

Environmental Compliance Monitoring Report

Semi-Annual Report No. 1

Loan Number: 3260 NEP
July-December, 2016

Nepal: Earthquake Emergency Assistance Project

Prepared by the Government of Nepal for the Asian Development Bank.

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Environmental Monitoring Report

July-December, 2016

Second Biannual Report

NEP: Earthquake Emergency Assistance Project
ADB Loan No. 3260 NEP (SF) and SDC TA

Prepared by Earthquake Emergency Assistance Project (EEAP)
for Government of Nepal and Asian Development Bank

CURRENCY EQUIVALENTS

	30 December 2016	
Currency unit	–	Nepalese Rupee (NRs)
NRs. 1.00	=	\$ 0.009150805
US \$ 1.00	=	NRs. 109.28

ABBREVIATIONS

ADB	Asian Development Bank
BoQ	Bill of Quantity
BS	Bikram Sambat (Nepali Calendar)
CFUG	Community Forest Users Group
CISC	Central Implementation Support Consultant
CLPIU	Central Level Project Implementation Unit
DDC	District Development Committee
DFO	District Forest Officer
DISC	District Implementation Support Consultant
DLPIU	District Level Project Implementation Unit
DoLIDAR	Department of Local Infrastructure Development and Agricultural Roads
DPR	Detail Project Report
DTO	District Technical Office
EEAP	Earthquake Emergency Assistance Project
EMP	Environmental Management Plan
FY	Fiscal Year
GoN	Government of Nepal
GRC	Grievance Redress Committee
IEE	Initial Environmental Examination
MoFALD	Ministry of Federal Affairs & Local Development
MoFSC	Ministry of Forest and Soil Conservation
NRA	National Reconstruction Authority
NRs	Nepali Rupees
SDC	Swiss Agency for Development and Cooperation

NOTES

- (i) The fiscal year (FY) of the Government of Nepal and its agencies ends on 16 July. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY 2016 ends on 16 July 2017.
- (ii) In this report, "\$" refers to US dollars.

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1. BACKGROUND

Earthquake Emergency Assistance Project (EEAP) is a project being implemented by loan assistance from the Asian Development Bank (ADB), technical assistance from Swiss Agency for Development and Cooperation (SDC) and counterpart funding from Government of Nepal (GoN). EEAP will support GoN to accelerate recovery and reconstruction following the devastating earthquake of 25 April 2015 and the major aftershock of 12 May 2015. The Project covers 12 affected districts in eastern, middle and western development region of Nepal¹.

The Project will restore and strengthen the resiliency of critical public and social infrastructure and services and has four outputs; Output 1: Schools are rebuilt and upgraded, Output 2: Roads and bridges are rehabilitated and/or reconstructed, Output 3: District-level government facilities constructed and/or rebuilt, Output 4: Disaster preparedness and management capacities strengthened.

Under Output 2, about 135 km of strategic roads and about 450 km of rural roads damaged by the earthquake and landslides will be rehabilitated. Project roads and bridges will have built back better features for road safety and climate resilience.

National Reconstruction Authority (NRA) is executing agency for EEAP. Ministry of Federal Affairs and Local Development (MoFALD) is implementing agency for rural road component of output 2 under EEAP. The implementing arrangements are as following: MoFALD has established a Central Level Project Implementation Unit (CLPIU) in Kathmandu, headed by a project coordinator to coordinate all project activities. The CLPIU will be responsible for guiding and monitoring District Development Committees (DDCs)/District Technical Office (DTO) as they implement project components.

At the district level, project implementation will be the responsibility of the District Level Project Implementation Unit (DLPIU) within the District Technical Office (DTO) of each district. Headed by District Team Leader, technical and social staff will support DLPIU as District Implementation Support Consultants (DISC). Overall back stopping support to the district will be provided by Central Implementation Support Consultants (CISC).

