

1.0 NAME AND ADDRESS OF THE PROPONENT

The District Development Committee (DDC)/District Technical Office (DTO), Jhapa is the executing agency at the district level and the proponent of the Initial Environmental Examination (IEE) study for the rehabilitation of Surunga-Saranamati-Taganduba-Digalbank road sub-project in Jhapa District. The Ministry of Local Development (MLD) is the concerned authority for the approval of IEE study report.

Address of the Proponent:

District Development Committee (DDC)

District Technical Office (DTO)

Chandragadhi, Jhapa

Telephone No. :- 023,456273

Fax No. :- 023,456394

2.0 INTRODUCTION

2.1 GENERAL INTRODUCTION

The Rural Reconstruction and Rehabilitation Sector Development Project (RRRSDP) covers 20 districts spread over the country, which focuses on immediate post conflict development priorities for accelerated poverty reduction and inclusive development, thereby enhancing the effectiveness and efficiency of the delivery of public services, and improving access of rural people to economic opportunities and social services.

The RRRSDP program is financed by the Government of Nepal (GoN), Asian Development Bank (ADB), Department for International Development (DFID), OPEC Fund for International Development (OFID) and Swiss Agency for Development and Cooperation (SDC) to improve the connectivity, enhance economic and employment opportunities, increase access to market and social services of rural communities. The coordinating government department is the Department for Local Infrastructure Development and Agricultural Roads (DoLIDAR) under the Ministry of Local Development (MLD).

The DDCs is the Project Implementing Agencies at the district level. The DTO of each respective DDC is responsible for technical and Project management matters in the district. The DTO will be supported by the DIST which includes engineering, safeguards, and social mobilization staff.

Everest Engineering Consultant JV inclusive consultant Pvt.Ltd, Old Baneshwor, Kathmandu is District Implementation Support Team (DIST) for RRRSDP and has the responsibility of providing technical assistance in Jhapa District.

This Terms of Reference (ToR) is prepared to conduct an IEE study of Surunga- Saranamati-Taganduba- Digalbank road sub-project of Jhapa District.

2.2 BACKGROUND OF THE SUB-PROJECT

The proposed road sub project Surunga- Saranamati- Taganduba- Digalbank lies in the middle part of Jhapa district of Eastern Development region of Nepal. This sub-project starts from Surunga bazaar of Surunga VDC and ends at Lasuna (Digalbank) of Kumarkhod VDC. Major settlements along the road alignment are Surunga bazar, Tulsibari, Chapramari, Kirat

Chowk, Sharnamati Bazar, Phulgachhi chowk, Kamatoli Bazar, Jhapa bazaar and Lasuna Chowk. Total length of the road alignment is 24.2 km.

The starting point of the road is Surunga bazaar, a point of East West Highway. Surunga bazar is 22 km far from Chandragadhi, district headquarter of Jhapa. The end point of road is Lasuna (Digalbank) a point which borders Nepal and Bihar state of India. Among total length of 24.2 km of road 3.2 km road is blacktopped. The remaining length of the road is graveled and the road width is 8.5 m to 10 m width. Existing carriageway of the road varies from 3.5m to 5.0 m.

The people in this project area are facing transportation problems due to poor condition of road. Local people have no access to the market centre to fulfill their daily needs. The road covers the area with high value of agriculture production. The agriculture production like rice, maize, wheat, oily products and cash crops i.e. ginger, capsicum (chilly), off-seasonal vegetables are getting low prices than it may fetch. Other development facilities such as water supply, electricity, health centre and telephone facilities are also far from the reach of people due to lack of all weather road. So, DDC Jhapa has been allocating budget annually to maintain this road.

The rehabilitation and upgrading of road will mainly enhance the transportation facilities for *cereal and cash crops* produced in areas of road corridor & other VDCs and it will also extend physical and economical access to the people within the immediate zone of influence. For the road construction, use of local labour will generate immediate employment to local people and minimizes migration to major city of Nepal and gulf countries in search of work. Consequently, local people will get long-term benefit which will enhance their economic status within the ZoI of road corridor.

This road is also prioritized in the District Transport Master Plan (DTMP) as a rural road class A. Rehabilitation and upgrading of this road will provide physical and economical access to the people of middle part of the district with district headquarter and other part of Nepal.

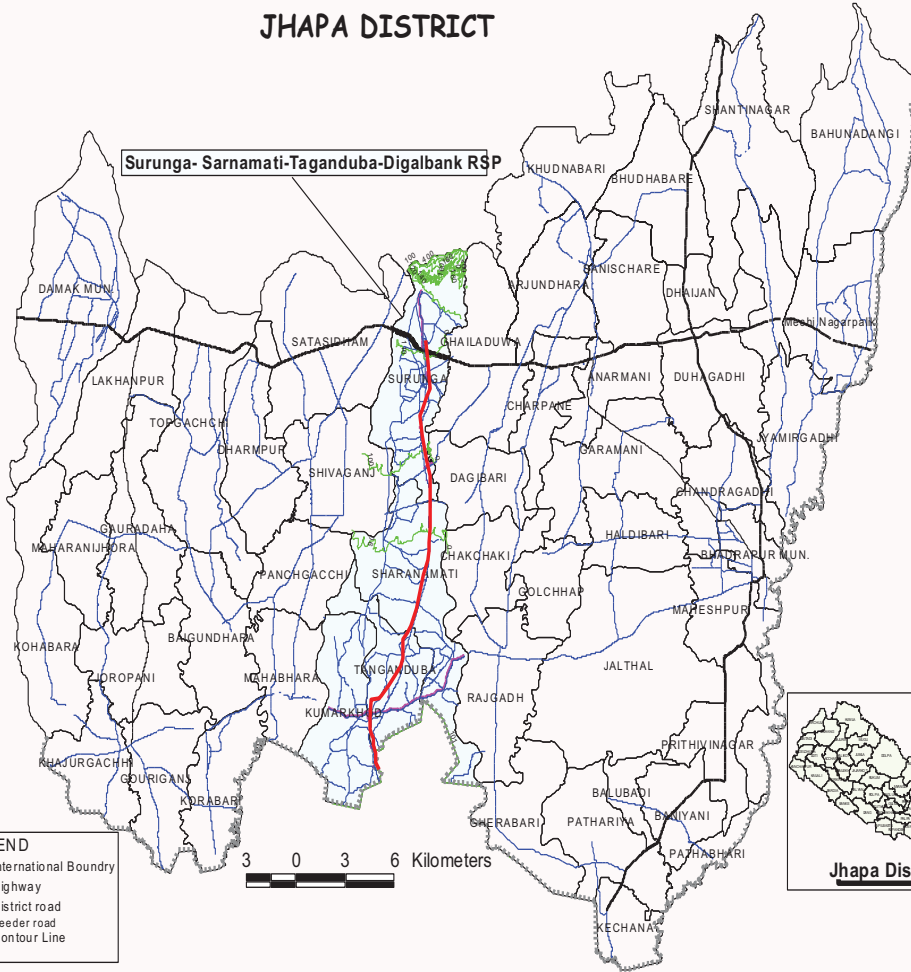
The location and alignment of the road is given in **Figure 1 and 2**.

