



Government of Nepal

Ministry of Federal Affairs and Local Development

OFFICE OF THE DISTRICT COORDINATION COMMITTEE

Dolakha

Earthquake Housing Reconstruction Project

(EHRP)

Environmental and Social Screening Report (ESSR)

Sub project Puwale/Settlement: DOL/BM-7: Bhimeshwor Municipality, Dolakha District

Date: 29 August, 2017

Abbreviation

BM:	Bhimeshwor Municipality
CBS:	Central Bureau of Statistics
CF:	Community Forest
CGI:	Corrugated Galvanized Iron
CL-PIU:	Central Level Project- Implementation Unit
DCC:	District Coordination Committee
DDRC:	District Disaster Response Committee
DL-PIU:	District Level – Project Implementation Unit
DOL:	Dolakha
DTO:	District Technical Office
DUDBC:	Department of Urban Development and Building Construction
EECCS:	Energy Environment and Climate Change Section
EHRP:	Earthquake Housing Reconstruction Project
EIA:	Environmental Impact Assessment
ENRC:	Environment and Natural Resource Committee
EPA:	Environment Protection Act
EPR:	Environment Protection Rule
ESMF:	Environmental and Social Management Framework
ESMP:	Environmental and Social Management Plan
FGD:	Focus Group Discussion
Ha:	Hectare
ICS:	Improve Cooking Stove
IEE:	Initial Environmental Examination
IP:	Indigenous People
IPDP:	Indigenous People Development Plan
LGCDP:	Local Governance and Community Development Program
MoFALD:	Ministry of Federal Affairs and Local Development
MoFSC:	Ministry of Forest and Soil Conservation
MoUD:	Ministry of Urban Development
NRA:	National Reconstruction Authority
PO:	Partner Organization
RAP:	Resettlement Action Plan
RCC:	Reinforced Concrete Cement
RM:	Rural Municipality (<i>Gaupalika</i>)
VCDP:	Vulnerable Community Development Plan
VDC:	Village Development Committee

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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. Dolakha is one the earthquake-affected district. According to National Reconstruction Authority (NRA) source, the total number of houses damaged in Dolakha district is 58,388 of which 56,553 were fully damaged and 1,835 were partially damaged.

Government of Nepal has selected Dolakha 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, Dolakha and Dhading districts) 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 labourers 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 August 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 bio-gas 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 settlement-*Puwale* lies in Bhimeswor Municipality (BM) ward number 7 (Former Ward number 12 of BM) at an altitude of 1700m asl. The settlement is accessible through *Puwale-2Km* black topped road via;