2. ENVIRONMENTAL SAFEGUARDS IN EEAP²

Environmental assessment is essential to integrate environmental considerations into development project in order to minimize negative environmental impacts. EEAP falls in category B project according to ADB Safeguard Policy Statement, 2009 and the road sub-projects under EEAP are classified as district road core network (DRCN)³ according to Nepal Rural Road Standard (2055 BS) 1st Revision, September 2012 of the DoLIDAR. Therefore, Initial Environmental Examination (IEE) for the sub-projects under EEAP is mandatory in order to assess the environmental consequences of the rural road rehabilitation and construction activities and suggest appropriate, practical and site specific mitigation and enhancement measures. In this context, IEE reports are under preparation for the district road sub-projects in

¹ The 12 project districts are Kathmandu, Lalitpur, Bhaktapur, Kavrepalanchok, Dolakha, Ramechhap, Okhaldhunga, Solukhumbu, Sindhuli, Gorkha, Lamjung, Chitwan

² This report covers only the rural road component of output 2 under EEAP

³ A Road within the district joining a VDC headquarter (HQ) or a growth centre to the district HQ directly or via other VDC(s), a neighbouring district HQ or the strategic road network is called "district road core network". Other roads which are not included in this network are village road.

accordance with the environmental rules and regulations (Act relating to Reconstruction of the Earthquake Affected Structures 2015, Rules relating to Reconstruction of the Earthquake Affected Structures 2016 and working procedure related to environmental impact assessment for Earthquake affected structure, 2016) of GoN and also satisfying the ADB environmental procedures. These IEE reports of the road sub-projects have to be approved by the NRA and concurrence is to be given by the ADB.

During the construction and rehabilitation of the road sub-projects, environmental monitoring is an important tool to ensure the compliance of mitigation measures and implementation of environmental management plan (EMP). Monthly, Quarterly and semi-annual Environmental safeguard monitoring report have to be prepared on the basis of report received from DISC team and environmental field visit made by Environmental Safeguard Unit of CISC, EEAP.

3. CONSTRUCTION APPROACH

EEAP applies National Competitive Bidding (NCB) approach for construction of road. However, spoil disposal is balanced with cutting and filling as far as possible. There will be minimum use of excavator, rock breaker, compacter, roller and truck for road construction. Construction activities will follow the environment friendly approach as much as possible.

4. INSTITUTIONAL ARRANGEMENT

EEAP has provision of a well-defined Grievance Redress Mechanism (GRM) to resolve grievances and complaints in a timely and satisfactory manner. The first level of GRM will be addressed at DLPIU, if unsolved will be forwarded to second level, CLPIU. Unresolved grievances will be forwarded to Grievance Redress Committee (GRC), third level of GRM.

If the grievance is not addressed at DLPIU, CLPIU or GRC, the affected person can seek legal redress of the grievance through the legal court system as fourth level of the GRM.

5. OVERALL ENVIRONMENTAL SAFEGUARD STATUS

All the road sub-projects in EEAP are mandatory to go through environmental assessment process with the preparation and due approval of Initial Environmental Examination (IEE) reports according to Act relating to reconstruction of the earthquake affected structures 2015, Rules relating to reconstruction of the earthquake affected structures 2016 and Working procedure related to environmental impact assessment for earthquake affected structure, 2016 of GoN and Safeguard Policy Statement, 2009 of ADB.

So far, 1 IEE of Sankhu-Palubari-Nagarkot Road, Kathmandu has been approved by MoFALD. 2 IEE reports of Khopasi-Dhungakharka-Chyamranbesi-Milche-Borang Road, Kavrepalanchok and Satungal-Matatritha-Deurali-Makwanpur Road, Bhakunde Chaur (Matatirtha)-Deurali-Makaibari Section of Kathmandu has already been presented in MoFALD.

3 IEE reports (Kuntabesi-Nayagaun-Nagarkot Road of Kavre, Sunkhani-Lamidanda-Kalinchowk section of Sunkhani Sangwa Road of Dolakha and Khurkhure (Highway)-Samitar-Thakurivanjyang Road of Chitwan) have been submitted to ADB for concurrence.