Figure 1. Map of Nepal showing location of Surunga-Saranamati-Tagandubba-Digalbank road sub-project in Jhapa district.

JHAPA DISTRICT



Surunga- Sarnamati-Taganduba-Digalbank RSP



LEGEND

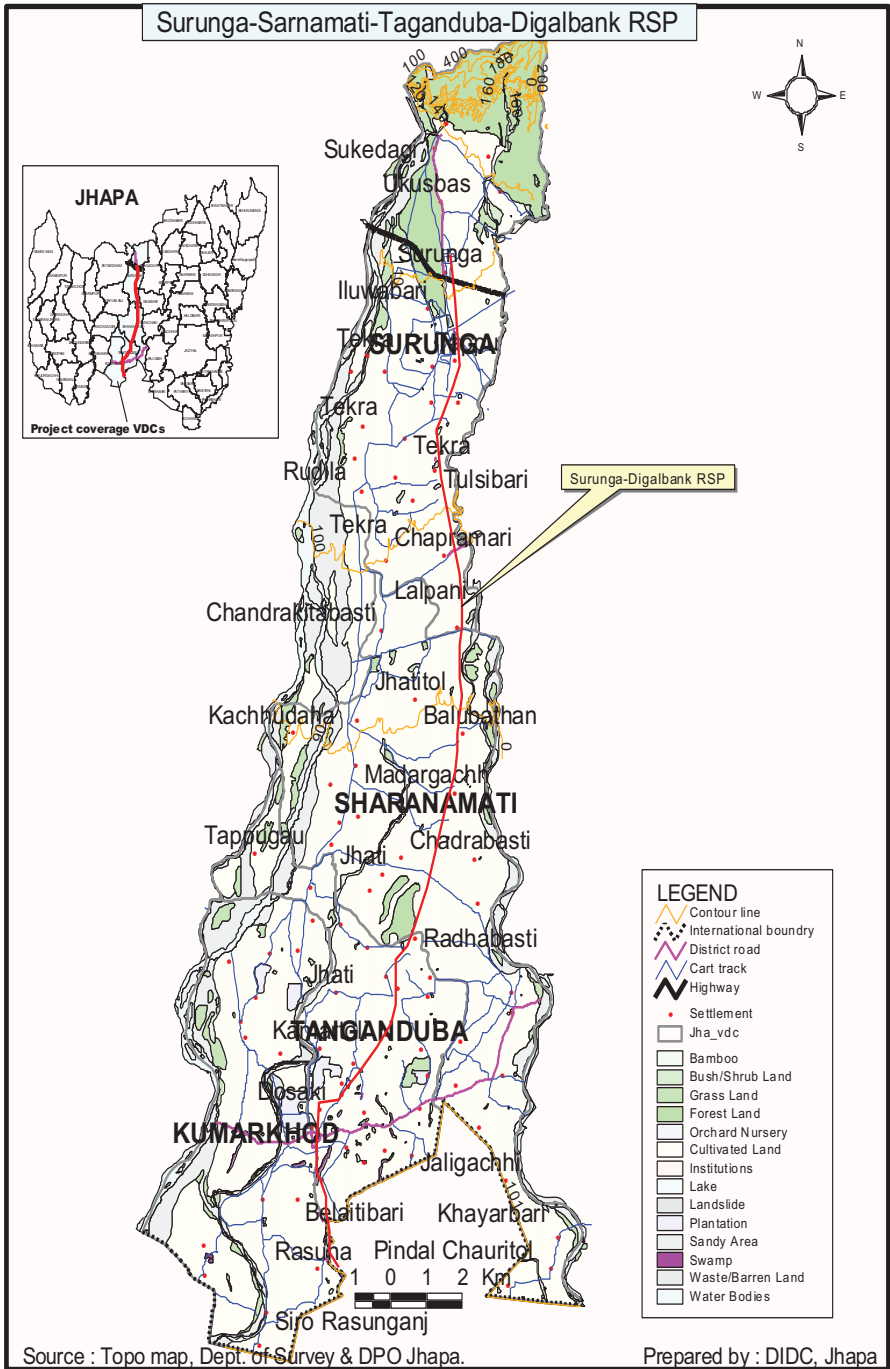
- International Boundry
- Highway
- District road
- Feeder road
- Contour Line



Source : Topo map, Dept. of Survey & DPO, Jhapa

Prepared by : Prakash Chaudhry, DDC, Jhapa

Figure 2. Map of Jhapa district showing Surunga-Saranamati-Tagandubba-Digalbank road sub-project



2.3 OBJECTIVES

The objectives of the proposed IEE study includes to:

- identify the major issues that may arise as a result of proposed works on bio-physical, socio-economic and cultural environment of the project area,
- recommend practical and site specific environmental mitigation and enhancement measures, prepare and implement environmental monitoring plan for the sub-project,
- make sure that IEE is sufficient for the proposed road sub-project, and
- provide information on the general environmental setting of the sub-project area as baseline data.

2.4 RELEVANCY OF THE SUB-PROJECT

The proposed road connects Surunga, Sarnamati, Taganduba and Kumarkhod VDCs of Jhapa district and boarder area Digalbank of Bihar state of India. This road starts from Surunga of Mahendra highway, which is a small market and will be changed to big bazaar because of the road corridor area is highly potential for seasonal and offseasonal vegetable production, cereal and cash crops production. Surunga bazaar is a market centre for several VDCs and business center of the areas. The road alignment passess towards south-west direction. The old district headquarter Jhapa bazaar in Kumarkhod VDC also lies on the road alignment.

An IEE of the proposed road is necessary in order to assess the environmental consequences of the proposed rural road construction activities and suggest appropriate, practical and site specific mitigation and enhancement measures. Since this is a district road, an IEE is a legal requirement according to Environmental Protection Act, 1997 (EPA, 1997) and Environmental Protection Rules, 1997 (EPR, 1997). Preparation of IEE report by concerned District Development Committee (DDC) and approval by the Ministry of Local Development (MLD) according to Nepali legal provision is considered sufficient by the ADB. However, rapid environmental assessment (REA) checklist will also be considered during IEE report preparation based on ADB Environmental Guideline.

3.0 REVIEW OF RELEVANT LAWS, RULES AND GUIDELINES

Government of Nepal has adopted various acts, regulations and guidelines to ensure the integration of development and conservation of environment. The IEE study will be guided by the requirements and provisions of the following acts, rules and guidelines as applicable.

- Environment Protection Act, 1997 and Environment Protection Rules, 1997 (amended 1999)
- Forest Act, 1993 and Forest Rules, 1995
- *Batabaraniya Nirdeśika* (Nepal; MLD), 2057
- National Park and Wildlife Conservation Act, 1973
- Local Self Governance Act, 1999 and Local Self Governance Rules, 2000
- Land Acquisition Act, 1977 and Land Acquisition Rules, 1969
- National Environmental Impact Assessment Guidelines, 1993
- APPROACH for the Development of Agricultural and Rural Roads, 1999 (DoLIDAR)
- RRRSDP Environmental Assessment & Review Procedures (EARP) Guidelines, 2007
- REFERENCE MANUAL for Environmental and Social Aspects of Integrated Road Development, 2003, Department of Road.

