Since most of the hazards affect those structures where people live and work in, it is these structures that need the most protection. To start with, the building stock can be categorized as (1) private buildings and (2) public buildings.

To address the first, it is necessary to focus on the key actors in the entire chain of construction, house owner, architect, civil and structural engineer, municipal engineer (approving authority), contractor, construction material manufacturing and distributing agencies and masons.

In case of public buildings, the 'owner' and the approving authority is from the same parent institution, the government. The 'owner' in this case could of course hail from different

ministries/departments/local bodies. In the long run, land use and recovery planning are also a major area of focus which affect all aspects of life and livelihoods. Hence the envisaged initiatives should comprehensively cover all these and other relevant stakeholders. The current political context in Nepal has to be the central element of all new programming, and gender equity and social inclusion have to be ensured in both process and access to benefits of the same.

Program Municipalities

The Project Appraisal Committee has approved the following municipalities to be covered under this project.

1. Central Region : **Hetauda** Municipality
2. Eastern Region : **Biratnagar** Sub- Metropolitan City
3. Western Region : **Pokhara** Sub- Metropolitan city
4. Mid-western Region : **Birendranagar** Municipality
5. Far-western Region : **Dhangadhi** Municipality

Implementation /Management Arrangements

This project is being implemented by the Ministry of Physical Planning and Works (MOPPW), Government of Nepal (GON) in accordance of UNDP's new Results Management Guide (RMG). UNDP has been providing operational support in the following areas:

- ★ Setting up the project team;
- ★ Identifying the consultants required by the project;
- ★ Procurement of goods and services;
- ★ Disbursing the project fund based on the annual and quarterly work plan of the project;
- ★ Coordinating with the Regional Project Team to carryout lessons learnt exercise on post disaster in high risk countries of the region.

The roles and responsibilities of the project management structure are defined as follows:

Project Board: The Project Board is responsible for making management decisions for the project when guidance is required by the Project Manager, including recommendation for Implementing Partner and UNDP's approval of project revisions. This group reviews the project and decisions are made at the designated decision points during the running of a project, or as necessary when raised by the project Manager. The Project Manager consults the group for decisions when PM authorities have been exceeded. The Project Board has been established with the following roles:

Project Executive: The Project Executive role as the Chair of the Board will be played by the National Project Director / Joint Secretary, Ministry of Physical Planning and Works (MoPPW), GoN. The Project Executive is the key body to closely monitor and review project activities, take decision on any change proposed by the National Project Manager (NPM). The Project Executive will regularly bring to the notice of Outcome Board (OB) of all the issues concerning any change that needs to be made in the project.

Focal desk with focal persons/engineers have been established in each program municipalities. All programs have been implemented in close coordination with municipalities. DUDBC Division Offices are being involved in activities of ERRRP program municipalities.