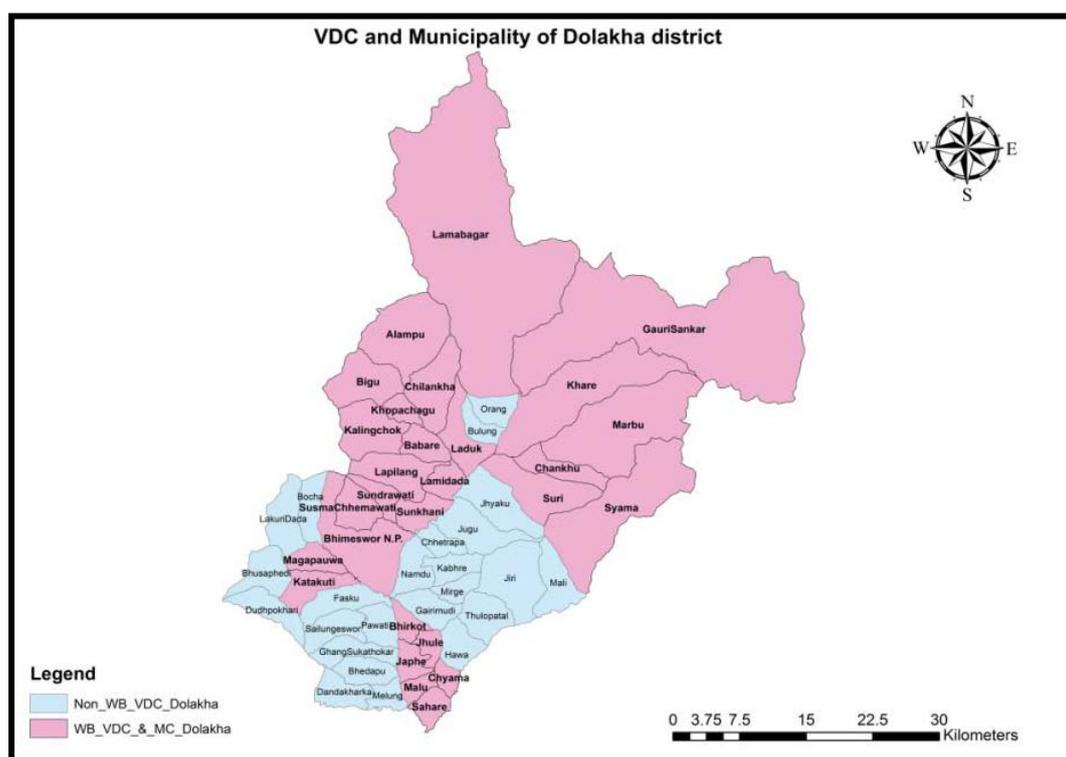


Figure 1: Map showing VDCs/Municipalities of Dolakha

Lamasnghu-Jiri Highway from Charikot bazaar. The total number of earthquake-affected HHs identified in the settlement is 67. (Annex- 2: List of Eligible HHs).

Physiographical condition of the subproject area (*Puwale*) is characterized by hill, subtropical climate, surrounded by *Thangsa-Deurali* community forest in uphill area (Figure-1 Settlement Google Map)

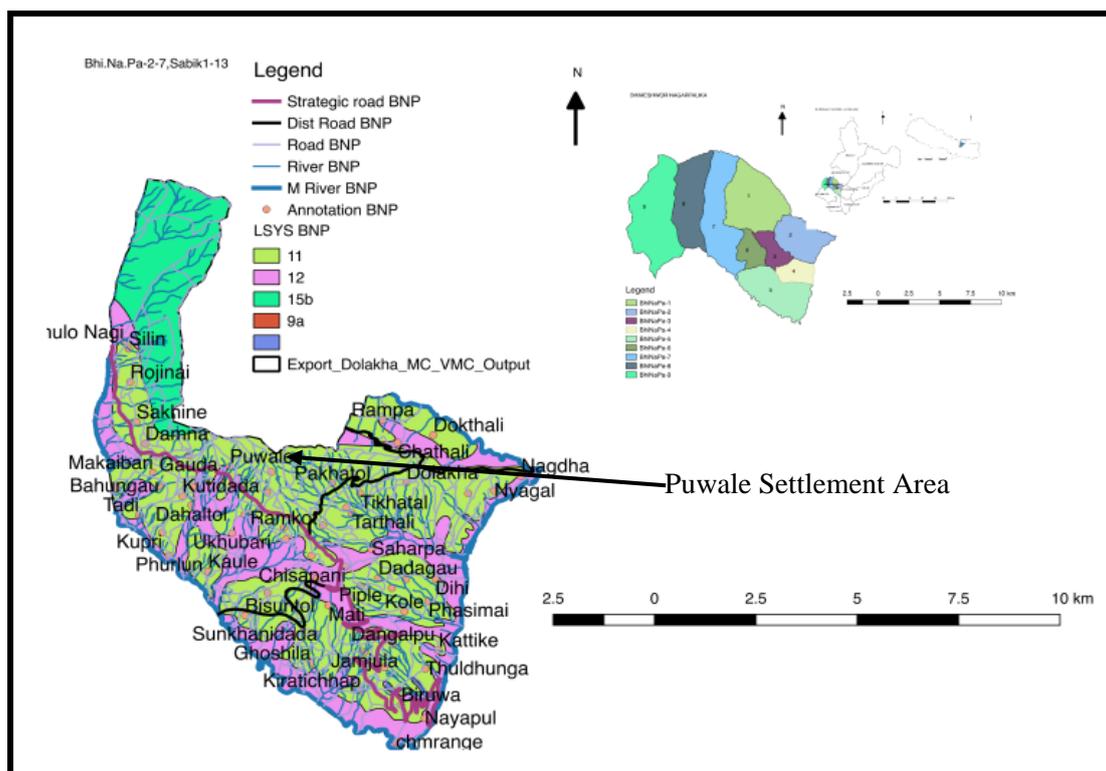


Figure 2: Map Showing Puwale Settlement Area

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 Coordination Committee(DCC), M/RM 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 ESMP, 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 I) 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 19 June, 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 findings and potential environmental and social issues and impacts identified by the Environmental and social screening study in the settlement/ subproject.

