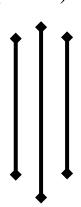


#### **Government of Nepal**

# Ministry of Federal Affairs and Local Development OFFICE OF THE DISTRICT COORDINATION COMMITTEE Nuwakot

# **Earthquake Housing Reconstruction Project**(EHRP)



### **Environmental and Social Screening Report (ESSR)**

Sub project Tinghare/Settlement: Thansing VDC, Nuwakot District

Date: 03 September 2017

# Seal of Acceptance of Environment and Social Screening Report

Upendra Pyakurel

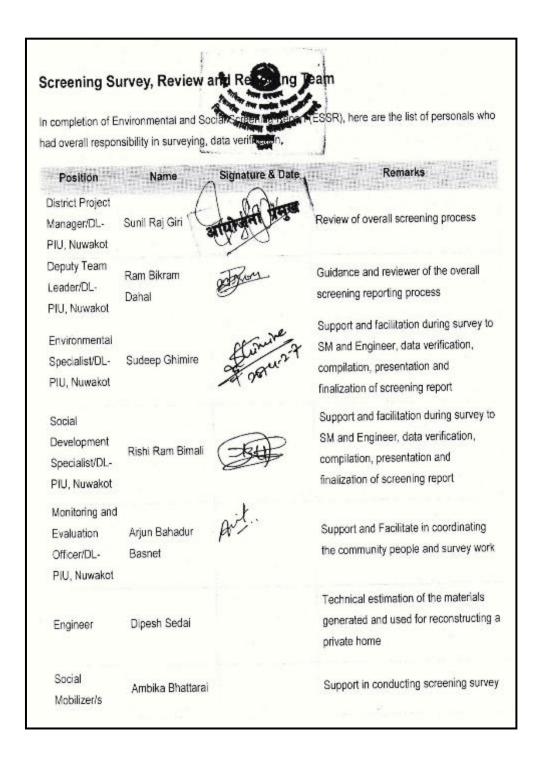
Energy and Environment Officer

Energy and Environment Section/Committee

District Coordination Committee

Bidur, Nuwakot





#### **Acronyms and Abbreviation**

CBS Central Bureau of Statistics

CL-PIU Central Level Project- Implementation Unit

DCC District Coordination Committee

DDC District Development Committee

DL-PIU District Level – Project Implementation Unit

DTO District Technical Office

EHRP Earthquake Housing Reconstruction Project

ENRC Environment and Natural Resource Committee

ESMF Environmental and Social Management Framework

ESMP Environmental and Social Management Plan

ESSR Environment and Social Screening Report

ESSS Environment and Social Screening Survey

HHs Households

ICS Improved Cooking Stove

IP Indigenous People

LGCDP Local Governance and Community Development Programme

LPG Liquid Petroleum Gas

MoFSC Ministry of Forest and Soil Conservation

MoUD Ministry of Urban Development

MoUD Ministry of Urban Development

NRA National Reconstruction Authority

NRA National Reconstruction Authority

NTFP Non Timber Forest Product

OP/BP Operational Policy/ Bank Policy

PIU Project Implementation Unit

POs Partner Organizations

RAP Resettlement Action Plan

RM Rural Municipality

TCN Timber Corporation of Nepal

VCDP Vulnerable Community Development Plan

VDC Village Development Committee

**Units** 

# Numbers/ Count

% Percentage

cft Cubic Foot

cum/m<sup>3</sup> Cubic Meter

Km Kilometer

masl Meter Above Sea Level

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#### 1. Background

Nepal Earthquake of April 2015 and subsequent aftershocks including of May 2015, caused wide spread destruction of residential houses, heritage sites, water supply system, government building, rural road, health posts etc. Nuwakot is one the earthquake-affected district. According to National Reconstruction Authority (NRA) source, the total number of houses damaged in Nuwakot district is 74,533 of which 65,759 are fully damaged and 8,774 partially damaged.

Government of Nepal has selected Nuwakot district as one of the three districts to be supported under the World Bank funded Earthquake Housing Reconstruction Project (EHRP). The main objective of the EHRP is to restore earthquake-affected houses with multi-hazard resistant core housing units in targeted districts (Nuwakot, Dolkha and Dhading district) and to enhance the government's ability to improve long-term disaster resilience. The project has four components: (1) Improved Housing Reconstruction, (2) Disaster Risk Management Systems, (3) Project Implementation Support and (4) is for Contingency Emergency Response.

#### 2. Scope of EHRP

EHRP supports only reconstruction of owners built houses. Government, through EHRP, provides grants to households for construction of residential houses following 'owner-driven' housing construction model.

#### EHRP approach includes:

- Beneficiary households will build their house on their own land. Thus, land acquisition and resettlement is not envisaged under the project.
- Residential houses will be small and constructed by the beneficiary household themselves.
- Not all the houses will be constructed at the same time. Beneficiary households are expected to build their houses at their own pace.
- Contractors will not be used. Households have option to hire skilled and unskilled laborers as needed.
- In Nepal, community members also come together to help each other to build their houses and community help is also provided to the vulnerable households.
- General awareness/orientation on building earthquake resilient houses, environment and social safeguards and "Build Back Better Opportunity" provisions in the project to beneficiary households.
- EHRP (housing component) does not support reconstruction of heritage/cultural sites, schools and other physical and social infrastructure and services.

Government's overall approach for earthquake disaster recovery in Nepal includes:

- Skilled training (mason, carpentry, plumbing, electrical) as a part of overall strategies are being provided by Department of Urban Development and Building Construction (DUDBC) in coordination with other line agencies and NGOs/INGOs. All interested community members and beneficiaries including those from vulnerable groups can take the training. NRA has already finalized the earthquake resilient house construction design parameters. Based on the design parameter DUDBC engineer verifies earthquake resilient house reconstruction and beneficiaries are entitled to receive the tranche payment.
- Government recognizes the need for supplementary top-up financial assistance worth NPR 50,000 for vulnerable households which could be in the form of materials and labor support among others. This supplementary financial support will be provided by partner organizations. Currently, the government is preparing the guideline for vulnerable support package for partner organizations and is expected to be finalized by end of September 2017.

