

PROJECT PROPOSAL

**PROJECT MERO GAUN**  
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UNDER THE GUIDANCE OF  
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## INTRODUCTION

Kulay, a community predominantly populated by Tamang, is located in a beautiful location overlooking mountains in Okharpauwa Village Development Committee, Nuwakot about 12 km North-West of Kathmandu.

On April 25 2015, an earthquake of magnitude 7.8 followed by 7.4 Richter scale earthquake devastated the lives and physical infrastructure of Nepal. In Kulay (Ward no. 5), the entire community of 55 houses were partially and totally damaged resulting in uninhabitable houses.

Project Mero Gaun is an unique project conceived by Gyetrul Jigme Rinpoche with ABARI aimed at designing a model village that will serve as an example for post-earthquake reconstruction and sustainable development. The model village will celebrate the vernacular architectural tradition of Nepal by using sophisticated traditional knowledge of natural materials while incorporating contemporary design and engineering practices so that they are hazard resistant. The project aims to facilitate the construction of the model village through an Owner Driven Reconstruction approach.

### Concrete Objectives of Project Mero Gaun:

- To design a model village that integrates sustainable design practices vis-à-vis energy, agriculture and livelihood.
- To provide trainees with necessary skills—masonry, carpentry, plumbing etc. with a focus on vernacular tradition—in order to become entrepreneurs, and to facilitate post-earthquake Owner Driven Reconstruction.
- Design of individual homes with improved animal husbandry, rainwater harvesting and improved cooking stoves or biogas (please note that this will vary according to available funds).
- To build capacity through social enterprise to help locals build a Community Facility Center (CFC) and rebuild their own permanent homes. The CFC will help facilitate Owner Driven Construction by serving as a center for training, knowledge diffusion, technical support and a place to store and access tools and materials.
- To build using natural building materials such as wood, earth and stone.

### Methodology:

- Technical and social assessment
- Detailed mapping of the village
- Social survey of the entire village
- Capacity building
- On the job training
- Owner driven reconstruction

### Mero Gaun Project Deliverables:

- Planning and designing a model village
- Training of local builder in Brick Making, improved stone masonry & Wooden Roof Prefabrication
- Construction of a Community Facility Center and two model houses

- Supervision of the model village construction

## PROJECT SCOPE

The scope of Mero Gaun Project includes the initial assessment, planning and designing of the model village, procurement of building construction materials, training, and construction of Community Facility Center and two model homes under ABARI's supervision. The scope of this project also includes completion of all documentation, manuals, and training aids to be used in conjunction with the CFC. Project completion of the first part will occur when the construction of CFC and building supervision of two model houses will be completed.

## PROJECT APPROACH

Owner Driven Reconstruction (ODR) is identified as a dignified approach encouraging individual homeowners to implement safe building design and construction in natural disaster affected areas. Given the high number of homes to be rebuilt and the scattered nature of earthquake-affected settlements, a decentralized ODR approach can be utilized as a set of principles guiding reconstruction in Nepal. Owner Driven Reconstruction is a participatory model which places homeowners at the center of reconstruction, integrating homeowner's decisions on home design and site selection for house construction with building techniques tailored to local environments and resilient to environmental hazards—in the case of Nepal, earthquakes, floods, landslides, and high winds. To expedite a well-informed and accelerated reconstruction process, ODR programs create contexts for homeowners to access building materials, finance construction, and receive technical assistance with home design and construction.

ABARI's vision for an Owner Driven Reconstruction approach incorporates vernacular Nepali architecture and construction practices with innovative methods in natural building, and corresponds with principles enshrined in Nepal's national building codes. ABARI's ODR program can help ensure that the building code is implemented in all permanent homes constructed through the program, expanding the reach of seismically safe construction practices throughout Nepal's rural areas and preparing Nepali households for the inevitable next disaster.

## PROJECT ACTIVITIES

The major milestones for the Project Mero Gaun are listed below:

### PHASE I—Study (28/06/2015 to 13/08/2015)

#### Assessment Study

The Kulay Assessment Study is conducted to understand the available local materials, available human resource and attitude of the people regarding building permanent houses in Kulay.

#### Technical Assessment Study:

The main objectives of the Technical Assessment Study are to gather soil sample for soil test and the topographical mapping of the existing village.

#### Individual House Assessment:

The individual household survey will collect and analyze basic household information, their aspiration on the design of the house and identify opportunity for enterprise and energy.

### PHASE II—Planning (04/08/2015 to 7/09/2015)

#### Master Plan:

In the planning phase, the master plan of the entire village will be conducted. The master plan will include standard house designs for 55 households considering their energy as well as the community infrastructure such as roads and community space.

#### Procurement of Materials:

Also, in this phase, for the implementation of the project and training, suggestions for raw materials and machineries will be done for procurement.