A. Earthquake Damaged Houses and Local Construction Materials

- Wall with stone masonry in mud mortar (also using RCC), timber framed windows and doors made from local woods and roof formation with CGI were the materials used to built earthquake damaged houses;
- A health post within the settlement was completely damaged by the earthquake;
- The proposed newly reconstruction houses will be made with stone masonry using availability of local raw materials;
- Beneficiaries are currently staying in temporary shelters within the same settlement area;
- 67 beneficiaries are rebuilding their houses in the same location following recommendation by Department of Urban Development and Building Construction (DUDBC) engineers. However the reconstruction policy of NRA also permits to rebuild their houses within the district;
- Total timber demand is estimated approximately 4,682 cubic feet (cft) and stone 3,350 cubic meter (cum) including aggregate for 67 houses (the net additional value required after reusing the timber and stone from damaged houses is timber 3,278 cft and stone 1,340 cum). The reuse of stone and timber will minimize the total demand minimizing pressure on natural resource. The details of raw materials calculation is presented in the Annex 6. The required materials (as sand, stone) will be purchased from DCC approved quarry site (which is at the bank of Tamakoshi river near Dholi Khola and approximately 23 Km from the settlement). The available local market is Charikot bazaar;
- Stone and timber salvaged are being packed and stored properly and being used for reconstructions of houses.

B. Forest and Wildlife

- *Thangsa Deurali* community forest (CF) with an area of 217.1 ha is located towards the uphill of settlement;
- Mammals like Monkey, Porcupine (*Erethizon*), Marten (*Martes flavigula*), Squirrel (*Funambulus spp*) Mongoose have been reported in sub-project area;
- Birds like Kalij Pheasant, Willow Warbler (*Phylloscopus Spp*), Small Black Partridge (*Francolinus spp*), Black Drongo (*Dicrurus macrocercus*), Cuckoo (*Cuculus sps*), Shallow and Sparrow (*Passer spp*) are reported in the CF;

- Non-timber forest product (NTFP) and Medicinal plants as Pakhanbed, Majitho (*Rubia cordofolia*), Nagbeli, Sisnu, Titepati (*Artemissia*), Okhar (*Juglans regia*), Aamala (*Phyllanthus emblica*), and Sall simta available in the sub-project area.
- Except Okhar (*Juglans regia*) tree any species protected by government of Nepal do not occur in the CF. Rare, endangered, threatened flora and fauna were not recorded in the Thangsa Deurali CF

The *Thangsa Deurali* CFs might be under pressure in supplying additional timber requirement for reconstruction of 67 houses. The Community Forest User Group (CFUG) has already allocated 50 cft of timber to each HH for reconstruction. CFUGs are distributing timber according to management plans of CF limiting the volume within annual sustainable production and safe yield (government relaxation quota). Timber distribution should be carried out in planned and well managed way following government directives such that impact on the nearby community forest will be minimal.

The requirement of Timber will be fulfilled from the quantity salvaged, felling of standing timber trees on farmland owned by the beneficiaries, utilization from government relaxation quota (50 cft from *Thangasa Deurali* CF), purchase from local market at Charikot, and purchase at subsidized rate distributed by the Timber Corporation of Nepal (TCN). Therefore impacts on forest due to reconstruction activities is likely to be low or minimal. Impacts on mammals and other wildlife due to reconstruction activities is supposed to be minimal.

C. Debris/Solid Waste Management and Hazardous Materials

- Debris from earthquake-damaged houses is managed at site by respective owner on their land;
- Solid waste like empty cement bags, metal scarps generated during construction will have minimal impact; and
- According to consultation with the health post staff, generic medicines, first aid kit was reported to be covered under the rubble of the damaged health post with no other hazardous and radioactive materials and facility like x-ray and other major health equipments except glass wares, spiky and prickly utensils, Adequate safety and waste management measures needs to be adopted while removing debris from the damaged health care unit during reconstruction process.

D. Socio-economic and Cultural Features

- Houses in the settlement are scattered in distribution;
- Out of the total 67 beneficiary HHs, 27 HHs belongs to indigenous people (IPs) Tamang caste, 36 HHs belongs to Chhetri, 4 HHs are of Dalit, and 15 HHs are women headed among the beneficiaries;
- Sub-project area has access to electricity supplied through national grid;
- Firewood is the major source of fuel for cooking; installation of ICS was not reported;
- Primary education and health services are available within the settlement; and
- The major source of livelihood is agriculture, livestock, job and occasional unskilled labor works.

E. Water and Sanitation

- Needful supply of drinking water is satisfactory;

- The major water source is Mahadev Khola stream located near the settlement. Chances that reconstruction activities of individual houses have any impact to the stream is minimal; and
- Sanitation condition at the settlement was not found satisfactory. However, minimal sanitation standards should be included in new constructions.