- Green Roads in Nepal, Best Practices Report – An Innovative Approach for Rural Infrastructure Development in the Himalayas and Other Mountainous Regions. GTZ, SDC, 1999.
- ADB Environmental Assessment Guidelines, 2003
- Three Years Interim Plan, 2007/08-2009/10

4.0 PROCEDURE TO BE ADOPTED WHILE PREPARING THE REPORT

The IEE approach, methodology and procedure should generally follow the provisions of the EPA and EPR. In this connection, following approach and methodology will be adopted during the IEE report preparation.

4.1 DESK REVIEW

The following steps will be followed during the desk review:

- Collection and review of secondary sources of information from various sources
- Initial interaction and consultation with the local community and district level stakeholders
- Delineation of geographical boundary of the Zone of Influence (ZoI) on the topographical map
- Preparation of project specific checklist

4.2 PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

The role of public consultation and participation is to ensure the quality, comprehensiveness, effectiveness of IEE as well as to ensure that the public view's are adequately taken into consideration in the decision making process. It is done during the preparation of an IEE. In order to ensure the public involvement, the following procedures will be followed during IEE report preparation:

- Publication of notice- A public notice of 15 days will be published in a national level daily newspaper seeking written opinion from concerned VDCs, DDC, school, health posts and related local organizations. A copy of the public notice will be affixed in the above mentioned organizations and deed of enquiry (*muchulka*) will be collected.
- Recommendation letter from concerned VDCs and/or municipality will also be obtained.
- IEE team will also carryout interaction with local communities and related stakeholders and will also collect the public concerns and suggestions.
- Draft IEE report will be sent to concerned VDCs for information disclosure.
- The approved IEE report will be made accessible to interested parties and general public through information center of DDC and websites of ADB, DoLIDAR and RRRSDP.

4.3 FIELD WORK

The IEE team will walk through along the road alignment visiting the significant environmental features in the probable influence corridor, and make necessary measurements, inspect/observe and discuss it with the local stakeholders. The information collection will be made covering physical, biological, socio-economic and cultural aspects of the environment.

5.0 ALTERNATIVES FOR THE IMPLEMENTATION OF THE PROPOSAL

Alternative analysis has been considered as an integral part of IEE study, which involves an alternative ways of achieving the objectives of a proposed sub-project. The aim of alternative analysis is to arrive at a development option, which maximizes the benefits while minimizing the unwanted impacts.

The study team will conduct alternative analysis considering the following issues:

- No action option
- Project alternatives
- Alternative alignment
- Alternative design and construction approach
- Alternative schedule and process
- Alternative resources

6.0 REQUIREMENT OF THE IEE STUDY

This includes time schedule, estimated budget and appropriate manpower (experts) for conducting IEE study.

6.1 TIME SCHEDULE

IEE report will be completed within eight weeks after the approval of ToR. An indicative time frame for conducting IEE is given in the **Table 1** below:

Table 1. Proposed work schedule for conducting IEE study

SN	Activities	Week							
		1	2	3	4	5	6	7	8
1	Orientation training to the team	■							
2	Desk study and review		■						
3	Public notice publication			■					
4	Field visit for survey and consultation with community			■	■				
5	Collection of suggestions and recommendations from stakeholders					■			
6	Analysis and interpretation					■	■		
7	Draft report preparation						■	■	
8	Comments on draft report							■	■
9	Final Report preparation and submission								■
10	Approval of the final report.								

6.2 ESTIMATED BUDGET AND STUDY TEAM

Most commonly an IEE of an infrastructure sub-project in the district need expert inputs from the following sectors:

- Landslides, slope stability, bio-engineering and erosion

- Forestry and wildlife
- Geology
- Road engineering
- Social, economic and culture.

The IEE will be carried out and prepared by DIST Environmental Specialist, with support from DIST team Jhapa, Environmental Specialist from CISC and District Project Office (DPO). CISC Environmental Specialist will provide necessary training to DIST for the environmental assessment procedures. The activity of IEE preparation will be supervised by DPO office. Since, the IEE report will be prepared by the DIST team with the support of the CISC, no separate budget and manpower is required. However, specific subject matter experts will be hired for short term basis if needed.

7.0 ENVIRONMENTAL BASELINE

This will describe environmental setting of the project location and surrounding areas and will contain information on relevant bio-physical, socio-economic and cultural factors and features. The updated, processed and analyzed information and data on each of the relevant bio-physical, socio-economic and cultural aspects will be presented in the IEE study. As far as possible, other environmental features such as, sensitive area, population and settlements, forests, geological features will be shown in the map.

8.0 ANALYSIS AND INTERPRETATION

Both secondary and primary information and data collected will be analyzed and interpreted. The bio-physical information will be tabulated to the extent possible. The socio-economic, cultural and religious information will be cross checked and analyzed.

9.0 IDENTIFICATION, PREDICTION AND EVALUATION OF IMPACT

The identification and prediction of impacts shall be carried out by considering the proposed project actions/activities in terms of rehabilitation and construction of the road project. The impacts of the activities shall be on bio-physical, socio-economic and cultural resources in a defined zone of influence (i.e.1.5 hours walking distance from the road alignment or 5 km distance).

The impacts shall be classified in terms of extent (site specific, local and regional), magnitude (low, medium and high) and duration (short term, medium term and long term) as well as reversible, irreversible, severe, moderate and significant. The likely impact shall be assessed covering both adverse and beneficial ones. The methodology adopted for impact identification and prediction will be checklists and matrix method. The likely impacts of the proposed road construction as well as operation are described in the following sections.

9.1 BENEFICIAL IMPACTS

Beneficial impacts due to the construction of the road shall be assessed by the study team in terms of impacts on physical, biological, socioeconomic and cultural systems of the project area. The impacts shall also be assessed in the category of extent, duration and magnitude. Based on the identification and prediction of the impacts, the suitable enhance measures to

maximize the project benefits shall be explored and designed. The largest beneficial impacts will be on the physical and socio-economic environment as given below:

9.1.1 Construction Stage

- Employment Generation and Increase in Income
- Skill Enhancement
- Enterprise Development and Business Promotion
- Community Empowerment and Ownership

9.1.2 Operation Stage

- Access to Inputs and Services
- Development of Market centers
- Appreciation of Land Value
- Increased Crop Productivity and Sale of Farm Products
- Enhancement of Community Development Services
- Promotion of Tourism Activity
- Women and Indigenous People Empowerment

9.2 ADVERSE IMPACTS

The likely adverse impacts during construction and subsequent operation and maintenance in terms of physical, biological, socioeconomic, cultural and religious aspects due to project actions shall be identified, predicted and evaluated. Based on the identified impacts, appropriate mitigation measures shall be recommended.