7 IEE Reports (Thaiba- Godamchaur Road of Lalitpur, Higuapati-Jyamdi-Dolalghat section of Nagarkot-Gairibisauna-Higuapati-Jyamdi-Dolalghat Road of Kavre, Bhirkot-Sahare-Hawa Section of Bhirkot-Sahare-Hawa-Jiri Road of Dolakha, Luitel- Aappipal-Harmibhanjyang-Thalajung-Bhachek Road of Gorkha, Bhoteodhar-Belghari-Bharate-Gauda Road and Belghari-Archalbot-Lamabagar-Serabazaar-Lituere-Pachok Road of Lamjung, Khurkhure (Highway)-Samitar-Thakurivanjyang Road of Chitwan, Devitar-Phulasipokhari Section of Devitar-Doramba-Paseban-Kolibagar Road of Ramechhap) are under finalization. IEE of remaining 7 roads are under preparation.

With the promulgation of acts, rules and working procedure related to Earthquake, 4 road sub-projects of Okhaldhunga, Sindhuli and Solukhumbu under EEAP had felled in EIA category and therefore it's ToR has not been approved yet. However, working procedure related to environmental impact assessment for earthquake affected structure (first amendment), 2017 has been done on dated 2073/09/11 by GoN and ToR for IEE of these 4 roads can be sent to NRA for approval now. (Please refer **Annex 1a** and **b** and **Table 1** for status of environmental safeguard).

Table 1: Overall Status of Environmental Safeguard Report Preparation

SN	Activity	No. of Sub-projects	Name of Sub-project	Remarks
1	ToR preparation	4	1. Okhaldunga - Rumjatar Road, Okhaldhunga 2. Okhaldunga - Rampur -Lapse Khola Road, Okhaldhunga 3. Garma - Nele -Bogal Road Road, Solukhumbu 4. Pipal Bhanjyang - Haitar - Netrakali Road, Sindhuli	Sending to NRA immediately
2	IEE report approved by MoFALD	1	1. Sankhu -Palubari -Nagarkot Road, Kathmandu	Done under RRRSDP, Still due to send to ADB
3	IEE already presented in MoFALD	2	2. Satungal - Matatritha - Deurali - MakwanpurRoad Bhakunde Chaur (Matatirtha) -Deurali - Makaibari Section, Kathmandu 3. Khopasi-Dhungakharka - Chyamranbesi-Milche-Borang Road, Kavrepalanchok	Done under RRRSDP, Still due to send to ADB and also comments from MoFALD need to incorporated by consultant under RRRSDP
4	IEE sent to ADB	3	1. Kuntabesi-Nayagaun - Nagarkot Road, Kavre 2. Sunkhani-Lamidanda -Kalinchowk section of Sunkhani Sangwa Road, Dolakha 3. Khurkhure (Highway) - Samitar - Thakurivanjyang Road, Chitwan	
5	IEE Draft report	7	1. Thaiba - Godamchaur Road,	Finalization ongoing

SN	Activity	No. of Sub-projects	Name of Sub-project	Remarks
	prepared		Lalitpur 2. Higuapati -Jyamdi - Dolalghat section of Nagarkot - Gairibisauna-Higuapati -Jyamdi - Dolalghat Road, Kavrepalanchok 3. Bhirkot - Sahare- Hawa Section of Bhirkot - Sahare- Hawa -Jiri Road, Dolakha 4. Luitel - Aappipal - Harmibhanjyang - Thalajung – Bhachek Road, Gorkha 5. Bhotodhar - Belghari-Bharate-Gauda Road, Lamjung 6. Belghari – Archalbot - Lamabagar-Serabazaar - Lituere - Pachok Road, Lamjung 7. Devitar – Phulasipokhari Section of Devitar – Doramba – Paseban – Kolibagar Road, Ramechhap	
6	ToR terminated	1	Singati - Sorung Section of Singati-Bigu-Thisang Road, Dolakha	Lies within Gauri Sankar Conservation Area
7	IEE draft report under preparation	4	1. Lele - Tikabhairab - Devichaur - Ghusel -Jagalkot Road, Lalitpur 2. Ghympesal - Balkot- Palkhu-Swara-Saurpani- Barpak Road, Gorkha 3. Bakular (Ratnanagar)-Jutpani-Shaktikhor- Siddhi Road, Chitwan 4. Haldebesi -Dhobi- Dhandebesi Road, Ramechhap	
8	IEE report (under preparation/ finalization)	3	1. Jhormahankal - Sangla - Jitpurfedi - Boharatar - Purano Jaybageswori Road, Kathmandu	Done under RRRSDP: Draft IEE of Jhor-Sangla-Kavresthali-Jitpurphedi Rural Road (6.28 km) done, IEE of remaing length is due
			2. Bysai –Jhaukhel –Changu –Telkot-Bhattedanda -Nagarkot Road, Bhaktapur	Done under RRRSDP: 2 separate IEE drafted (Puranobato-Manohara Bridge-Engineering College-Changu VDC-Indre ko Kholsa-Radha Krishna School-Telkot Road (12 km) and Telkot-Bhattedanda-