 Housing construction support of NRs 25,000 may be used as an opportunity to promote sanitations, renewable energy (including solar power, Improved Cooking Stoves (ICS) or biogas etc. As such, the sanitation part of the settlement is likely to improve. Unless toilet or installation of alternative energy provision is adopted by beneficiaries the amount allocated will not be paid to the beneficiaries

#### 3. Sub Project (Settlement)

Environmental and Social Screening is done at settlement level. Under EHRP-Settlement /sub project is defined using combination of criteria including the following: administrative boundary (such as a ward, or a VDC), name of the village/place (such as Tole)/ community, natural or topographical boundary, and contiguity. Former Village Development Committees (VDCs) are restructured as Rural Municipality/Municipality according to new restructure federal system of Nepal.

The sub-project *Tinghare* settlement is located in *Kakani* Rural Municipality, Ward Number-8 (former *Thansing* VDC) and lies at an average altitude of 1319m asl at about 13 Km towards southeastern part of district headquarter, Bidur (Fig. 1). The details of settlement are presented in google earth image (Annex E). The settlement is accessible through *Tokha- Chhahare* Feeder road of earthen type.



Fig.1: Map Showing *Tinghare* Settlement in the Thansing VDC

Physiographical condition of the sub project area is characterized by mountain, subtropical climate, surrounded by uphill area with no such happening of any natural disaster.

The total number of beneficiaries HHs identified from National Reconstruction Authority (NRA) for "Nepal Earthquake 2015" within this settlement is 73.

#### 4. Social and Environmental Screening and its Objectives

ESMF requires Environmental and Social screening of each subproject/ settlement. The objectives of Screenings are:

- To identify potential environmental and social issues/risks related to the subprojects and its activities (physical, biological, social –cultural issues/risks specific to the area, in and around the settlement),
- To identify the need to obtain any regulatory clearances such as from Ministry of Forest and Soil Conservation (MoFSC) for specific site/s like clearing/felling of trees, from District Development Committee (DDC) and VDCs for approved quarry sites etc,
- To check if the proposed location and activity meets the exclusion criteria,
- To establish the need to carry out any further investigation/survey/ assessment for preparation of safeguard document like ESMPs, Resettlement Action Plan (RAP), Vulnerable Community Development Plan (VCDP), or any specific study and to provide guidance regarding environmental and social requirements and steps that needs to be taken for addressing identified issues, and
- To explore opportunities for creating linkage for enhancing benefits, building better and synergy.

#### 5. Methodology

- Desk study: Documents such as district profile, VDC profile, CBS publication and publication of line agencies at district level and other project related reports were reviewed. Aid of topographic maps of scale 1:25000 and regional geological map including google earth map was taken to get the overview of the project area.
- Field visit and consultation: Environmental and Social screening checklist was used (Annex A) for recording information. Walkover survey for recording information was also carried out at settlement level. Free, prior and informed consultation with beneficiaries and local informants was undertaken on March, 2017. During the consultation, they were informed about the project provisions and information on socioeconomic setting including physical and biological features were recorded. Discussions were also held with district and local sectoral agencies including District Technical Office (DTO), ward secretary of rural municipality, communities' groups- CFUGs and CBO active in sub project.
- Further consultation and discussion were held with and among EHRP Consultants; consultant engineers from Ministry of Urban Development (MoUD), Local Governance and Community Development Programme (LGCDP) Social Mobilizers.

#### 6. Findings and Issues

Following are the potential environmental and social issues and impacts identified by the Environment & Social screening of the affected settlement:

#### (i) Earthquake Damaged Houses and Local Construction Materials

- With scattered distribution, a typical house before the earthquake comprised of 24'\*32' plinth with five rooms in 2-3 stories made from timber, stone, clay, bamboo and corrugated sheets.
- The beneficiaries are currently residing in temporary shelters within the settlement;
- The proposed newly reconstruction houses will be made with stone and brick masonry using availability of local raw materials under government standard;
- 73 beneficiaries are rebuilding their houses in the same location following recommendation by engineers from Department of Urban Development and Building Construction (DUDBC).

However, the reconstruction policy of NRA also permits to rebuild their houses within the district;

- About 40 percent of the houses will be built using stone and remaining sixty percent will use bricks for reconstructing their houses. Total additional demand of stone is approximately 876 cum, bricks is 11,60,481 numbers and timber 129.21 cum after reusing 146 cum from salvage timber besides requirement of sand, aggregate, cement, iron (Annex F);
- All required raw materials for building will be purchased from DDC approved quarry site nearby other ward 3 & 4 of Thansing VDC and also from Trishuli River quarry sites.
- Most of the identified quarry sites are located nearby Likhu River and local markets are located at Battar, and Bidur; and
- Stone and timber salvaged are being packed and stored properly and being used for reconstructions of houses.

#### (ii) Forest and Wildlife

- Most of the sub project area lies within the agricultural land and *Chihan Danda Keureni* Community Forest is nearby forest area present in the settlement;
- Leaf and fruit of *Aap* (Mangifera indica), *Amala* (Phyllanthus emblica), *Titae Pati* (Artemesia indica), *Ghodtapre* (Centella asiatica), *Neem* (Azadirachta indica), *Bojho* (Acorus calamus), *Parijaat* (Nyetanthes arbortritis), and *Sisnu* (Utrica dioca), etc are among the Non-Timber Forest Product (NTFP) found within the settlement;
- Mammals like Langur (<u>Semnopithecus entellus</u>), Bandel (<u>Sus scrofa</u>), and *Dumsi* (<u>Hystrix indica</u>) were occasionally reported in the forest; and
- Project activities and implementation is not likely to directly affect aquatic life of nearby Likhu River (is not a Ramsar Site) since construction materials are purchased from market.

The total additional demand of 129.21 cum of timber will not have significant impact on adjoining community forest as the standing trees are of low timber value and most are immature to harvest. The requirement of timber will be fulfilled from the quantity salvaged, felling of standing timber trees on farmland owned by the beneficiaries, purchase from local market at *Dhikure*, *Battar* and Bidur, purchase at subsidized rate distributed by the Timber Corporation of Nepal (TCN), a government owned entity and other from the CF at government relaxation quota. Therefore, impacts on forest due to reconstruction activities are likely to be low or minimal.

#### (iii) Debris/Solid Waste Management and Hazardous Materials

The debris generated were managed within the subproject by beneficiary HH; and no hazardous waste were reported or observed in this settlement as damage to structure (eg health post) containing these kind of waste were not reported. Solid waste like empty cement bags, metal scarps generated during construction will have minimal impact.