9.2.1 Construction Stage - Though the sub-projects will apply LEP approach to the extent possible during the implementation, it may not be possible to avoid all likely impacts; the study shall take into account the following issues:

Physical environment

The issues and concerns generally related to physical environment typically include, but not necessarily limited to:

- Change in Land Use
- Spoil Disposal
- Slope Instability
- Water Management works i.e. springs, streams, rain water (Drainage and Cross Drainage Works)
- Air Dust, Noise and Water Pollution
- Quarrying and Borrow Pit
- Decline in Aesthetic Value

Biological environment

The issues and concerns generally related to biological environment typically include, but not necessarily limited to:

- Loss or degradation of forests and vegetation.
- Impact on wildlife including birds due to loss or degradation of habitat, increased hunting and other form of human pressure.
- Impacts on flora and fauna (as listed in CITES and IUCN Red data book)

Socio-economic and cultural environment

The issues and concerns generally related to socio-economic and cultural environment typically include, but not necessarily limited to;

- Loss or degradation of farm land and productivity
- Loss or degradation of private properties such as houses, farm sheds, and other structures, crops and fodder/ fruit trees
- Impact on community infrastructure such as irrigation, water supply, schools, health post, trail and trail bridges
- Impacts on cultural, religious and archeological sites
- Impacts on health and safety matters.

9.2.2 Operation stage - The following issues will be taken into account during operation and maintenance stage:

Physical environment

- Road slope stability and management
- Impact due to air, noise and water pollution

Biological environment

- Depletion of forest resources
- Disturbance to wild life and illegal hunting

Socio-economic and cultural environment

- New settlement along the road alignment
- Change in social behaviour
- Impact on livelihood and economic opportunities
- Road safety measures

10.0 BENEFIT AUGUMENTATION/MITIGATION MEASURES

The IEE study will propose site-specific benefit augumentatin and mitigation measures to optimize the benefits expected from the sub-project and minimize/mitigate avoid or control of proposal's adverse impacts. The benefit augumentation and mitigation measures will be selected based upon appropriateness and cost analysis and these will be suggested for pre-construction, construction and post construction phase of the project. Mitigation measures will be proposed for the impacts on physical, biological, socio-economic and cultural environment.

11.0 ENVIRONMENTAL MANAGEMENT PLAN

The study will ensure the implementation and monitoring of mitigation measures for minimizing adverse impacts and maximizing the beneficial impacts. This plan will also identify the key environmental monitoring indicators with respect to activities, methods and responsibilities in order to monitor the environmental condition and adoption of suitable mitigation measures.

12.0 IEE report format

This format will be in line with provision made in the Schedule 5 of EPR, 1997 and should be adapted to project specific situation. The IEE report will contain the following sections:

- i. Cover page with name of the proposal and proponent and address**
- ii. Table of content**

iii. List of Abbreviation (acronyms)

iv. Executive Summary that includes:

- Background
- Project Proponent
- Objective
- Relevancy of the Proposal
- Project Description
- Existing Condition
- Identification of Impacts and Benefit Augmentation/Mitigation Measures
- Environmental Management Plan
- Conclusions and recommendations

v. Salient Features of the Project

vi. Introduction: This section should describe the project in simple terms and concisely, without missing relevant points but avoiding unnecessary details. The project description should provide following information:

1. Background
2. Relevancy of the proposal
 - Objectives
 - Methodology adopted
3. Name and Address of the Proponent
4. Description of the Sub-project
5. Construction Approach
6. Proposed Schedule for Implementation of Sub-project

vii. Public Consultation and Information Disclosure

viii. Review of Relevant Acts, Regulations and Guidelines: During the study relevant policies, legislations and guidelines should be reviewed and their salient features should be mentioned in this section. Similarly related institutions should be consulted.

ix. Existing Environmental condition: Baseline information on the existing physical, biological as well as socio-economic and cultural resources of the proposed sub-projects is described here. Environmental features such as sensitive areas, population and settlements, forests should be shown in a map

x. Project Alternatives: This section summarizes the alternatives by environmental comparison. This may include the following sub-headings.

- a. Project alternative
- b. Alternative routes
- c. Alternative design and construction approach
- d. Alternative schedule and process
- e. Alternate resources
- f. Any other alternatives

xi. Identification of Impacts and Benefit Augmentation/Mitigation Measures: This section contains the process, findings and conclusions of analysis and interpretations. The impacts are predicted in terms of their magnitude (minor, moderate and high), extent (site specific, local and regional) and duration (short, medium and long term) and appropriate benefit enhancement and mitigation measures are suggested as following:

- a) **Physical Impacts:** such as land, air, water, noise, infrastructure impacts and other factors
- b) **Biological Impacts:** such as flora, and fauna, population, and natural habitats and ecosystems

c) **Socio-economic-cultural impacts:** such as agricultural land, human health, social, cultural and religious values, implications of physical and biological impacts and other relevant socio-cultural-economic impacts.

This section also summarizes the recommended mitigation measures including basis for selection and cost if possible.

xii. Environmental Management Plan: This section summarizes the recommended implementation of IEE, monitoring parameters/indicators, activities, methods and responsibilities.

xiii. Conclusion and Recommendations: This section should clearly indicate whether IEE report is sufficient or further assessment is needed. Likewise, it should also be recommended that what aspects should be covered if further environmental assessment is needed.

xiv. Miscellaneous: Reference materials should be mentioned here if used during IEE report preparation in standard format.

xv. Annex

- ToR of IEE
- Rapid Environmental Assessment (REA) Checklist
- Abstract of cost
- RRRSDP environmental checklist
- Public notice
- Deed of enquiry (*muchulka*)
- Name of the organizations
- List of person contacted
- Meeting minutes of community consultation
- Recommendation letters from municipality and VDC's
- Existing condition
 - a. Distribution of household by major occupation
 - b. Summary of public services and infrastructures according to settlement
 - c. Land holding pattern of settlements within ZoI
 - d. Number of households belonging to different food security category
- List of trees
- Maximization of slope cutting and preservation of vegetation cover
- Photographs

Annex II: Rapid Environmental Assessment (REA) Checklist

Rapid Environmental Assessment (REA) Checklist

Instructions:

- This checklist is to be prepared to support the environmental classification of a project. It is to be attached to the environmental categorization form that is to be prepared and submitted to the Chief Compliance Officer of the Regional and Sustainable Development Department.
- This checklist is to be completed with the assistance of an Environment Specialist in a Regional Department.
- This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB checklists and handbooks on (i) involuntary resettlement, (ii) indigenous peoples planning, (iii) poverty reduction, (iv) participation, and (v) gender and development.
- Answer the questions assuming the “without mitigation” case. The purpose is to identify potential impacts. Use the “remarks” section to discuss any anticipated mitigation measures.