SN	Activity	No. of Sub-projects	Name of Sub-project	Remarks
				Kattikevanjhyang Road (6km))
			3. Godamchour- Godabari- Badikhel- Lelebhanjyang Road, Lalitpur	Done under RRRSDP, coordination ongoing
Total		25		

6. COMPLIANCE WITH ENVIRONMENTAL SAFEGUARD MEASURES

For better environmental safeguard compliance of the project, implementation of EMP should be done strictly. During planning phase, budget for mitigation measures and benefit augmentation are/will be included in the project cost and BoQ.

Since Environmental Safeguard Unit of CISC is backstopping consultant team in IEE report preparation, it is make sure that there is site specific data and enough budgets in following headings.

1. Awareness raising training and other benefit augmentation measures
2. Tree loss and Compensatory plantation
3. Slope stabilization and bioengineering activities
4. Camp Site Management
5. Occupational health and safety
6. Signboard placing (erection)
7. Central level monitoring

In addition to above, CISC team will backstop, facilitate and monitor in Forestry clearance, Spoil management, Rehabilitation of community infrastructures and cultural and religious sites, Quarry site management, Grievances (related to Environmental safeguard) received and addressed. Each sub-project has to prepare spoil disposal management plan and compensatory plantation plan at site specific level (please refer **Annex 2 and 3** respectively for format)

7. EMP IMPLEMENTATION, MONITORING, REPORTING AND FIELD VISIT

Environmental reporting format has been developed as given in **Annex 4**. EEAP is still preparing planning document on Environmental safeguards of different sub-projects.

8. WAY FORWARD

IEE of road sub-project are still under preparation and/or finalization except Sankhu-Palubari-Nagarkot Road (approved from MoFALD). Obtaining forestry clearance is important as it is legal requirement as well as catalyst in achieving targeted compensatory plantation. Therefore, once the IEE is approved, DLPIU should coordinate with DFO on this regard. For the IFB awarded sub-project, DLPIU should organize orientation program to workers of contractor on environmental friendly working approach.