#### (iv) Socio-economic and Cultural Features

- The project area is a homogenous community containing 73 HHs belonging to indigenous group, the Shrestha and 1 HHs among them are women headed HHs (Annex-B);
- The eligible HHs are rebuilding their houses in the same location following recommendation by engineers from Department of Urban Development and Building Construction (DUDBC). However, reconstruction policy of NRA also permits to rebuild their houses within the district and adjoining VDCs;
- The major source of livelihood is agriculture, service, remittance and occasional labor works;
- The existing road provides access to the market and approved quarry sites to collect construction materials; and

• Most of the beneficiaries HHs are gradually shifting from traditional firewood to LPG as cooking fuel.

#### (v) Water and Sanitation

The source of water for drinking facility is from spring is fair. Sanitation condition was also found satisfactory within the settlement even though some of the HHs are using temporary toilet that will be completed with the final installment grant money provided under government's overall approach to EHRP.

#### (vi) Build Back Better Opportunity

- More improved water, sanitation and hygiene situation in the settlement by toilet construction using housing grant allocated for sanitation purpose and adoption and installation of alternative energy measures;
- As some of the individual residential houses in the settlement/ subproject area are still using firewood as the traditional cooking fuel, this project provides an opportunity to build Improved Cooking Stoves (ICS) or bio-gas etc; andThese could be promoted through agencies including government and NGOs/ INGO which are already engaged in these sectors in the district. Such opportunity needs to be further explored and promoted as far as possible.

#### (vii) Any Sensitive Site

There is no known significant physical cultural site, and no protected site in the immediate surroundings of the subproject/ settlement. There is no known habitat for endangered, rare, protected or special species. There are no hazardous place or restricted place within the settlement.

#### 7. Feedback of Environment and Natural Resource Committee (ENRC) Review Meeting

Following are the major concern/recommendations from the DCC-ENRC meeting held on 25th April, 2017 (Annex C)

- It is likely that the most of the earthquake affected HH may choose to rebuild their houses insitu instead few of them are using even for agriculture land where no options exists.
- Local government is concerned that as a result of shifting and rebuilding process in the area; there could be loss of productive agricultural land, which could potentially affect the local economy.
- Awareness activities in relation to the above-mentioned issue should be carried out in *Tinghare* settlement land area.

#### 8. Environmental and Social Mitigation Measures, Monitoring Activities:

The following are Environmental and Social issues and mitigation measures identified from screening report.

Table-1: Environmental and Social issues, impacts and mitigation measures.

	Environmental and			Respons		Remarks
SN	Social Issues	Mitigation Measures	Mitigation Measure Cost	Implementation	Monitoring/Supe rvision	
1.	Impacts from the supply and purchase of construction materials (aggregates, stone and sand) from local market on the local community	Aggregates will be purchased from suppliers or at market (Dhikure, Battar, and Bidur). Quarry operators supply the materials from approved quarry sites. District Coordination Committee (DCC) former District Development committee (DDC) is the licensing authority for the quarries, and is responsible to monitor the licensed quarry sites and enforce compliance to environmental mitigations.  Timber will be sourced from demolished house salvage, from own farm land, government relaxation quota and from licensed local market. The timber Corporation of Nepal, a government entity, also supply additional timber to local market of the earthquake affected district.	Contractor will be responsible to borne mitigation cost as a part of quarry site license approval clause.	Beneficiary Household/DL- PIU	Monitoring by CL-PIU/mobile team and Third party.  Monitoring findings will be shared with DCC.	Aggregated suppliers and vendors are registered on concerned government authority to have permits to supply and sale the products.
2.	Forest and Wild life	The mitigation measures regarding impact on forest (timber supply/demand) is already discussed in foregoing cell. Besides, following measures should be adopted while	Not applicable	Beneficiary Household/DL- PIU	Monitoring by CL-PIU/Mobile team and Third Party.	

	Environmental and			Responsibility  Implementation Monitoring/Supervision		Remarks
SN	Social Issues	Mitigation Measures	Mitigation Measure Cost			
3.	The construction of small residential buildings will involve small scale civil works. Hence, there is health and	<ul> <li>managing timber from forest;</li> <li>Seek for alternative to timber as for example Aluminum Window Pane;</li> <li>Use trees felled by the wind or other factor, and use trees without disturbing the core forest area, for example trees likely to be lost by landslide, tree along forest path etc;</li> <li>Fell tree based on density and distribution, do not fell tree from sparse area of the forest;</li> <li>Only fell mature trees;</li> <li>Undertake plantation of tree along bare area as a part of community forest management plan;</li> <li>Abide by forest law, regulations and guidelines; and</li> <li>Impact on wildlife is expected to be minimal.</li> <li>Various training and awareness activities will be organized by DL-PIU, health and safety training and awareness is part of those training and awareness by DL-PIU. Masons and carpenters will be trained on relevant</li> </ul>	The cost of health and safety awareness and training is internalized within the overall cost of training and awareness. Project Implementation Unit (PIU)	DL-PIU	Monitoring findings will be shared with DCC	
	safety risks of minor accidents and injuries.	safety measures, and owners will be made aware of the safety risks and management.	as a part of annual work plan will develop environmental and social training, awareness and dissemination			

	Environmental and			Responsibility		Remarks
SN	Social Issues	Mitigation Measures	Mitigation Measure Cost	Implementation	Monitoring/Supe rvision	
			plan and cost/ budget.			
4.	Debris/Solid Waste Management	Demolition waste generated is already managed in-situ. The solid waste generated during construction will be minimal and will be managed by beneficiaries themselves	Not applicable	Beneficiaries	DL-PIU	
5	Build Back Better Opp	portunity – enhancement measures				
5.1	Health and sanitation	In terms of prioritizing built back better opportunity need priority are :.  1. Integration of toilet (sanitations) construction in housing reconstruction  2. Addressing Indoor air pollution through well ventilated housing design including promotion of Improved Cooking Stoves (ICS)  3. Renewable energy (including solar power, or bio-gas etc .	Housing construction support of NRs 25,000	Beneficiary Household/DL- PIU	Monitoring CL-PIU/mobile team/CL-PIU/and third party	Monitoring cost is covered under overall project site visit, supervision and monitoring. External monitoring (third party) for overall EHRP is estimated to be about NRs. 7 million.
5.2	Indigenous Peoples and other vulnerable groups including marginalized, poor, woman headed households, disabled	Mitigation measures include:  • Targeted communication and awareness to vulnerable group(e.g. organizing consultation in areas accessible for women and people with disabilities.) on:	This will not require additional mitigation cost.	DL-PIU/Mobile team/ Partner organisations (The team will	Monitoring by CL-PIU/NRA	The Government/Project is drafting a guideline for Vulnerable Community Support Package equivalent to NRs