Country/Project Title: **Nepal/ Rural Reconstruction and Rehabilitation Sector Development Program (RRRSDP)**

Sub Project: **Surunga-Sharnamati-Taganduwa-Digalbank Road Sub Project**

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Silting			
Is the Project area adjacent to or within any of the following Environmentally sensitive areas?			
Cultural heritage site		✓	
Protected Area		✓	
Wetland		✓	
Mangrove		✓	
Estuarine		✓	
Buffer zone of protected area		✓	
Special area for protecting biodiversity		✓	
B. Potential Environmental Impacts			
Will the Project cause...			
Encroachment on historical/cultural areas; disfiguration of landscape by road embankments, Cuts, fills, and quarries?		✓	
Encroachment on precious ecology (e.g. sensitive or protected areas)?		✓	
alteration of surface water hydrology of waterways crossed by roads, resulting in increased sediment in streams affected by increased soil erosion at construction site?		✓	
Deterioration of surface water quality due to silt runoff and sanitary wastes from worker- aced camps and chemicals used in construction?		✓	
Increased local air pollution due to rock crushing, cutting and filling works, and chemicals from asphalt processing?	✓		
Noise and vibration due to blasting and other civil works?	✓		
dislocation or involuntary resettlement of people		✓	
other social concerns relating to inconveniences in living conditions in the project areas that may trigger cases of upper respiratory problems and stress?		✓	
poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from workers to local populations?		✓	
Creation of temporary breeding habitats for mosquito vectors of disease?		✓	
Dislocation and compulsory resettlement of people living in right-of-way?		✓	
Accident risks associated with increased vehicular traffic, leading to accidental spills of toxic materials and loss of life?		✓	
Increased noise and air pollution resulting from traffic volume?		✓	
Increased risk of water pollution from oil, grease and fuel spills, and other materials from vehicles using the road?		✓	

Annex III: Abstract of Cost

Name of Sub-Project: Surunga-Sharnamati-Tagandubba-Digalbank Rural Road Sub-Project

District: Jhapa

Cost Estimate on Engineering Basis

S.No	Description of items	Unit	Quantity	Unit Rate (NRs)	Amount (NRs)	Remarks
1	Road Foundation Preparation					
1.1	Embankment filling by River Bed Material(RBM)	cum	14832	880.67	13062097.44	
1.2	Filling by road side soil including excavating the soil and lead upto 50m (for filling portion)	cum	7416	131.1	972237.60	
1.3	Filling by road side soil including excavating the soil and lead upto 50m(for non filling portion)	cum	11538	131.1	1512631.80	
2	Road Pavement Works					
2.1	Sub-base preparation (15 cm)	cum	9481.5	1938.56	18380456.64	
2.2	Base course of (10 cm)	cum	6321	3693.34	23345602.14	
2.3	20 mm wearing course of Bituminous Macadam(premix carpeting)	sqm	63210	182.57	11540249.70	
2.4	Tack coat when the application is upon the existing Water Bound Macadam	sqm	63210	84.01	5310272.10	
2.5	Surface dressing on existing bituminous road surface	sqm	9330	163.88	1529000.40	
3	Retaining and River Training Work					
3.1	Gabion wall	cum	200	3381	676200.00	
4	Cross Drainage Structure					
4.1	Hume pipe culvert all complete(60cm)	no	18	100000	1800000.00	
5	Side Drain (Brick masonry)	run. m	700	1000	700000.00	
6	Bioengineering Works (and Purchasing and fixing of bamboo tree guards with trees)	no	1000	500	500000.00	
7	RBG Insurance				400,000.00	
8	Occupational Health and Safety				500,000.00	
				Sub-total NRs	80228748.00	
				VAT@13% NRs	10429737.00	
				Grand total NRs	90658485.00	
				Cost per km NRs	3794830.00	

1.5	Junelo										
1.6	Phaper										
1.7	Others (list)										
2.0	CASH CROPS										
2.1	Oil Seeds										
2.2	Beans/Dal										
2.3	Tobacco										
2.4	Potato										
2.5	Vegetables										
2.6	Fruits										
2.7	Tea/Coffee										
2.8	Amliso										
2.9	Sericulture										
2.10	Others (list)										
3.0	LIVESTOCK & FISHERIES										
3.1	Cattle (cows & buffaloes)										
3.2	Horses, Mules										
3.3	Yak										
3.4	Goat										
3.5	Sheep										
3.6	Rabbit										
3.7	Pig										
3.8	Fisheries										
3.9	Poultry										
3.10	Bee-keeping										
3.11	Others										

A. _____ B. _____ C. _____ D. _____ E. _____
 F. _____ G. _____ H. _____ I. _____

7. Migration for employment

(a) No. of HHs from where at least one person (may be HH head) is away from home for more than 6 months.

Settlement (No. of HH)									
A	B	C	D	E	F	G	H	I	J

(b) Seasonal migration in search of work.

Month	No. of Total HH	Destination	Purpose

8. Dominant off-farm occupation in the settlement in descending order

B. DEVELOPMENT POTENTIAL ACCORDING TO SETTLEMENT

B.1. Areas which have significant potential for development, for instance, high agricultural production, tourism development, local mines, etc. (indicate these areas in map/sketch).

S. N.	Name of Area	Description of Development Potential

B.2. Scope of the proposed linkage in view of promoting socio-economic development (communication, agricultural production, education and health).

S. No.	Sectors to get direct benefit	Describe how it will benefit

B. Historic and Cultural Resources Within The Settlement

Type of Resource	Name/specification	Affecting activities	Location from project

Annex V: Public Notice

१० राजधानी
विहीवार, २९ असोज, २०७६

अर्थतन्त्र

प्रारम्भिक वातावरणीय परिक्षण (IEE) सम्बन्धी राय सुभाबका लागी सार्वजनिक सूचना

सूचना प्रकाशित मिति : २०६६/६/२९

ग्रामिण पुनर्निर्माण तथा पुनस्थापना आयोजना (RRRSDP) अन्तर्गत एशियाली विकास बैंक (ADB) अन्तर्राष्ट्रिय विकास विभाग (DFID) स्वीस सरकार विकास नियोगको (SDC) अनुदान सहयोग अर्थात् ङ्कको (OFID) कृषि सहयोग तथा नेपाल सरकार जिल्ला विकास समिति र वाजप्राडी समितिको लगानीमा निर्माण गर्ने प्रस्ताव गरिएको सुरुवा-सर्नामती-टापनढुव्या-डिगल बैक सडक, साधुटार-मधनपुर-लक्ष्मीपुर-घेरावारी सडक, दुधे-शिवगञ्ज-महाभारा-कुन्जवारी-कोरोवारी-विरपुर-बगाहचौधरी सडक उपआयोजनाहरूको प्रारम्भिक वातावरणीय परीक्षण (IEE) प्रतिवेदन कार्यान्वयन गर्ने बिलसिलामा वातावरण संरक्षण नियमावली २०५४ (पहिलो संशोधन २०५५ समेत) को नियम २९(२) अनुसार यो सूचना प्रकाशित गरिएको छ ।