Annexes

Annex 1a: Status of Environmental Safeguard Planning Status

District	Name of Sub-project	Environmental screening is carried out? (Yes or No)	Environment category of the project / subproject (A/B/C/FI)	EARF is prepared (if applicable) (Yes/No)	EIA/IEE/DDR with EMP is prepared (Yes/No)	ADB approved EIA/IEE with EMP (Yes / Under Review / Not Yet Due/Over Due)	Government approved EIA/IEE with EMP (Yes / Under Review / Not Yet Submitted)	Safeguard monitoring and coordination mechanism established (Yes/No)	GRC is established (Yes/No)	Automated safeguard monitoring system customized (Yes/No)	EMP cost in approved document is included in BOQ as an individual item (Yes/No)	Remarks
Kathmandu	Sankhu -Palubari -Nagarkot Road	√	B	√	IEE		Approved					IEE approved by MoFALD
	Satungal - Matatritha - Deurali - MakwanpurRoad Bhakunde Chaur (Matatritha) -Deurali - Makaibari Section	√	B	√	IEE							IEE presented in MoFALD already
	Jhormahankal - Sangla - Jitpurfedi - Boharatar - Purano Jaybageswori Road	√	B	√	IEE							Draft IEE of Jhor-Sangla-Kavresthali-Jitpurphedi Rural Road (6.28 km) done, IEE of remaining length is due
Bhaktapur	Bysai -Jhaukhel -Changu -Telkot-Bhattedanda -Nagarkot Road	√	B	√	IEE							2 separate IEE drafted (Puranobato-Manohara Bridge-Engineering College-Changu VDC-Indre ko Kholsa-Radha Krishna School-Telkot Road (12 km) and Telkot-Bhattedanda-Kattikevanjhyang Road (6km))
Lalitpur	Lele - Tikabhairab - Devichaur - Ghusel - Jagalkot Road	√	B	√	IEE							IEE report preparation ongoing
	Thaiba - Godamchaur Road	√	B	√	IEE							IEE report finalization ongoing
	Godamchour- Godabari- Badikkhel- Lelebhanjyang Road	√	B	√	IEE							
Kavre	Higuapati -Jyamdi - Dolalghat section of Nagarkot - Gairibisauna-Higuapati -Jyamdi - Dolalghat Road	√	B	√	IEE							IEE report finalization ongoing
	Kuntabesi-Nayagaun - Nagarkot Road	√	B	√	IEE	Under review						IEE submitted to ADB
	Khopasi-Dhungakharka -Chyamranbesi- Milche-Borang Road	√	B	√	IEE							Already presented in MoFALD
Dolkha	Singati - Sorung Section of Singati-Bigu- Thisang Road											Lies within Gaurisankar Conservation Area.
	Bhirkot - Sahare- Hawa Section of Bhirkot- Sahare- Hawa -Jiri Road	√	B	√	IEE							IEE report finalization ongoing
	Sunkhani-Lamidanda -Kalinchowk section of Sunkhani Sangwa Road	√	B	√	IEE	under review						IEE submitted to ADB
Gorkha	Ghympesal - Balkot- Palkhu- Swara- Saurpani- Barpak Road	√	B	√	IEE							IEE report preparation ongoing
	Luitel - Aappal - Harmibhanjyang - Thalajung - Bhachek Road	√	B	√	IEE							IEE report finalization ongoing
Lamjung	Bhoteodhar - Belghari-Bharate-Gauda Road	√	B	√	IEE							IEE report finalization ongoing
	Belghari - Archalbot - Lamabagar- Serabazaar - Lituere - Pachok Road	√	B	√	IEE							IEE report finalization ongoing
Chitwan	Bakular (Ratnanagar)-Jutpani-Shaktikhor- Siddhi Road	√	B	√	IEE							IEE report preparation ongoing
	Khurkhure (Highway) - Samitar - Thakurivanjyang Road	√	B	√	IEE	Under review						
Sindhuli	Pipal Bhanjyang - Haitar - Netrakali Road	√	B	√	IEE							ToR still to be approved from NRA
Ramechhap	Haldebesi - Dhobi- Dhandebesi Road	√	B	√	IEE							IEE report preparation ongoing
	Devitar - Phulasipokhari Section of Devitar - Doramba - Paseban - Kolibagar Road	√	B	√	IEE							IEE report finalization ongoing
Okhaldhunga	Okhaldunga - Rumjatar Road	√	B	√	IEE							ToR still to be approved from NRA
	Okhaldunga - Rampur -Lapse Khola Road	√	B	√	IEE							ToR still to be approved from NRA
Solukhumbu	Garma - Nele -Bogal Road Road	√	B	√	IEE							ToR still to be approved from NRA

Note: EIA- Environmental Impact Assessment; IEE- Initial Environmental Examination; DDR- Due Diligence Report; EMP- Environmental Management Plan, GRC- Grievance Redress Committee; BOQ- Bill of Quantity