	Environmental and			Respon	nsibility	Remarks
SN	Social Issues	Mitigation Measures	Mitigation Measure Cost	Implementation	Monitoring/Supe rvision	
	people	<ul> <li>Information about the project, grant, training opportunities</li> <li>Awareness campaign on indoor pollution and its health effects</li> <li>Target vulnerable groups while providing trainings to construction workers, supervisors, social mobilisers;</li> <li>Target female-headed household and other vulnerable groups during social mobilization process and provide them with additional technical assistance during construction period (masonry, carpenters, etc.);</li> <li>Ensuring their participation during consultation process throughout project implementation cycle; and</li> <li>Provide additional assistance in accessing housing grants (e.gfacilitate opening bank account, paperwork for installments/tranche, etc.)</li> </ul>		ensure that vulnerable groups are targeted and their participation in ensured through district project team mobilization)		50,000 for vulnerable households to be provided through partner organisations. The project (NRA) including the district team will coordinate with NGOs/INGOs and donor partners to provide the package to the vulnerable groups in the concerned settlement  Monitoring cost is covered under overall project site visit, supervision and monitoring. External monitoring (third party) for overall EHRP is estimated to be about NRs. 7 million.
5.3	Loss of productive agricultural land in the settlement area	Organize awareness program and distribute awareness materials in relation to prevention of loss of productive agricultural land in and around the settlement area	The cost of awareness activities is internalized within the overall cost of training and awareness.	DL-PIU	CL-PIU/NRA	CL-PIU will submit copy of awareness

	Environmental and		Responsi		Responsibility		Remarks
SN	Social Issues	Mitigation Measures	Mitigation Measure Cost	Implementation	Monitoring/Supe rvision		
5.4	Other build back better opportunities	Coordination and linkages with other line agencies including government and NGOs/ INGOs which are already engaged in these sectors in the district.	additional mitigation cost. Beyond the nominal cost	DL-PIU	CL-PIU/NRA	Agencies working in different sections will be identified and added later on in the Annex	

#### 9. Conclusions and Recommendations

The major conclusions on the environmental and social issues are;

- There will be no significant adverse impact on physical cultural resources, archeological and wildlife habitat due to sub-project reconstruction activity;
- Health and safety aspects of house reconstruction by the owner will be addressed by the training and awareness to be carried out by the DL-PIU;
- Timber and other construction materials will be purchased from nearby local markets such as Battar, and Bidur. Besides, use of timber from own farmland, distributed volume according to government relaxation quota and purchase from Timber Corporation of Nepal (TCN) will fulfill the additional demand of 129.21 cum whereas, demand of 876 cum stone will be fulfilled from nearby DDC approved quarry sites within the settlement of Thansing VDC wards 3 & 4. Therefore, impact on forest and quarry sites will be low or unlikely.
- Occurrence of natural hazards/disaster in *Tinghare* settlement is low or unlikely and is insignificant concern;
- As affected households of *Tinghare* have own land for reconstruction of houses and also not any major natural risk identified in the area so land acquisition and involuntary resettlement is not required; and
- There will be no adverse impacts on indigenous peoples groups including woman headed HH.

The environmental and social impact envisaged from the reconstruction activity in this settlement is envisaged as minimal or low and no significant adverse impact is foreseen. Owners will purchase the raw material requirement such as timber and aggregates from quarry and local market. The potential impacts and mitigations are summarized in Table -1. There is no need for further Environmental Assessment.

Furthermore, the sub-project does not entail land acquisition or involuntary resettlement thus RAP is not required. In relation to presence of IPs, the screening and community consultation suggests that the project area is a homogenous community where indigenous households live together. Since IPs are benefitting from the housing grant money for reconstruction of their houses as a whole a separate VCDP is not required. Measures to ensure that indigenous peoples including woman headed HH are not excluded during project implementation and they are able to maximize benefits from the project are discussed in Table -1.

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#### Annexes

#### Annex A: Environmental and Social Safeguard Screening Checklist

1.	Project Title	Earthquake Housing and Reconstruction Project (EHRP)
2.	Project District	Nuwakot
3.	Name of the VDC/Municipality	Former Thansing VDC(Current Kakani Rural Municipality)
4	Name of the Settlement, Ward No.	Tinghare,8 (Current Kakani,8)
5	Number of eligible households:	73 HHs
6	Altitude of the Settlement (in meters)	1319 masl
7	Nearest road head/highway/headquarter	Tokha-Chhahare Highway/13 km from headquarter
8	Settlement ID/no	28-59-8-13
9	Proposed Date of Commencement of Work:	January 5, 2017
	Number of houses damaged	73 HHs
	Number of houses to be reconstructed	73 HHs
	Quantity of debris generated (by type)	Stone, bonding soil, wood, rags,
	Quantity of reusable materials (by type)	Stone, Timber
	Quantity of debris that needs to be disposed	With very few exception most of the generated debris are already managed in-situ by the beneficiaries household, Stone and timber salvaged are being packed properly and being used wisely
	Quantity of construction materials needed (Timber, sand, gravel, stone, etc)	Additional about 129.21cum Timer and about 876 cum stone is needed and brick of 11,60,481 numbers
	Any hazardous materials mixed with debris (e.g. from damaged health-posts, medicines, from agro-vet shops/ service etc)	None:, soil as binding materials are properly disposed and leveled in the adjoining cultivated land

1	0.	Exclusion criteria:	
		Shelter/house should not be located in the risky spots (having ground slope of more than 30 degree, known flood risk spot, on top of or adjacent to known fault-line, etc).	Not applicable

	House/ shelter should not be located in protected area, and forest.	Not applicable
	Any activity, including material quarrying, resulting significant conversation or degradation of critical natural habitat is not permitted	Not applicable
	Use of any public PCR in private home reconstruction is not permitted.	Not applicable