F. Build Back Better Opportunity

- Unless toilet, maintenance of sanitation or installation of alternative energy provision is not adopted by beneficiaries the amount allocated will not be paid to the beneficiaries;
- As the individual residential houses in the settlement/ subproject area are using firewood as the traditional cooking fuel, this project provides an opportunity to build Improved Cooking Stoves (ICS) or bio-gas etc;
- These could be promoted through agencies including government and NGOs/ INGOs which are already engaged in these sectors in the district. Such opportunity needs to be further explored and promoted as far as possible;
- DL-PIU/CL-PIU may explore and coordinate with district forest office, rural road projects, water induced disaster management office, Forest and Soil conservation office, Watershed management office etc. for mitigating/ managing the proper drinking water supply and better livelihood opportunities; and
- Need to coordination with the line agency for livelihood enhancement activities (like sewing-cutting, commercial agriculture farming).

G. 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 (except *Okkhar*) or special species.

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

Following are the major agendas and recommendations related to sub-project from the DCC-ENRC meeting held on 12th September (Annex 7) are:

Agendas:

- Debris and Timber Management for Reconstruction;
- Provision/Management of Drinking Water, Health and Sanitation; and
- Management and Use of Construction Materials (Aggregates)

Recommendations:

- Preparation of ESSR and ESMP and Sharing with CL-PIU for Clearance, Early Completion of Safeguard Study Report for its Early Implementation and While Preparing ESSR Due Priority shall be given to Settlement at Risk;.
- Construction of Water Seal Latrine Should be Made as Compulsory Measure before the Release of Third Tranche of Grant Money
- Discourage Heavy Equipments Use in other Infrastructure Development that may have Possible Impact at Housing Reconstruction Spot
- Awareness on Re-use of Construction Materials Salvaged from Debris and Management of Solid and Hazardous Waste;
- Effective Co-ordination with POs for Addressing Safeguard Issues, Setting Priority on Efficient Management of Drinking Water, Health, Sanitation, Plantation and Livelihood Activities.

8. Environmental and Social Mitigation Measures and 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.

SN	Environmental and Social Issues	Mitigation Measures	Mitigation Measure Cost	Responsibility		Remarks
				Implementation	Supervision	
1.	Impacts from the supply and purchase of construction materials (aggregates, stone and sand) from local market on the local community	<p>Aggregates will be purchased from suppliers or at market (Charikotbazzar). Quarry operators supply the materials from approved quarry sites which are near to Tamakoshi and Dholi Khola about 23 Km away from settlement. 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.</p> <p>Timber will be sourced from demolished house salvage, from own farm land, distributed from government relaxation quota (50 cft) and from licensed local market. The timber Corporation of Nepal, a government entity, also supply additional timber to local market of</p>	Contractor will be responsible to borne mitigation cost as a part of quarry site license approval clause.	Beneficiary HH/DL-PIU	<p>Monitoring by CL-PIU/mobile team and Third party.</p> <p>Monitoring findings will be shared with DCC.</p>	Aggregated suppliers and vendors are registered on concerned government authority to have permits to supply and sale the products.

SN	Environmental and Social Issues	Mitigation Measures	Mitigation Measure Cost	Responsibility		Remarks
				Implementation	Supervision	
		the earthquake affected district.				
2.	Forest and Wild life	<p>The mitigation measures regarding impact on forest (timber supply/demand) is already discussed in foregoing cell. Besides, following measures should be adopted while managing timber from forest;</p> <ul style="list-style-type: none"> • Seek for alternative to timber as for example Aluminium Window Pane; • 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; • Fell tree based on density and distribution, do not fell tree from sparse area of the forest; • Undertake plantation of tree along bare area as a part of community forest management plan; • Abide by forest law, regulations and guidelines; and • Impact on wildlife is expected to be minimal 	Not applicable	Beneficiary Household/DL-PIU	<p>Monitoring by CL-PIU/Mobile team and Third Party.</p> <p>Monitoring findings will be shared with DCC</p>	

SN	Environmental and Social Issues	Mitigation Measures	Mitigation Measure Cost	Responsibility		Remarks
				Implementation	Supervision	
3.	The construction of small residential buildings will involve small scale civil works. Hence, there is health and safety risks of minor accidents and injuries.	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 safety measures, and owners will be made aware of the safety risks and management.	The cost of health and safety awareness and training is internalized within the overall cost of training and awareness. Project Implementation Unit (DL-PIU and CL-PIU) as a part of annual work plan will develop environmental and social training, awareness and dissemination plan and cost/ budget.	DL-PIU	CL-PIU/NRA	DL-PIU itself is a project implementation unit (PIU)
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 Opportunity – 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 construction support of NRs 25,000	Beneficiary HH/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