Annex 1b: Environmental Safeguard Implementation Status

Districts	Name of Subproject	Compliance to Environmental Management Plan*											Grievances			Corrective Action Plans are prepared and implemented (Y/N)	Env compliance reporting is maintained (Y/N)	Remarks	
		Physical		Drainage Management (compliance in %)	Other as per EMP (specify)	Biological		Firewood is used for cooking and heating (Y/N)	Other as per EMP (specify)	Socio-economic			Nos of grievances documented	No of grievances resolved	No of grievances under processing				
		Spoil Management (compliance in %)**	Landslide protection with Bio-eng (compliance in %)**			Compensatory Plantation	Target (Nos.)			Planted (Nos.)	Occupational Health and Safety	Community structures are compensated/reconstructed (Progress in % of total estimated work)***							Other as per EMP (specify)
								Safety Gears are sufficient and used (Y/N)	Labors are insured (Y/N)	Labor and work camps are healthy and have sanitary	Community structure 1	Community structure 2							
Kathmandu	Sankhu - Palubari -Nagarkot Road																		
	Satungal - Matairitha - Deurali - Makwanpur Road																		
	Bhakunde Chaur (Matairitha) -Deurali -Makaibari Section																		
Bhaktapur	Jhormahankal - Sangla - Jitpurfedi - Boharatar - Purano Jaybageswori Road																		
	Bysai -Jhaukel -Changu -Telkot-Bhattedanda -Nagarkot Road																		
Lalitpur	Lele - Tikabhairab - Devichaur - Ghusel - Jagalkot Road																		
	Thaliba - Godamchaur Road																		
Kavre	Godamchour- Godabari- Badikhel- Lelebhanyang Road																		
	Higuapati -Jyamdi - Dolalghat section of Nagarkot - Gairibisauna- Higuapati -Jyamdi - Dolalghat Road																		
Dolkha	Kuntabesi-Nayagaun - Nagarkot Road																		
	Khopasi-Dhungakharka - Chyamranbesi-Milche-Borang Road																		
Gorkha	Singati - Sorung Section of Singati-Bigu-Thisang Road																		
	Bhirkot - Sahare- Hawa Section of Bhirkot - Sahare- Hawa -Jiri Road																		
Lamjung	Sunkhani-Lamidanda - Kalinchowk section of Sunkhani Sangwa Road																		
	Ghympesal - Balkot- Palkhu- Swara-Saurpani- Barpak Road																		
Chitwan	Luitel - Aappipal - Harmibhanyang - Thalajung - Bhacheek Road																		
	Bhotesodhar - Belghari- Bharate-Sauda Road																		
Ramechhap	Belghari - Archalbot - Lamabagar- Serabazaar - Lituere - Pachok Road																		
	Bakular (Ratnagar)- Jutpani-Shaktikhor- Siddhi Road																		
Sindhuli	Khurkhure (Highway) - Samitar - Thakurivanjyang Road																		
	Pipal Bhanyang - Haitar - Netrakali Road																		
Okhaldhunga	Haldebesi - Dhobi- Dhandebesil Road																		
	Devitar - Phulasipokhari Section of Devitar - Doramba - Paseban - Kolibagar Road																		
Solukhumbu	Okhaldunga - Rumjatar Road																		
	Okhaldunga - Rampur - Lapse Khola Road																		
	Garma - Nele -Bogal Road																		

Note: * Added field as guided by EMP in IEE/DDR, ** Written in percentage of compliance in a scale of 100%, *** type of community structures mentioned

Annex 3: Plantation Plan

Many sub-projects under EEAP pass through forests area and will be affecting the forest vegetation as well as disturbing wildlife and their habitat also. Appropriate mitigation measures have been/will be recommended in the Initial Environment Examination (IEE) report that has been prepared/under preparation. According to the Government of Nepal (2071/01/12 BS): **Standard for Removing Government Trees**, 2071 BS (2014 AD), the sub-project has to carry out plantation (with protection for five years) at the ratio of 1:25 plants or pay for the plantation and protection cost to the concerned community forest user groups (CFUGs)/District Forest Office. In private land, trees will be planted at the ratio of 1:1. Planting a huge number of seedlings needs a pre-plan and coordination with concerned stakeholders. **Table 1** will be used to manage the planting stock for plantation for different purposes.