प्रस्तावको नाम:- जिल्ला विकास समितिको कार्यालय, जिल्ला प्राविधिक कार्यालय, जिल्ला आयोजना कार्यालय भन्दा प्रस्तावित सडक उपआयोजनाहरूको विवरण:-

क्र.सं.	सडकको नाम	प्रभाव पार्ने गा.वि.स. इला	प्रस्तावको विवरण	लम्बाई
१.	सुरुवा-सर्नामती-टापनढुव्या-डिगल बैक सडक,	सुरुवा, सर्नामती, टापनढुव्या, सुमरखोद	यो उपआयोजना सुरुवा बजार देखि सुरुवाई बजारसम्म टापनढुव्या, सुमरखोद हुने भागको सीमाना डिगल बैक सम्म गई जना हुन्छ ।	२२.५३ कि.मि
२.	साधुटार-मधनपुर-लक्ष्मीपुर-घेरावारी सडक	सुनुवावारी, अर्जुनधारा, घेलाढुव्या, इर्लावारी, बकचकी, राजगड न घेरावारी	यो उपआयोजना सुनुवावारी गा.वि.स. को साधुटार बाट सुरु गई मदनपुर, लक्ष्मीपुर हुने घेरावारी गा.वि.स. भन्दा सम्म गई जना हुन्छ ।	६३.६६ कि.मि
३.	दुधे-शिवगञ्ज-महाभारा-कुन्जवारी-कोरोवारी-विरपुर-बगाहचौधरी सडक	सतासीधाम, शिवगञ्ज, पाथगाडी, महाभारा, कोरोवारी	यो उपआयोजना सतासीधाम को दुधे बजार बाट सुरु गई शिवगञ्ज बजार, पाथगाडी, कुन्जवारी, तुलापन हुने कोरोवारी गा.वि.स. को बगाह चौधरी सडक सम्म गई जना हुन्छ ।	३१.२९ कि.मि

उक्त प्रस्तावको कार्यान्वयन बाट वातावरणमा पर्ने सक्ने प्रभावको बारेमा सम्बन्धित गा.वि.स., विद्यालय, स्वास्थ्य चौकी, वन उपभोक्ता समिति तथा अन्य सरोकार जना व्यक्ति वा संस्थाले यो सूचना प्रकाशित भएको मितिले १५ (पन्ध्र) दिन भित्र निम्न ठेगानामा आफ्नो राय सुझाव पठाई सहयोग गरिदिनुहुन अनुरोध गरिन्छ ।

राय सुझाव पठाउने ठेगाना:-

जिल्ला विकास समितिको कार्यालय, भन्दा टेलिफोन नं. ०२३-४५५१६५, फ्याक्स नं. ०२३-४५६२९४	जिल्ला प्राविधिक कार्यालय/जिल्ला आयोजना कार्यालय, भन्दा टेलिफोन नं. ०२३-४५६२२९, ४५६२७७ फ्याक्स नं. ०२३-४५६२७३
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गाउँ विकास समितिको कार्यालय
OFFICE OF VILLAGE DEVELOPMENT COMMITTEE
 सुरुवा, सर्लाही (नेपाल)
 SURUGA, SARLAHI (NEPAL)

स.सं./Dir. No. ०९२/९३
 स.सं./Dir. No. ६५२

दि. २०६२/०७/१३

विषय / SUB: सुचना सँगै स्याजतकरी सडाईको बारे।
 -सि जिल्ला प्राथमिक विद्यालय
 आशुषी पुनर्निर्माण तथा पुनर्स्थापना अर्थोपजन
 सिल्ला अर्थोपजन कार्यालय, मधुपुर, सुरुवा

प्रस्तुत विषयमा तल कुराहरुको तालिका नं. ३० मिति २०६२/०७/१३ को प्रारम्भ पत्रमा प्रारम्भिक जानकारीको प्रारम्भ (L.R.C) अनुसार तल कुराहरुको कार्यालयमा स.सं. १ प्रारम्भ गर्ने- यथा मिति कार्यालयको सुचना जारीमा मिति २०६२/०७/१३ मा सुरुवा सडाईको बारेमा सुचना जारी गर्ने।

(Signature)
 २०६२/०७/१३
 गाउँ विकास समिति
 स.सं. १ सुरुवा

गाउँ विकास समितिको कार्यालय
Office of Village Development Committee
 सुरुवा, सर्लाही (नेपाल)
 Surugahi, Sarlahi (Nepal)

स.सं./Dir. No. १३५
 स.सं./Dir. No. १३५

दि. २०६२/०७/१३

विषय/Subject: सुचना सँगै स्याजतकरी सडाईको बारे।
सि/Share: जिल्ला प्राथमिक विद्यालय
 आशुषी पुनर्निर्माण तथा पुनर्स्थापना अर्थोपजन
 सिल्ला अर्थोपजन कार्यालय, सुरुवा

उपरोक्त विषयमा तल कुराहरुको तालिका नं. ३० मिति २०६२/०७/१३ को प्रारम्भ पत्रमा प्रारम्भिक जानकारीको प्रारम्भ (L.R.C) अनुसार तल कुराहरुको कार्यालयमा स.सं. १ प्रारम्भ गर्ने- यथा मिति कार्यालयको सुचना जारीमा मिति २०६२/०७/१३ मा सुरुवा सडाईको बारेमा सुचना जारी गर्ने।

(Signature)
 २०६२/०७/१३

श्री स्वस्थानी प्राथमिक विद्यालय
 श्री स्वस्थानी प्राथमिक विद्यालय

स.सं. २०६२/०६/६
 स.सं. २०६२/०६/१९

विषय: श्रमोपजन सुरुवा गर्ने।
 जिल्ला: सर्लाही जिल्ला मधुपुर, सुरुवा
 विषय: सुचना सँगै स्याजतकरी सडाई

उपरोक्त विषयमा मिति २०६२/०६/१९-पत्र ३०को प्रारम्भ पत्रमा प्रारम्भिक जानकारीको प्रारम्भ (L.R.C) अनुसार तल कुराहरुको कार्यालयमा स.सं. १ प्रारम्भ गर्ने- यथा मिति कार्यालयको सुचना जारीमा मिति २०६२/०६/१९ मा सुरुवा सडाईको बारेमा सुचना जारी गर्ने।

(Signature)
 २०६२/०६/१९
 श्री स्वस्थानी प्राथमिक विद्यालय

Annex VII: Name of the Organizations

Name of the Organizations (notice pasted and deed of inquiry obtained)

SN	Name or Organization	Address
1	District Project Office	Bhadrapur, Jhapa
2	District Development Committee	Bhadrapur
3	Office of Village Development Committee, Taganduba	Taganduba
4	Office of Village Development Committee, Kumarkhod	Kumarkhod
5	Office of Village Development Committee, Surunga	Surunga
6.	Office of Village Development Committee, Sarnamati	Sarnamati
7	District Forest Office, Jhapa	Jhapa
8.	Shri Shosthani Primary School, Taganduba	Taganduba