SN	Environmental and Social Issues	Mitigation Measures	Mitigation Measure Cost	Responsibility		Remarks
				Implementation	Supervision	
		<p>housing design including promotion of Improved Cooking Stoves (ICS)</p> <p>3. Renewable energy (including solar power, or bio-gas etc .</p>				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 people	<p>Mitigation measures include:</p> <ul style="list-style-type: none"> • Targeted communication and awareness to vulnerable group(e.g. organizing consultation in areas accessible for women and people with disabilities.) on: <ul style="list-style-type: none"> ○ Awareness on efficient usage of water and WASH ○ Information about the project, grant, training opportunities ○ Awareness campaign on indoor pollution and its health effects • Target vulnerable groups while providing trainings to construction workers, supervisors, social mobilisers; • Target female-headed households and other vulnerable groups during social mobilization process and provide them with additional technical assistance during construction period (masonry, carpenters, etc.); and 	This This will not require additional mitigation cost.	DL-PIU/Mobile team/ Partner organisations (The team will ensure that vulnerable groups are targeted and their participation in ensured through district project team mobilization)	Monitoring by CL-PIU/NRA	<p>The Government/Project is drafting a guideline for Vulnerable Community Support Package equivalent to NRs 50,000 for vulnerable households to be provided through partner organizations. 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</p> <p>Monitoring cost is</p>

SN	Environmental and Social Issues	Mitigation Measures	Mitigation Measure Cost	Responsibility		Remarks
				Implementation	Supervision	
		<ul style="list-style-type: none"> Ensuring their participation during consultation process throughout project implementation cycle; Provide additional assistance in accessing housing grants (e.g.- facilitate opening bank account, paperwork for installments/tranche, etc.) 				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	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.	This will not require additional mitigation cost.	DL-PIU	CL-PIU/NRA	Agencies working in different sections will be identified and listed in Annex

9. Conclusions and Recommendations

The conclusions on the environmental and social issues are;

- Sub-project activities will not have significant impact on protected area/protected species/habitat, social, cultural, archeologically sensitive areas in and around the settlement/ subproject area;
- Housing construction will be owner driven. Health and safety aspects of house reconstruction will be addressed by the training and awareness to be carried out by the DL-PIU, and by the mobile team (consisting of engineers, environmental and social persons);
- Timber, stone and other construction materials will be purchased from nearby local market at Charikot Bazaar. Besides use of timber from own farmland government relaxation quota from Timber Corporation of Nepal (TCN) will fulfill the demand. Therefore, impact on forest will be low or minimal;
- Out of the total 67 residential houses not any HHs are in the influence zone of natural hazards as flood or landslide;
- As people of Puwale have their own land for reconstruction of houses, land acquisition and involuntary settlement is not required;
- There will be no significant adverse impacts on vulnerable groups, marginalized groups (female-headed households and indigenous peoples groups).

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 mixed community where indigenous households and other households live together and do not have collective attachment to the area. They have same socio-economic and educational status with other caste groups. The vulnerable households are benefited from the EHRP project and they do not have any adverse impact from it. Besides housing grant they are entitled to get 50,000 top up subsidy (See table-1). Thus, a separate VCDP is not required. Measures to ensure that the vulnerable groups including indigenous peoples 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 1: Environmental and Social Safeguard Screening Checklist at Settlement Level**

1.	Project Title	Earthquake Housing Reconstruction Project (EHRP)
2.	Project District	Dolakha
3.	Name of the Rural Municipality/Municipality	Bhimeswor Municipality -7
4.	Name of the Settlement, Ward No.	Puwale, BM-7
5.	Number of eligible households:	67
6.	Altitude of the Settlement (in meters)	1700m
7.	Nearest road head/highway/headquarter	Lamosanghu-Jiri road around 2 Km from Charikot Bazaar
8.	Settlement ID/no	DOL/ BM-7 (Puwale)
9.	Proposed Date of Commencement of Work: _____	July-02, 2017
	Number of houses damaged	67
	Number of houses to be reconstructed	67
	Quantity of debris generated (by type)	Stone, bonding soil, wood, rags,
	Quantity of reusable materials (by type)	Stone (2,010 m ³), Timber (0.6 m ³) and other is not known
	Quantity of debris that needs to be disposed	Debris materials as stone, bonding soil have already been managed at settlement level by local people
	Quantity of construction materials needed (Timber, sand, gravel, stone, etc)	Timber-3,278 cub. feet, (approx.), stone 1,340 m ³ (calculated as per guideline of SMC 2.1 MoUD, DUDBC)
	Any hazardous materials mixed with debris (e.g. from damaged health-posts, medicines, from agro-vet shops/ service	None: (all damage material is residential houses/ no medical shops. No hazardous materials/pesticides were found).

	etc)	
10.	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 any risky zone observed
	House/ shelter should not be located in protected area, and forest.	There is not any protected area in sub project and its vicinity
	Any activity, including material quarrying, resulting significant conversation or degradation of critical natural habitat is not permitted	Not any
	Use of any public PCR in private home reconstruction is not permitted.	Not any