Table 1: Type of plantation and planting stock

Type of plantation	Number of plants needed	Cost of plants including transportation	Source of planting stock	Remarks
Compensatory plantation in NF/CFs				
Plantation in private land				
Roadside plantation				

A. Compensatory plantation in NF/CFs Requirements for plantation activities

- 1) Coordination with CFUGs and DFO - Meeting will be held with concerned CFUGs and DFO to discuss about the plantation management
- 2) Agreement with CFUG/DFO/DDC - Agreement will be done with concerned CFUGs, DFO and DDC/DTO for the compensatory plantation
- 3) Managing planting stock - Nursery establishment and operation
 - From DFO nursery
 - From private nursery owner
 - Fruit trees in private land - Horticulture farms in districts
- 4) Identification and survey of plantation area - Plantation area will be identified by concerned CFUGs and DFO and survey will be done.
- 5) Fencing - Fencing will be done by concerned CFUGs/DFO.
- 6) Pitting - Pits of 30cmx45cmx45cm size will be dug.
- 7) Transportation of seedlings - From nursery to the planting sites
- 8) Planting - It will be done by the CFUG members in the starting of monsoon
- 9) Weeding - After the monsoon season, weeding is done to reduce the competition by weeds.
- 10) Survival count - before winter starts, survival of the plantation will be done for casualty replacement before next monsoon.

B. Roadside plantation

- 1) Coordination with local communities, VDC/Municipality, CFUGs and DFO - Meeting will be held with concerned local communities, VDC/Municipality, CFUGs and DFO to discuss about the plantation management
- 2) Agreement with concerned stakeholders - Agreement will be done with concerned local communities, VDC/Municipality, CFUGs and DFO for the road side plantation
- 3) Managing planting stock - Nursery establishment and operation
 - From DFO nursery
 - From private nursery owner from districts
 - Fruit trees in private land - Horticulture farms in districts
- 4) Identification and survey of plantation area - Plantation area will be identified by concerned local communities, VDC/Municipality, CFUGs and DFO and survey will be done.
- 5) Fencing - Fencing will be done by concerned local communities, VDC/Municipality, CFUGs and DFO.
- 6) Pitting - Pits of appropriate size will be dug depending on species
- 7) Transportation of seedlings - From nursery to the planting sites
- 8) Planting - It will be done in the starting of monsoon
- 9) Weeding - After the monsoon season, weeding is done to reduce the competition by weeds.
- 10) Survival count - before winter starts, survival of the plantation will be done for casualty replacement before next monsoon.

Plan of Action for Plantation for compensatory and roadside plantation

Activities	April 17	May 17	June 17	July 17	Aug 17	Sep 17
Agreement with CFUG/DFO/DDC	■					
Managing planting stock	■					
Survey of plantation area		■				
Fencing		■				
Pitting			■			
Transportation of seedlings				■		
Planting				■	■	
Weeding						■

C. Plantation in private land

Coordination with affected landowner - Meeting will be held with concerned affected landowner to discuss about the plantation trees in their land.

- 1) Managing planting stock
 - From DFO nursery
 - From private nursery owner from districts
 - Fruit trees in private land - Horticulture farms in districts.
- 2) Identification and survey of plantation area - Plantation area will be identified in coordination with affected landowner.
- 3) Protection- Protection of planted trees will be done by the landowner.

- 4) Pitting - Pits of appropriate size will be dug depending on the species.
- 5) Transportation of seedlings - From nursery to the planting sites
- 6) Planting - It will be done by the affected landowner and cost will be provided in the starting of monsoon
- 7) Weeding - After the monsoon season, weeding is done to reduce weed competition.