Source: Field Survey, November, 2009

Annex VIII: List of persons consulted

SN	Name	Organization	Remarks
1	Bupal Bd Niroula	DDC	LDO
2	Hemlal Aryal	DFO	DFO
3	Murlihar Mishra	DADO	CADO
4	Lekhnath Pokhrel	DAO	Ass CDO
5	Prem Dahal	Surunga	memberDDC
6	Dewman Thebe	Kumarkhod VDC	Ex Chairman
7	Bhatai Chaudhary	Survey Office	Amin
8	Shamvu Karki	DTO	Chief DTO
9	Meghraj Pokhrel	NTC	
10	Tulasi Pd Bandari	Surunga	VDC Secretary
11	Yamnath Sedai	Surunga	Users
12	Lila Upreti	Surunga	Users
13	Balkrishna Upreti	Surunga	Users
14	Devi Pd Kharel	Surunga	Users
15	Teknath Ghimire	Sarnamati	VDC Secretary
16	Bhakti Pd Baniya	Sarnamati	Users
17	Dhanpati Rijal	Sarnamati	Users
18	Tej Pd Bhattra	Sarnamati	Users
19	Parbati Bhattra	Sarnamati	Users
20	Durga Pd Dhakal	Taganduwa	VDC Secretary
21	Pusparaj Joshi	Taganduwa	Users
22	Swet Bd Shrestha	Taganduwa	Users
23	Rohit Rajbanshi	Taganduwa	Users
24	Nagendra Rajbanshi	Taganduwa	Users
25	Ram Pd Ghimire	Kumarkhod	VDC Secretary
26	Jiban Majhi	Kumarkhod	Users
27	Utam K. Subedi	Kumarkhod	Users
28	Gobinda Agrawal	Kumarkhod	Users
29	Hari Pd Ganesh	Kumarkhod	Users
30	Champadevi Koch	Kumarkhod	Users

Annex X: Recommendation Letters from VDCs

नेपाल सरकार
स्थानीय विकास मन्त्रालय

गाउँ विकास समितिको कार्यालय
राजधानी, काठमाडौं (नेपाल)

प.सं. :
स.सं. :
मिति: २०६६/९/२५

विषय : प्रतिक्रिया पठाइएको सम्बन्धमा ।

श्री ग्रामिण पुर्ननिर्माण तथा पुनस्थापना आयोजना कार्यालय
काया ।

उपरोक्त सम्बन्धमा तहाँ कार्यालयबाट तयार भएको सुदृढ डिगलरवैक सटकको प्रारम्भिक बातावरणीय परीक्षण सम्बन्धी प्रतिवेदन गाविसको सचिव सदस्यहरु लगायत नागरिक समाजको बैठकमा छलफल गराई उक्त आयोजना कार्यालयबाट कुनै पनि बातावरणीय प्रतिकूल प्रभाव नपर्ने देखिएको पाइएको तथा यस कार्यालयमा टाँसिएको बातावरणीय प्रभाव सम्बन्धी सूचना अनुसार पनि कुनै पनि व्यक्ति र संस्थाको प्रतिकूल प्रभाव सम्बन्धी उजुरी नपर्ने देखिएकोले उक्त आयोजना कार्यालयको लागि सिफारिस साथ अनुरोध गर्दछु ।

[Signature]
स. वि. नं. १०७७७७७७

नेपाल सरकार
स्थानीय विकास मन्त्रालय

गाउँ विकास समितिको कार्यालय
OFFICE OF VILLAGE DEVELOPMENT COMMITTEE

प.सं. :
स.सं. :
मिति: २०६६/९/२५

विषय : प्रतिक्रिया पठाइएको सम्बन्धमा ।

श्री ग्रामिण पुर्ननिर्माण तथा पुनस्थापना आयोजना कार्यालय
काया ।

उपरोक्त सम्बन्धमा तहाँ कार्यालयबाट तयार भएको सुदृढ डिगलरवैक सटकको प्रारम्भिक बातावरणीय परीक्षण सम्बन्धी प्रतिवेदन गाविसको सचिव सदस्यहरु लगायत नागरिक समाजको बैठकमा छलफल गराई उक्त आयोजना कार्यालयबाट कुनै पनि बातावरणीय प्रतिकूल प्रभाव नपर्ने देखिएको पाइएको तथा यस कार्यालयमा टाँसिएको बातावरणीय प्रभाव सम्बन्धी सूचना अनुसार पनि कुनै पनि व्यक्ति र संस्थाको प्रतिकूल प्रभाव सम्बन्धी उजुरी नपर्ने देखिएकोले उक्त आयोजना कार्यालयको लागि सिफारिस साथ अनुरोध गर्दछु ।

[Signature]
स. वि. नं. १०७७७७७७

नेपाल सरकार
स्थानीय विकास मन्त्रालय

गाउँ विकास समितिको कार्यालय
Office of the Village Development Committee

प.सं. / L.No.
स.सं. / Ref. No.
राजधानी, काठमाडौं (नेपाल)
Teghadubhi, Nepal (Nepal)

मिति / Date: २०६६/९/२५

विषय/Subject:- प्रतिक्रिया पठाइएको सम्बन्धमा ।

श्री ग्रामिण पुर्ननिर्माण तथा पुनस्थापना आयोजना कार्यालय
काया ।

उपरोक्त सम्बन्धमा तहाँ कार्यालयबाट तयार भएको सुदृढ डिगलरवैक सटकको प्रारम्भिक बातावरणीय परीक्षण सम्बन्धी प्रतिवेदन गाविसको सचिव सदस्यहरु लगायत नागरिक समाजको बैठकमा छलफल गराई उक्त आयोजना कार्यालयबाट कुनै पनि बातावरणीय प्रतिकूल प्रभाव नपर्ने देखिएको पाइएको तथा यस कार्यालयमा टाँसिएको बातावरणीय प्रभाव सम्बन्धी सूचना अनुसार पनि कुनै पनि व्यक्ति र संस्थाको प्रतिकूल प्रभाव सम्बन्धी उजुरी नपर्ने देखिएकोले उक्त आयोजना कार्यालयको लागि सिफारिस साथ अनुरोध गर्दछु ।

[Signature]
स. वि. नं. १०७७७७७७

नेपाल सरकार
स्थानीय विकास मन्त्रालय

गाउँ विकास समितिको कार्यालय
OFFICE OF VILLAGE DEVELOPMENT COMMITTEE

प.सं. :
स.सं. :
मिति: २०६६/९/२५

विषय : प्रतिक्रिया पठाइएको सम्बन्धमा ।

श्री ग्रामिण पुर्ननिर्माण तथा पुनस्थापना आयोजना कार्यालय
काया ।

उपरोक्त सम्बन्धमा तहाँ कार्यालयबाट तयार भएको सुदृढ डिगलरवैक सटकको प्रारम्भिक बातावरणीय परीक्षण सम्बन्धी प्रतिवेदन गाविसको सचिव सदस्यहरु लगायत नागरिक समाजको बैठकमा छलफल गराई उक्त आयोजना कार्यालयबाट कुनै पनि बातावरणीय प्रतिकूल प्रभाव नपर्ने देखिएको पाइएको तथा यस कार्यालयमा टाँसिएको बातावरणीय प्रभाव सम्बन्धी सूचना अनुसार पनि कुनै पनि व्यक्ति र संस्थाको प्रतिकूल प्रभाव सम्बन्धी उजुरी नपर्ने देखिएकोले उक्त आयोजना कार्यालयको लागि सिफारिस साथ अनुरोध गर्दछु ।