S. No	ISSUES	YES	NO	DO NOT KNOW/remarks
1	Is the proposed sub-project likely to have minimal or no adverse environmental impacts?	√		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?		√	OP 4.01 Minor impact on community forest is expected
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?	√	√	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? Is the subproject located in, or in the vicinity of, cultural sites? Will the sub-project likely adversely impact physical cultural resources? ¹		√ √ √	OP 4.11
5.	Will the sub-project involve significant conversion or degradation of critical or non-critical natural habitats? ²		√	OP 4.04
6	Does the sub-project involve involuntary land acquisition or prior acquisition of land or demolition of existing structures?		√	OP 4.12 (Not identified).
7	Are there any ethnic minority communities present in the project area? Are they adversely impacted by the proposed sub-project?	√	√	OP 4.10 IP HHs are present in the settlement
Physical 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? (show in map)		√	There is not any history of rock fall and landslide in the subproject area
2	Is the settlement located close to groundwater sources, springs, surface water bodies, riverbank, and watercourses?	√		Mahadev Khola stream is located near the settlement. Not any impact to the stream due to reconstruction of individual houses
3	How is the terrain? –flat, ridge, undulating, terraced, valley, tar etc.	√		Terraced
4	Any history of erosion, flashflood, landslides, earthquake in the area/ vicinity?		√	Not noted

¹Examples of physical cultural resources are archaeological or historical sites, including historic urban areas, religious monuments, structures and/or cemeteries particularly sites recognized by the government.

² Critical natural habitats include those habitats that are legally protected, officially proposed for protection, identified by authoritative sources for their high conservation value, or recognized as protected by traditional local communities.

5	Current land use practice (agriculture, grazing, barren, forest, shrubs-----)	√		Agriculture, grazing and forest
6	Is the subproject located on prime agricultural land?		√	
7	Does the sub project involve significant extraction, diversion or containment of surface or ground water for the local people or agriculture?		√	
8	Any existing/approved/ potential quarry sites (sand, aggregate, stone, slates, boulders) in the vicinity of the sub-project?	√		At the bank of Tamakoshi river near Dholi Khola and approximately 23 km from the settlement Need to identify stone quarry site for sourcing materials and assess its impacts.
9	Are there any potential sites/land for debris management/ solid waste management/ reclamation for future use?		√	People have managed waste debris from damaged houses at their own on their backyard
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)		√	
11	Any risks (health and safety, location- cliff, ridge etc.) associated with the setting of the sub-project which needs to be taken care?		√	Such types of place is not noted in the subproject area
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?		√ √	

2	If the subproject is located near the forest, what is the category of the forest- national, community, leasehold, religious etc.?	√		Thangsa-Deurali Community Forest with and area of 217.1 Hectare.
3	Any area/ spot in and around the subproject/ settlement that is known as/for wildlife/ bird habitat (examples – bear, langur monkey, red panda, deer, trees where vulture or bats nests, cliff where wild beehives,etc)	√		Mammals like Monkey, Porcupine, Marten, Squirrel, and Mongoose occasionally visit the forest. Important avian fauna including Kaliz Pheasant, Willow Warbler, Small Black Patrige
	Is the settlement/ subproject area a known wildlife movement/ migration route or bird migration route?		√	Migratory animals are not reported in the sub-project area
	Is there any water body, river, wetland etc known as important 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 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, ecosystems, and/or livelihoods?		√	
6	Are there any areas/ spots used by the protected, important 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?		√	
8	Does the sub-project implementation leads to harvesting of natural	√		Harvesting of

	forests, timber, plantation development, or deforestation?			timber is required
9	Any NTFP or medicinal plants in and around the sub-project?	√		Medicinal plant <i>Pakhanved, Majitho, Nagbeli, Sisnu, Allow and sallako Simta</i> are available in the forest area
Socio-economic and Cultural Features				
1	Is the subproject located in a densely populated area?		√	The distribution pattern of houses in the settlement is scattered (67)
2	How many people comprise a typical household?	√		5 members per HH on an average
3	How many households are without any land/shelter, any squatters?		√	
4	Is the subproject located near to the sites of archaeological/historical or cultural importance?		√	
5	Presence of minority/vulnerable/indigenous population in the area?	√		IPs, Dalits and Woman Headed HHs
6	Is the sub-project located near cultural or religious place of importance including sacred hill/ peak, sacred cliff, cave and/ or sacred tree?		√	
7	What household and livelihood support activities typically take place within the affected community?	Agriculture, service, job, remittance and occasional labor works		
8	What are the typical building practices of the affected people and what are the different materials have they used in the past?	2 story made with timber, stone, clay, bamboo and corrugated sheets		
9	Will the project require displacement or relocation of persons in the affected area?		√	