### PHASE III—Implementation (27/09/2015 to 10/07/2016)

#### 5 day training on Brick Making

Five-day training on brick making for local skilled builders. Trainees will learn about:

- Brick Making ( 2 days)
- Brick Production (2 days)
- Brick Laying ( 1 days)

#### 5 day training on Wooden Roof Prefabrication

Five-day training on wooden roof prefabrication for local skilled builders. Trainees will learn about:

- Wooden joinery ( 2 days)
- Truss fabrication (3 days)

### Production of Brick and Wooden Roof Prefabrication/ Prep Work

After the training, the trainees with the help of the community members will start the brick production and wooden roof prefabrication, which will be used in the construction of CFC and model house. Under the intermittent supervision of ABARI supervisor, the production will be done in three months.

### Construction of CFC/ On the job training in building CFC

Construction of Community Facility Center by the trained builders with supervision from ABARI supervisors in the site recommended by the local partners.

When this CFC is completed, it will serve as:

- Vocational training center : to provide on the job trainings to local builders, carpenters, mason or interested individuals
- Work-shop: prefabrication hub for building houses.
- Storage space/tool library: Building materials and power tools can be stored in this space and the community members can hire the tools. The fund can financially sustain the CFC.
- Space for community meetings regarding the project
- Information center: Information regarding permanent houses. Printed versions of the designs of the permanent houses developed by ABARI shall be available in the CFC.
- Official space: Working space for Project team members from Project Mero Gaun and ABARI's technical team. ABARI technical team will be available in the CFC to stimulate, supervise and guide the building process in the CFC.

The different components in building CFC includes:

- Foundation: The construction of foundation will take 3 weeks with total of five people in which 2 skilled mason and one ABARI supervisor.
- Walls: The construction of walls will take 6 weeks with total of five people in which 2 skilled mason and one ABARI supervisor.
- Doors and Windows : The construction of doors and windows will start simultaneously with the construction of walls. It will take 3 weeks with 2 skilled carpenters.
- Roof : The construction of roof will take 3 weeks with 2 skilled carpenters
- Finishing: The finishing of the entire CFC will take 2 weeks with four people in which 2 will be skilled masons.

### Construction of Model House I & II / on the job training

Construction of two permanent one- story model houses made out of (i) Compressed Earth Blocks and (ii) Stone Masonry. This will be constructed by the trained builders with the Owner Driven Reconstruction approach, which includes active participation by the homeowner and supervision of technical details by ABARI supervisor.

The different components in building Model House includes:

- Foundation: The construction of foundation will take 2 weeks with total of five people in which 2 skilled mason and one ABARI supervisor.
- Walls: The construction of walls will take 4 weeks with total of five people in which 2 skilled mason and one ABARI supervisor.
- Doors and Windows : The construction of doors and windows will start simultaneously with the construction of walls. It will take 2 weeks with 2 skilled carpenters.
- Roof : The construction of roof will take 3 weeks with 2 skilled carpenters
- Finishing: The finishing of the entire house will take 1 week with four people in which 2 will be skilled masons.

#### Supervision by ABARI technical team

ABARI technical team will include overseer/supervisor/engineer as required for the supervision of the construction of CFC and two model houses.

Note: The construction of CFC and two model house will be built simultaneously. The construction of CFC will take approximately 100 days and construction of one model house takes approximately 70 days.

#### PHASE IV—Supervision of the model village construction (17/05/2016- 09/08/2017)

The ABARI technical team will continue to supervise the construction of the rest of the model village.

#### Houses:

The remaining 53 houses will be divided into five clusters and will be constructed simultaneously. Considering at least five skilled human resource for construction of one house, we divided 10 houses in one cluster. The clusters will be defined according to a group of adjacent houses:

- Cluster I: 10 houses
- Cluster II: 10 houses
- Cluster III: 10 houses
- Cluster IV: 10 houses
- Cluster V: 13 houses

Since the model village will be constructed with the Owner Driven Reconstruction Model, the home owner will have the maximum responsibility in building their own house. However, ABARI will provide constant technical supervision with one full time supervisor (more if need be) in the overall construction of the houses.

Note: The timeline for the construction of the remaining 53 houses will depend on the home owner. If they can provide for more human resources, the construction period can be accelerated.

## RESOURCE CALENDAR

The Gantt Chart that shows a breakdown of the project activities and corresponding duration is attached as a PDF file.

## COST BASELINE

The cost baseline for the Project Mero Gaun includes all budgeted costs for the successful completion of Phase I, II, III and IV.

## COST PER INDIVIDUAL HOME

The estimated cost of building a home using the ODR approach is attached as a PDF document. Please note that the costs are calculated on current market prices, and may fluctuate according to market prices.

## SPONSOR ACCEPTANCE

Approved by the Project Sponsor:

\_\_\_\_\_  
<Project Sponsor>  
<Project Sponsor Title>

Date: \_\_\_\_\_