S.No	ISSUES	YES	NO	DO
				NOT KNOW/remarks
1	Is the proposed sub-project likely to have minimal or no adverse environmental impacts?	1		OP 4.01
2	Is the proposed subproject likely to have adverse environmental impacts that are site specific; few if any of them are irreversible, and mitigation measures are readily known or can be designed?		V	OP 4.01 Minor impact on community forest is expected with no adverse impact
3.	Is the proposed subproject likely to have adverse impacts on the health and quality of forests or rights and welfare of people and their level of dependence upon or interaction with forests?  Is the proposed subproject likely to bring about changes in the management, protection or utilization of natural forests or plantations?	√	V	OP 4.36 The quantity distributed as per approve government quota will not have significant adverse impact on forest. Minor increase in utilization is expected.
4	Will the sub-project be supporting reconstruction, management, or preservation of physical cultural resources?		1	OP 4.11
	Is the subproject located in, or in the vicinity of, cultural sites?  Will the sub-project likely adversely impact physical cultural resources?		1	
			$\sqrt{}$	
5.	Will the sub-project involve significant conversion or degradation of critical or non-critical natural habitats?		1	OP 4.04
6	Does the sub-project involve involuntary land acquisition or prior acquisition of land or demolition of existing structures?		V	OP 4.12
7	Are there any ethnic minority communities present in the project area?		V	OP 4.10
	Are they adversely impacted by the proposed sub-project?		1	

Physi	cal features			
1	Is the settlement/subproject located in an area susceptible to landslides, rock fall or erosion, flood prone areas and extreme climatic conditions, fogs, avalanche, snow-fall, etc?		V	
2	Is the settlement located close to groundwater sources, springs, surface water bodies, riverbank, and watercourses?		1	
3	How is the terrain? –flat, ridge, undulating, terraced, valley, tar etc.	1		Slope terrain with most of the agriculture land
4	Any history of erosion, flashflood, landslides, earthquake in the area/vicinity?		1	
5	Current land use practice (agriculture, grazing, barren, forest, shrubs)		1	Mostly agricultural and forest land
6	Is the subproject located on prime agricultural land?		1	
7	Does the sub project involve significant extraction, diversion or containment of surface or ground water for the local people or agriculture?		V	
8	Any existing/approved/ potential quarry sites (sand, aggregate, stone, slates, boulders) in the vicinity of the sub-project?	V		Likhu River bank at the side of Thansing VDC ward no. 3 & 4 and even from Trishuli River quarry sites had obtained approval from DDC, Nuwakot
9	Are there any potential sites/land for debris management/ solid waste management/ reclamation for future use?		V	NA and people have managed their waste at HHs level
10	Are there any areas or features of high landscape or scenic value on or spots with unique feature in and around the location which could be affected by the project? (examples, viewing point/ ridge/ peak, water-fall, cave, cliff etc)		<b>V</b>	
11	Any risks (health and safety, location- cliff, ridge etc.) associated with the setting of the sub-project which needs to be taken care?		V	
	Biological features			
1	Any critical habitat or ecosystem of importance?  Is the subproject located in or adjacent to a protected areas/ national forests, wilderness areas, wetlands (Ramsar), biodiversity, critical habitats?		1	

2	If the subproject is located near the forest, what is the category			Chihandada
	of the forest- national, community, leasehold, religious etc.?			Keureni
				Community Forest
3	Any area/ spot in and around the subproject/ settlement that is	$\sqrt{}$		Semnopithecus
	known as/for wildlife/ bird habitat (examples – bear, langur			schistaceus, Sus
	monkey, red panda, deer, trees where vulture or bats nests, cliff			scrofa cristatus and
	where wild beehives, etc)			Hystrix indica
	Is the settlement/ subproject area a known wildlife movement/		1	
	migration route or bird migration route?			
	Is there any water body, river, wetland etc known as important		1	
	habitat (or renowned) for fishes or aquatic life?			
	Any Ramsar site in the vicinity of the settlement/ subproject?			
4	Would the sub-project potentially cause adverse impacts to		1	
	habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?			
_			,	
5	Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats,		1	
	ecosystems, and/or livelihoods?			
			,	
6	Are there any areas/ spots used by the protected, important		1	
	sensitive species of flora and fauna for breeding, nesting, foraging, resting and for migration?			
			,	
7	Would Project activities pose risks to endangered species or their habitat?		1	
8	Does the sub-project implementation leads to harvesting of			Only few trees
	natural forests, timber, plantation development, or			from the Community forest
	deforestation?			will be used for
				reconstruction
				because of standing
				tree having no or little timber value
9	Any NTFP or medicinal plants in and around the sub-project?	1		Mangifera indica
				(leaf and fruit),  Phyllanthus
				emblica, Artemesia
				indica, Centella
				asiatica,
				Azadirachta indica, Acorus calamus,
				Nyetanthes arbor-
				tritis, Utrica dioca,
				etc are common NTFPs
	Socio-economic and Cultural Features	1		1

1		1	1./	72 1111
1	Is the subproject located in a densely populated area?		1	73 HHs at
				settlement are
				scattered in
_		,		distribution
2	How many people comprise a typical household?	<b>V</b>		Average HHs size is 5
3	How many households are without any land/shelter, any			Every HHs have
	squatters?			their own private
	1			land
4	Is the subproject located near to the sites of		$\sqrt{}$	
	archaeological/historical or cultural importance?			
	1			
5	Presence of minority/vulnerable/indigenous population in the	V		73 HHs are
	area?			Indigenous and 1
	dica.			HHs is Women
				headed HHs
6	Is the sub-project located near cultural or religious place of		<b>√</b>	
	importance including sacred hill/ peak, sacred cliff, cave and/			
	or sacred tree?			
	of sacred free?			
7	What household and livelihood support activities typically take	Agrica	ılture a	nd labor work
<b>'</b>		rigited	iituic a	na iaoor work
	place within the affected community?			
8	What are the typical building practices of the affected people	Sizoc	vory on	ch cases with most
0				
	and what are the different materials have they used in the past?			h with 4 rooms in 1-2
				Stone, Clay,
9	Will the against acquire displacement or releasting of games	Dambe		Corrugated Sheets
9	Will the project require displacement or relocation of persons		V	
	in the affected area?			
10	Who are the systemathle months in the negative slee			IDa Waman
10	Who are the vulnerable people in the population, also	1		IPs, Women
	considering those affected by HIV/AIDS etc.?			Headed HHs are
		,		Vulnerable People
11	What is the current availability of water for drinking and	1		Drinking water
	personal hygiene,			supply spring in
				adequate and
				sanitation condition
4.5		,		is satisfactory
12	What is the current provision of social/infrastructure facilities	1		Access of better
	(health posts, sub-health posts, schools, communications, road			road network
	etc?)			
			<u> </u>	
13	Are there any roads on around the location which causes			
	congestion, environmental problems during project			
	implementation?			
	1			
14	Are there any open space, industries, recreation areas which		1	
	could be affected by the project?			
	to all of allocted of the project.			
15	Are there any women headed HH (No. of HHs to be identified)	1		1 HHs is women
	in the settlement.	,		headed eligible
	in the settlement.			HHs
16	Are there any conflicts about the use of local resources		1	
16	Are there any conflicts about the use of local resources		V	