10	Who are the vulnerable people in the population, also considering those affected by HIV/AIDS etc.?		√	Woman headed, IPs and Dalit HHs
11	What is the current availability of water for drinking and personal hygiene,	√		Supply of drinking water is satisfactory
12	What is the current provision of social/infrastructure facilities (health posts, sub-health posts, schools, communications, road etc?)	√		Access of earthen and gravel road, school and health post with poor Management
13	Are there any roads on around the location which causes congestion, environmental problems during project implementation?		√	
14	Are there any open space, industries, recreation areas which could be affected by the project?		√	
15	Are there any women headed HH (No. of HHs to be identified) in the settlement.	√		15 HHs
16	Are there any conflicts about the use of local resources		√	No any conflict to use the local resources

	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, micro-hydropower, catchment area/ soil erosion protection, community forest, buffer zone management, trail development, agriculture, composting, flood protection, river training, etc?)			<ul style="list-style-type: none"> • Mason training is provided by NSET-Dolakha to 5 people. • Need to identify commercial agriculture activities from DCC; • Use of NTFPs; • ICS and installation of alternative energy measures; and • Proper maintenance of sanitation.
	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.		√	Not any

	Customized minimum requirements for the subproject/ settlements			<ul style="list-style-type: none"> • Timber, building stone, mason and easy access for material transport • Discourage use of agricultural land for housing; • 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.
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	Identify programs/ activities for coordination and linking for 'building better' and / or synergy.	<ul style="list-style-type: none"> • Need for co-ordination with district level line agency; • Housing construction support of NRs. 25,000 needs to be used as an opportunity to 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 underway as a part of overall reconstruction.
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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 Timber 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 Thangsa Deurali 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 are:

- Out of 67 houses, 36 HHs are of Chhetri, 27 HHs are of IPs, 4 houses are of Dalit and 8 HHs are woman headed;
- 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) Need for any special study: Not required

- **Preparation of ESMP:** Environmental and Social impacts are nominal. However, the type of activities to be conducted, it is recommended that a simple yet comprehensive ESMP shown in table-1 (mitigation measures) commensurate with the potential adverse impacts is implemented. It is recommended that the ESSR provides a brief overview of key mitigation measures for the identified minimal adverse impacts..

(vi)

(vii) Need for IPDP/VCDP:

- The project area is a mixed community where indigenous households and other households live together. Other vulnerable groups (Dalit, female headed HHs and IPs) are also present in the settlement. 27 IPs HHs out of 67 HHs are Ips HHs and they do not have collective attachment to the area. They have same socio-economic and educational status with other caste groups. The

vulnerable households are benefited from the EHRP project and they do not have any adverse impact from it. Besides housing grant they are entitled to get 50,000 top up subsidy. Thus, a separate VCDP is not required.

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

Screening Tool Completed and Reviewed by:

<p>Environmental Specialist in the District Level - PIU:</p> <p>Title and Date: Yubaraj Satyal/ , 2nd August, 2017</p>	<p>Social Specialist in District Level - PIU:</p> <p>Title and Date: Chandra Niraula /, 2nd August, 2017</p>	<p>Project Manager in District Level - PIU:</p> <p>Title and Date: Nirmal Darshan Acharya /DTO Chief/Project Manager</p>	<p>Presentation/ Briefing to DCC – ENRC done on: 12th September 2017</p> <p>Advice, comments, and suggestions from the DCC-ENRC are attached in Annex 7</p> <p>Screening cleared by DCC – ENRC on: 12th September 2017</p>
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Annex 2: Name list of Eligible households with Details