[Signature]
स. वि. नं. १०७७७७७७

Annex XI

XI.a: Summary of public services & infrastructures

XI b: Land holding pattern of settlements within Zol

XI c. Number of households belonging to different food security category

XI d. Distribution of households by major occupation

Annex XI.a: Summary of public services & infrastructures

VDC Name	SCHOOL				HEALTH POST	AGRICULTURE /VETERINARY OFFICE	POST OFFICE	BIOGAS	TELEPHONE FACILITY	FOREST OFFICE	SECURITY OFFICE	SHOPS	COOPERATIVES	FURNITURE	RICE MILL
	PRIMARY	LOWER SECONDARY	SECONDARY	HIGHER SECONDARY											
Surunga	6	1	3	1	PHP	2	1	924	1	1	1	120	6	1	7
Sarnamati	4	1	1	0	SHP	0	1	266	1	0	1	98	2	0	17
Taganduwa	2	0	1	0	SHP	0	1	50	1	0	0	92	1	0	6
Kumarkhod	6	0	0	0	HP	2	1	48	1	0	1	176	1	3	5

PHP: Public Health Centre

SHP: Sub Health Post

HP: Health Post

Annec XI b: Land holding pattern of settlements within Zol

S. N.	Influenced VDCs	Ownership /land holdings						Total
		Distribution of HHs						
		Less than one ropani	1-5 ropani	5-10 ropani	10-20 ropani	20-50 ropani	More than 50 ropani	
1	Surunga	280	167	127	205	245	54	1078
2	Sarnamati	158	85	95	208	196	36	778
3	Taghandubba	337	198	61	96	139	72	903
4	Kumarkhod	148	50	21	31	36	42	328
Total		923	500	304	540	616	204	3087
Percentage		29.9	16.2	9.85	17.5	19.95	6.6	100

Annex XI c: Number of households belonging to different food security category

Sn	Influenced VDCs	Distribution of HHs by food sufficiency level				Total HHs
		0-3 months	3-6 months	6-9 months	9-12 months	
1	Surunga	469	134	100	375	1078
2	Sarnamati	251	89	136	302	778
3	Taghandubba	482	99	73	249	903
4	Kumarkhod	197	21	22	88	328
Total		1399	343	331	1014	3087
Percentage		45.32	11.11	10.72	32.85	100

Annex XI d: Distribution of households by major occupation

S.N	VDCs	Agriculture labor	Employee	Business	Agriculture and Livestock raising	Abroad Labor	Total HH
1	Surunga	78	108	117	675	100	1078
2	Sarnamati	73	72	87	425	121	778
3	Tagandubba	158	52	83	454	156	903
4	Kumarkhod	45	20	59	191	13	328
Total		354	252	346	1745	390	3087
Percentage		11.46744	8.1632653	11.20829	56.52737	12.63362	100

Annex XII: Detail Structure

Chainage		Items	Existing	Proposed	Remarks
From	To				
0+000	0+246		Gravelled		Black starts at 0+246
0+000	0+760	Drain		A Type	Both side
0+246	1+083	Blacktopped(BT)	Pot holes	Patching	2%
1+083	3+084	BT			Blacktop ends at 3+084
2+168	2+577	Slab culvert(SC)	6*1.6m		
2+577	2+697	Pipe culvert (PC)		60Φ	2 cell
2+697	2+707	PC	90 Φ*7m		
2+707	3+084	PC	40 Φ*7.4m		
3+084	3+155	PC	60 Φ*6m		
3+155	3+158	PC	60 Φ*6m		
3+158	5+503	PC	90 Φ*7.7m		
5+503	5+582	PC	90 Φ*7.5m		
5+582	5+662	PC	90 Φ*5.5m		
5+662	5+744	SC	3.6Φ*4.6m		
5+744	5+928	PC	90 Φ*7.5m		
5+977	6+220	Filling		required	
6+817	6+855	PC		90 Φ	
6+855	7+100	Filling			
6+870	7+788	PC		60 Φ	
7+788	8+101	Filling			
7+980	8+080	PC		90 Φ	
8+080	8+403	PC	60 Φ* 6m		
8+403	8+780	Gabion	1*1		Left
8+748	8+780	PC	90 Φ	Parapet maintenance	
10+075	11+085	PC	90 Φ*6.7m	„	
11+085	11+175	PC	90 Φ*7.7m		
11+175	11+535	PC	90 Φ*7.6m (2cell)		Replaced by PC & maintenance
11+535	11+938	Drain	90Φ*7m	Type A	
11+938	12+409	PC	60Φ*7.6m		
12+409	12+827	PC	40Φ*7.6m		
12+883	12+894	PC		60 Φ	
12+894	13+692	PC	60Φ*9.7m		Double Cell
13+692	13+720	PC	40Φ*5.4m		
13+720	13+860	Filling			
13+860	14+001	PC	120 Φ*9.4m		Double Cell
14+001	14+926	PC	90 Φ*7.25m		Parapet maintenance
14+926	15+445	PC		60 Φ	
16+015	16+420	Drain		Type A	Both side
17+585	17+776	Filling			

17+776	17+800	PC	60 Φ *7.5m		Replaced by 4 no PC
17+800	17+830	PC	90 Φ		
17+830	17+856	PC	90 Φ		
17+856	17+875	PC	90 Φ		
17+875	17+904	PC	90 Φ		
17+904	18+103	PC	90 Φ *7.5m		Remove and new construction
18+103	18+117	PC	75 Φ *7.5m	Parapet maintenance	
18+117	19+512	PC	90 Φ *7.5m	„	
19+512	19+755	PC	90 Φ *4.2 m	SC 6*6m	Replaced
19+755	20+220	Drain		Both side	Jhapa bazaar
21+143	21+383	Gabion wall		1*1*1	Both side
21+220	21+250	PC	110 Φ *5m		
21+250	21+374	SC		6*7.5	
21+374	21+398	Retaining stone masonry	1.7*0.45m		
22+678	22+795	PC		90 Φ	
22+795		PC	Hume pipe 90 Φ	90 Φ	New PC construction
23+670		PC	PC60 Φ *5.4m	60 Φ	New Pc construction

Annex XIII: Photograph



Starting point at Surunga Bazaar



Jhapa market at Kumarkhod VDC



Irrigation crossing at Ch. 5+744



End Point at Digal bank (Lasuna)



Existing blacktopped road at Ch 4+ 100



Existing road at Ch 4+200, road width is 6m



Existing roadside tree plantation at Ch 13+500



Hulaki road crossing point at Ch 19+184