What are the programs/ activities ongoing or planned in the settlement/ VDC or subproject area that may be coordinated, linked, and/or worked together for synergy and for 'building better'? Examples: Biogas, improved smokeless stoves, sanitation, microhydropower, catchment area/ soil erosion protection, community forest, buffer zone management, trail development, agriculture, composting, flood protection, river training, etc?)	\ \ \	Agencies working in different sectors will be added later on in the Annex
Identification of 'no go' or 'do not disturb' area/ spots/ features based on hazards potential, protected or protection worthy area, common resources, and cultural values.	1	

Customized minimum requirements for the	•	Timber, building stone and mason;
subproject/ settlements	•	Properly manage remaining demolition waste/debris
		during housing reconstruction;
	•	Adoption of proper safety measures and due priority
		to vulnerable HHs during re-construction; and
	•	Optimal re-used of salvaged materials.
Identify programs/ activities for coordination	•	Need for co-ordination with district level line
and linking for 'building better' and / or		agency;
synergy.	•	Housing construction support of NRs. 25,000 needs
		to be used as an opportunity to further promote
		sanitations, ICS etc;
	•	Renewable energy including solar power, or bio-gas
		etc.; and
	•	Identify and co-ordinate with infrastructure
		development works (eg road upgrading) that are
	1	underway as a part of overall reconstruction.

#### **Screening Conclusions:**

#### (i) Main environmental issues are:

- Significant environment issues were not identified. Since construction materials such as timber, stone have to be either purchased from local market or brought from DCC approved quarry sites. The requirement of timer will be fulfilled from salvage and additional from local market and through Timber Corporation of Nepal including use of government relaxation quota; and
- Potential adverse impact is not envisaged on the *Chihan Danda Keurini* Community Forest. Because government relaxation quota based on allowed annual sustainable yield will be utilized for reconstruction.

#### (ii) Permits/ clearance needed are:

- Permits from DFO /CFUGs for distribution of timber from community forest to earthquake affected household as provisioned by GoN Rules and Guidelines; and
- Ensure that the quarry operator hold required permits from Rural Municipality/DCC.

#### (iii) Main social issues:

- 73 HHs are Indigenous and 1 HHs is Women headed HHs
- Any social issues of significant concern were not identified at the sub-project settlement

#### (iv) Land acquisition and involuntary resettlement (permanent or temporary) if any;

• Land acquisition and involuntary resettlement is not needed.

- (v) Further assessment/investigation needed and next step.
- (vi) Need for any special study: NA
- (vii) Preparation ESMP (main issue to be addressed by the ESMP):
  - Due to the project implementation, environmental and social impacts are nominal or no adverse impacts. Therefore no need of ESMP

#### (viii) Need for IPDP/VCDP:

The project area is a homogenous community where indigenous households live together. A single female-headed HHs present in the settlement is identified as vulnerable HHs. Since IPs and vulnerable HHs are benefitting from the housing grant money for reconstruction of their houses as a whole a separate VCDP is not required.

- (ix) Need for IEE or EIA: Not needed
- (x) Any other requirements/ need/ issue etc: Not needed

#### Screening Tool Completed and Reviewed by:

Environmental Specialist in the	Social Specialist in District Level -PIU:	Project Manager in District Level - PIU:	Presentation/ Briefing to DCC –
District Level -PIU:  Title and Date: Sudeep Ghimire/20 <sup>th</sup> April, 2017	Title and Date: Rishi Ram Bimali/20 <sup>th</sup> April, 2017	Title and Date: Sunil Raj Giri/DTO Chief/Project Manager	ENRC done on: 25 <sup>th</sup> April, 2017  Advice, comments, and suggestions from the DCC-ENRC are attached in Annex 3  Screening cleared by DCC – ENRC on: 22 <sup>nd</sup> May, 2017

DL-PIU, Nuwakot VII

**Annex B: Eligible HHs List of Tinghare Settlement** 

S.N.	Beneficiary	Vulnerable HHs( Dalit, IPs and Woman Headed HHs)	Gender	Agreement No.	Ward	Village/Tole
1	Rajendra Shrestha	IP	M 28-59-		8	Tinghare
2	Ram Chandra Shrestha	IP	M	28-59-8-0-2	8	Tinghare
3	Bishnu Kaji Shrestha	IP	M	28-59-8-0-3	8	Tinghare
4	Babu Kaji Shrestha	IP	M	28-59-8-0-4	8	Tinghare
5	Babukaji Shrestha	IP	M	28-59-8-0-5	8	Tinghare
6	Santalal Shrestha	IP	M	28-59-8-0-6	8	Tinghare
7	Sukuman Shrestha	IP	M	28-59-8-0-7	8	Tinghare
8	Sanu kanxa Shrestha	IP	M	28-59-8-0-8	8	Tinghare
9	Ishor Shrestha	IP	M	28-59-8-0-9	8	Tinghare
10	Navaraj Shrestha	IP	М	28-59-8-0- 10	8	Tinghare
11	Ramlal Shrestha	IP	M	28-59-8-0- 11	8	Tinghare
12	Narayan Shrestha	IP	M	28-59-8-0- 12	8	Tinghare
13	Ratna Bahadur Shrestha	IP	M	28-59-8-0- 13 8		Tinghare
14	Lal Bahadur Shrestha	IP	M	28-59-8-0- 14	8	Tinghare
15	Ganesh Bahadur Shrestha	IP	M	28-59-8-0- 15	8	Tinghare
16	Indra Bahadur Shrestha	IP	M	28-59-8-0- 16	8	Tinghare
17	Ram Kumar Shrestha	IP	M	28-59-8-0- 17	8	Tinghare
18	Uttam Bahadur Shrestha	IP	M	28-59-8-0- 18	8	Tinghare
19	Thulo kanx Shrestha	IP	M	28-59-8-0- 19 28-59-8-0-	8	Tinghare
20	Sanu kanxa Shrestha	IP	M	20-39-8-0-	8	Tinghare
21	Goma Manandhar	Woman Headed,IP	F	28-59-8-0- 21	8	Tinghare
22	Santalal Shrestha	IP	M	28-59-8-0- 22	8	Tinghare
23	Krishna Bahadur Shrestha	IP	M	28-59-8-0- 23	8	Tinghare
24	Dipesh Shrestha	IP	M	28-59-8-0- 24	8	Tinghare
25	Pancha Bahadur Shrestha	IP	M	28-59-8-0- 25 28-59-8-0-	8	Tinghare
26	Dinesh Shrestha	IP	M	26	8	Tinghare
27	Krishnalal Shrestha		M	28-59-8-0- 27	8	Tinghare
28	Durga Bahadur Shrestha	IP	M	28-59-8-0-	8	Tinghare