S.N.	Name list of Households	Vulnerable HHs(Dalit, IPs and Woman Headed HHs)	Sex	Former - BMC, 12
1	Kanchi Tamangni	IP/Woman Headed	F	Puwale
2	Ishwor Shah		M	Puwale
3	Bam Bd Tamang	IP	M	Puwale
4	Khadga Bd Tamang	IP	M	Puwale
5	Dhan Bd Tamang	IP	M	Puwaly
6	Saarsi Lama	IP/Woman Headed	M	Puwaly
7	Nar Bd Tamang	IP	M	Puwaly
8	Roj Muktan	IP	M	Puwale
9	Durga Devi Shah	Woman Headed	F	Puwale
10	Keshab Shah		M	Puwale
11	Dhan Bd Tamang	IP	M	Puwale
12	Srimatimai Tamang	IP/Woman Headed	F	Puwale
13	Dal Bd Lama	IP	M	Puwale
14	Bhim Bd Tamang	IP	M	Puwale
15	Padam Bd Tamang	IP	M	Puwale
16	Kancho Tamang	IP	M	Puwale
17	Dhankaji Tamang	IP	M	Puwale
18	Jeet Bd Lama	IP	M	Puwale
19	Shreemaya Tamangni	IP/Woman Headed	F	Puwale
20	Chinimaya Tamangni	IP/Woman Headed	F	Puwale
21	Binod Lama	IP	M	Puwale
22	Kumar Tamang	IP	M	Puwale
23	Rajkumar Lama	IP	M	Puwale
24	Karma Lama	IP	M	Puwale
25	Kancha Lama	IP	M	Puwale
26	Chini Lamini	IP/Woman Headed	F	Puwale
27	Buddiman Tamang	IP	M	Puwale
28	Lal Bd Kami	Dalit	M	Puwale
29	Ram Bd Bk	Dalit	M	Puwale
30	Surya Bd Kami	Dalit	M	Puwale
31	Sabin Kunar Bk	Dalit	M	Simkharka
32	Ram Bd khatri		M	Simkharka
33	Sarwan Basnet		M	Simkharka
34	Wokil Bd Kc		M	Simkharka
35	Bishnu Kumari Shah	Woman Headed	F	Bhutpokhari

S.N.	Name list of Households	Vulnerable HHs(Dalit, IPs and Woman Headed HHs)	Sex	Former - BMC, 12
36	Badri Bd Shahi		M	Bhutpokhari
37	Nar Bd Lama	IP	M	Puwale
38	Chandra Bd Kc		M	Puwale
39	Singha Bd Tamang	IP	M	Puwale
40	Krishna Bd Thapa		M	Puwale
41	Tara Kumari Thapa	Woman Headed	F	Puwale
42	Bir Bd Tamang	IP	M	Puwale
43	Dhurba Bd Karki		M	Puwale
44	Gopi Khatri		M	Gauda Chapay
45	Hari Krishna Khatri		M	Gaudachapay
46	Ishwor Khatri		M	Gaudachapay
47	Dambar Kumari Khatri	Woman Headed	F	Gaudachapay
48	Bhakta Bd Khatri		M	Gaudachapay
49	Durga Bd Khatri		M	Gaudachapay
50	Ramesh Khatri		M	Gaudachapay
51	Kamala Khatri	Woman Headed	F	Gaudachapay
52	Padam Bd Khatri		M	Gaudachapay
53	Topendra Bd Khatri		M	Gaudachapay
54	Sarada Shahi	Woman Headed	F	Gufachapay
55	Bhu Bd Shahi		M	Gufachapay
56	Raj Shahi		M	Gufachapay
57	Ram Bd Budathoki		M	Gufachapay
58	Radha Krishna Budathoki		M	Gufachapay
59	Dhan Bd Shahi		M	Gufachapay
60	Krishna Bd Karki		M	Gufachapay
61	Ram Sharan Basnet		M	Gufachapay
62	Dip Bd Basnet		M	Gufachapay
63	Sita Ram Shahi		M	Gufachapay
64	Narayani Shahi	Woman Headed	M	Gufachapay
65	Baburam Shahi		M	Gufachapay
66	Usha Maya Shahi	Woman Headed	F	Gufachapay
67	Kumar Bd Shahi		M	Gufachapay

Annex 3: List of Consultation

S.N	Name	Tole	Contact No.
1	Sange Ghyampo Lama	BMC-7 Puwale	
2	Dhan Bdr Tamang	BMC-7 Puwale	
3	Ishowr saha	BMC-7 Puwale	
4	Sanu Babu Sahi	BMC-7 Puwale	
5	Kumar Karki	BMC-7 Puwale	
6	Bikram Sahi	BMC-7 Puwale	

Annex 4: Photographs



Picture1: View of Puwale settlement

Annex 5: Sub project in Google Map



Figure 3: Google Map of Punwale Settlement

Puwanle settlement lies in 27°40'11" N and 86°01'34" E

Annex 6: Quantity Calculation Sheet

Type of house: Model no. Stone Masonry in Cement Mortar (SMC-2.1)						
S. No.	Structurewise	Materials				
		Stone (m ³)	Cement (Bags)	Sand (m ³)	Aggregate (m ³)	Timber (m ³)
1	Upto D.P.C. level	19	82	12	7	0
2	Super structure	31	138	18	7	1.18
3	Roof	0	0	0	0	0.8
	Total	50	220	30	14	1.98
	Reuse from demolished house	30				0.594
	Additional Needed/House	20				1.386
	Additional Needed for 67 Houses	1340				92.86

Source: Adapted from MoUD/DUDBC, GoN and field observation

Note: 1 m³=35.28 cft

Note: Project has been providing training to local masons and carpenter 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, there will be no influx of labour and no need for labor camp