Annex 4: Environmental Safeguard Compliance Monitoring Format

SN	Description	Indicator	Status		Remarks
			Monthly	Cumulative	
1	ToR for IEE	Completed / ongoing / proposed			
2	IEE report	Completed / ongoing / proposed			
3	Awareness raising orientation training	Number of events and participants			
4a	Stock piling and spoil disposal management	Obtaining written permission for stockpiling			
		Management of stockpiling of construction materials			
		Preparation of spoil disposal management plan (Y/N)			
		Location and management of spoil disposal site			
		Location of disposal site near the water courses (Y/N)			
		Volume of safely disposed spoil (m ³)			
		Remaining excavated materials (m ³)			
		Spoil falling or being washed on to forest and farm land (Y/N)			
		Spoil disposal work affecting public interest, locals and their properties (Y/N)			
4b	Toe walls for safe disposal of excavated materials	Number and volume (m ³) of toe wall constructed			
5	Bioengineering works	Location (chainage)			
		Area (Rm/m ²)			
		Type of measures taken			
6	Dust emission	Spray of water for suppressing dust emission (Y/N) and time interval			
7	Water quality	Water quality observed			
8	Quarry site management	Location (chainage)			
		Volume of aggregates/stones supplied (m ³)			
		Rehabilitation of site (Y/N)			
9	Campsite management	Supply of safe drinking water (Y/N)			
		Temporary toilets constructed in camp sites (no.)			
		Energy used for cooking (fuel wood, kerosene, LPG, electricity)			

SN	Description	Indicator	Status		Remarks
			Monthly	Cumulative	
		Proper management of sewerage and waste disposal (Y/N)			
		Separation of waste disposal in biodegradable and non-biodegradable (Y/N)			
10	Drainage management	Drain water discharged into farm land/ risky areas (Y/N)			
		Cross drainage structure (no.) & volume (m ³)			
11	Storage management	Bituminous material discharged into side drains (Y/N)			
		Fuel wood being used for bitumen heating (Y/N)			
		Bitumen drums stored in dedicated areas and not scattered along the road (Y/N)			
		Provision for leakage and spills in storage & service yards (Y/N)			
12	Land slide and erosion control measures	Type of measures taken			
		Number and volume (m ³)			
13	Compensatory plantation in forest area	Number of plants felled			
		Establishment of nursery (number & location)			
		Plantation carried out (number of plants and area in ha)			
		Name & location of forest			
		Plantation survival rate (%)			
14	Compensatory plantation in private land	Number of plants felled			
		Plantation carried out (number of plants)			
		Plantation survival rate (%)			
15	Road side plantation	Plantation carried out (number of plants)			
		Location			
		Plantation survival rate (%)			
16	Rehabilitation of public infrastructure along road side	1. Name & Location			
		2. Name & Location			
17	Protection/Rehabilitation of culturally & religiously sensitive spots (Temple, Mane, cremation sites etc.)	1. Name & Location			
		2. Name & Location			

SN	Description	Indicator	Status		Remarks
			Monthly	Cumulative	
18	Occupational health & safety	Number of Personal Protective Equipment (PPE) provided			
		Use of PPE by workers (%)			
		First aid kit provided with medicines (no.)			
		Replacement of medicines (Y/N)			
		Accidental insurance (number of workers)			
		Type & number of accident occurred			
		Compensation provided			
		Number of workers fallen sick			
		Coordination with nearby health center (Y/N)			
19	Informative/safety signboard erected	Number			
		Location			
20	Meeting convened by safeguard desk	Number of meeting held			
		Environmental monitoring done			
21	Grievances received and addressed	Received number			
		Addressed number			
22	Photographs				

Annex 5: Photographs



Existing Thaiba - Godamchaur Road, Lalitpur



Existing Bhotodhar-Belghari-Bharate-Gauda Road, Lamjung



Public consultation during IEE Report preparation



Public consultation during TOR preparation for IEE Report



Forest along Okhaldunga - Rampur -Lapse Khola Road, Okhaldhunga



Agriculture land along Belghari-Archalbot-Lamabagar-Serabazaar-Lituere- Pachok Road,