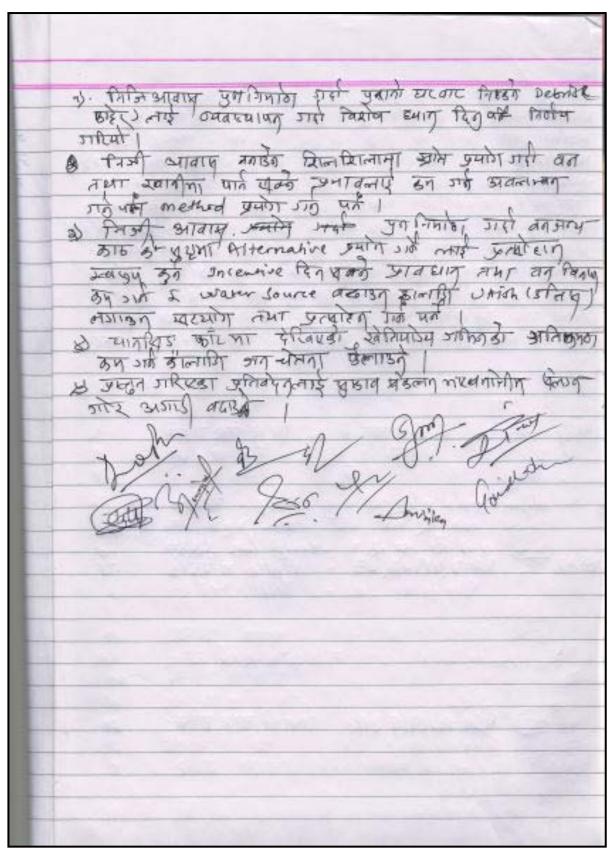
DL-PIU, Nuwakot VIII

S.N.	Beneficiary	Vulnerable HHs( Dalit, IPs and Woman Headed HHs)	Gender Agreement No.		Ward	Village/Tole
				28		
29	Ramesh Shrestha	IP	M	28-59-8-0- 29	8	Tinghare
30	Jagat Bahadur Shrestha	IP	M	28-59-8-0- 30	8	Tinghare
31	Mahendra Shrestha	IP	M	28-59-8-0- 31	8	Tinghare
32	Ramsaran Shrestha	IP	M	28-59-8-0- 32	8	Tinghare
33	Ramkrishna Shrestha	IP	M	28-59-8-0- 33	8	Tinghare
34	Ramkrishna Shrestha	IP	M	28-59-8-0-	8	Tinghare
35	Bishnukaji Shrestha	IP	M	28-59-8-0- 35	8	Tinghare
36	Sitaram Shrestha	IP	M	28-59-8-0- 36	8	Tinghare
37	Kiran Shrestha	IP	M	28-59-8-0- 37 28-59-8-0-	8	Tinghare
38	Ramkaji Shrestha	IP	M	38	8	Tinghare
39	Ramji Shrestha	IP	M	28-59-8-0- 39	8	Tinghare
40	Sanu kanxa Shrestha	IP	M	28-59-8-0- 40 28-59-8-0-	8	Tinghare
41	Padam Bahadur Shrestha	IP	M	28-59-8-0- 28-59-8-0-	8	Tinghare
42	Bhoj Kumar Shrestha	IP	M	28-59-8-0- 28-59-8-0-	8	Tinghare
43	Babukaji Shrestha	IP	M	28-59-8-0- 28-59-8-0-	8	Tinghare
44	Radha Krishna Shrestha	IP	M	28-59-8-0- 28-59-8-0-	8	Tinghare
45	Hom Bahadur Shrestha	IP	M	28-59-8-0- 28-59-8-0-	8	Tinghare
46	Thulo kanx Shrestha	IP	M	46 28-59-8-0-	8	Tinghare
47	Ramchandra Shrestha Prakash Chandra	IP	M	47 28-59-8-0-	8	Tinghare
48	Shrestha	IP	M	48 28-59-8-0-	8	Tinghare
49	Mahila Shrestha	IP	M	49 28-59-8-0-	8	Tinghare
50	Kharka Narayan Shrestha	IP	M	50 28-59-8-0-	8	Tinghare
51	Dhan Bahadur Shrestha	IP	M	51 28-59-8-0-	8	Tinghare
52	Narayan Shrestha	IP	M	52	8	Tinghare
53	Sanu kanxa Shrestha	IP	M	28-59-8-0-	8	Tinghare

S.N.	Beneficiary	Vulnerable HHs( Dalit, IPs and Woman Headed HHs)	Gender	Agreement No.	Ward	Village/Tole
				53		
54	Ratnalal Shrestha	IP	М	28-59-8-0- 54	8	Tinghare
55	Babukaji Shrestha	IP	M	28-59-8-0- 55	8	Tinghare
56	Krishna la Shrestha	IP	M	28-59-8-0- 56	8	Tinghare
57	Ram krishn Shrestha	IP	M	28-59-8-0- 57	8	Tinghare
58	Raju Shrestha	IP	M	28-59-8-0- 58	8	Tinghare
59	Ratna Bahadur Shrestha	IP	M	28-59-8-0- 59	8	Tinghare
60	Keshar lal Shrestha	IP	M	28-59-8-0-60	8	Tinghare
61	Dhan Bahadur Shrestha	IP	M	28-59-8-0- 61	8	Tinghare
62	Rail Bahadur Shrestha	IP	M	28-59-8-0- 62	8	Tinghare
63	Resham Shrestha	IP	M	28-59-8-0- 63	8	Tinghare
64	Keshab lal Shrestha	IP	M	28-59-8-0- 64	8	Tinghare
65	Babulal Shrestha	IP	M	28-59-8-0- 65	8	Tinghare
66	Purnalal Shrestha	IP	M	28-59-8-0- 66	8	Tinghare
67	Gobinda Shrestha	IP	M	28-59-8-0- 67	8	Tinghare
68	Hari krish Shrestha	IP	M	28-59-8-0- 68	8	Tinghare
69	Durba Kumar Shrestha	IP	M	28-59-8-0- 356	8	Tinghare
70	Sanukaji Shrestha	IP	M	28-59-8-0- 357	8	Tinghare
71	Raju Shrestha	IP	M	28-59-8-0- 358	8	Tinghare
72	Ramhari Shrestha	IP	M	28-59-8-0- 359	8	Tinghare
73	Ramchandra Shrestha	IP	M	28-59-8-0- 360	8	Tinghare

Annex C: Review Meeting Minutes for Approval of Screening Report for Thansing VDC

आज निती 2068/09/98 जते यम नुवाडोट जिल्ला खल्ला पात्वप
व्यक्तितीं इलामा स्थामप विद्वाप अधिदारी अने हैसर वशहर परिवत
ज्यू हे अध्यस्मामा भूडिन्यम् आवाप् पूने निर्माश आयोजना अन्याप्त
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ऑपरिया हर्मालाम इंडाई (DL-PLU) ले तमार वार्डी खावाड बिट्ट-ट.
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**Annex D: List of Consultation** 

Name of VDC: Thansing, 8

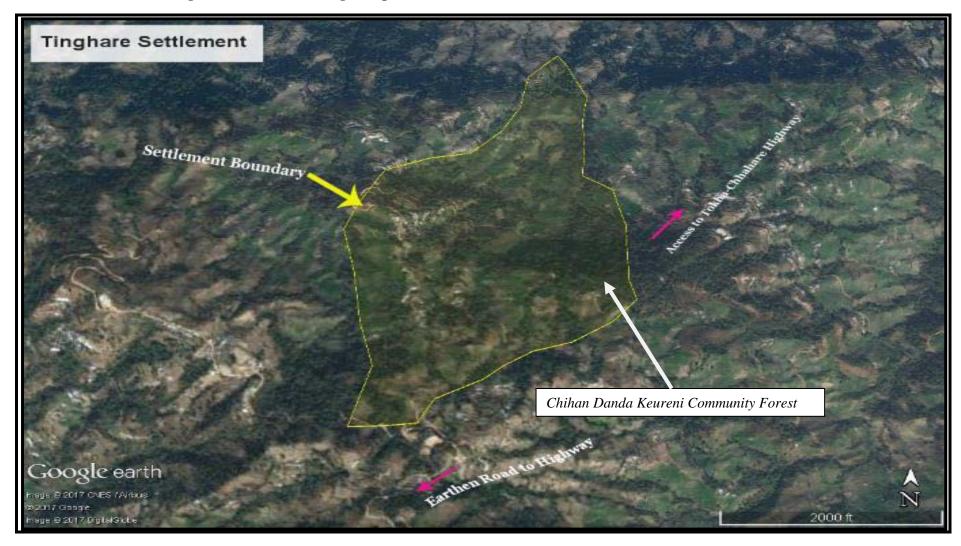
Name of Settlement: Tinghare

DL-PIU, Nuwakot XII

S.N	Name of Participants	Tole
1	Rajendra Shrestha	Tinghare
2	Ram Chandra Shrestha	Tinghare
3	Bishnu Kaji Shrestha	Tinghare
4	Babu Kaji Shrestha	Tinghare
5	Babukaji Shrestha	Tinghare
6	Santalal Shrestha	Tinghare
7	Sukuman Shrestha	Tinghare
8	Sanu kanxa Shrestha	Tinghare
9	Ishor Shrestha	Tinghare
10	Navaraj Shrestha	Tinghare
11	Ramlal Shrestha	Tinghare
12	Narayan Shrestha	Tinghare
13	Ratna Bahadur Shrestha	Tinghare
14	Lal Bahadur Shrestha	Tinghare
15	Ganesh Bahadur Shrestha	Tinghare
16	Indra Bahadur Shrestha	Tinghare
17	Ram Kumar Shrestha	Tinghare
18	Uttam Bahadur Shrestha	Tinghare

DL-PIU, Nuwakot XIII

Annex E: Arial View of Tinghare Settlement in Google Map



DL-PIU, Nuwakot XIV

Total HHs: - 73

1,022.00

1.022.00

146.00

129.21

129.21

1.77

#### **Annex F: Quantity Calculation Sheet for Tinghare**

Type of house: Model no. Stone Masonry in Cement Mortar (SMC-2.1) and Brick

**Masonry in Cement Mortar (BMC-2.1)** 

Additional Needed for Total HHs Based upon

		Materials							
S. No.	Structure Wise	Stone (m <sup>3</sup> )	Brick (#)	Cement (Bags)	Sand (m <sup>3</sup> )	Aggregate (m <sup>3</sup> )	Timber (m <sup>3</sup> )		
1	Upto D.P.C. level	19.00	5,000.00	82.50	12.00	7.00			
2	Super structure	31.00	21,495.00	138.00	18.00	7.00	2.29		
3	Roof						1.48		
Total (Per HHs)		50.00	26,495.00	220.50	30.00	14.00	3.77		
Reuse from demolished house		20.00					2.00		

1,934,135.00

1,160,481.00

16,096.50

16,096.50

2,190.00

2,190.00

1,460.00

2,190.00

30.00

876.00

Reference: MoUD/DUDBC

**Total Reusable Materials** 

Additional Needed/House

**Estimated Total Quantity** 

**Brick:Stone** > (60:40)%

Note: \*: - 1  $m^3$  = 35.28 cft

Note: Project has been providing training to local masons and carpenters on EQ resilient house construction. Each owner will build their own house using locally available skilled and unskilled human resource. Project will not hire contractor for constructing houses. Hence, three will be no influx of labour and no need for labour camp.

<sup>\*\*: -</sup> Ratio of ongoing construction of houses for bricks and stone (60:40percentage)