

Environmental Assessment Document

Initial Environmental Examination

Grant Number: 0093 NEP

April 2011

Nepal: Rural Reconstruction and Rehabilitation Sector Development Program

Upgrading of Chisapani- Huwas-Barachaur Road Subproject, Parbat District

Prepared by the Government of Nepal

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Government of Nepal
Ministry of Local Development
Department of Local Infrastructure Development and Agricultural Roads
Rural Reconstruction and Rehabilitation Sector Development Program
[ADB Grant 0093NEP]

Initial Environmental Examination (IEE) Report
of
(Upgrading of) Chisapani- Huwas- Barachaur
Road Sub-project, Parbat

Submitted to:
Ministry of Local Development
Government of Nepal

Proponent:
District Development Committee
District Technical Office
KUSHMA, PARBAT

April, 2011

Prepared By:
District Implementation Support Team (DIST)
RECON Pvt. Ltd

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ABBREVIATIONS

ADB	Asian Development Bank	IUCN	International Union for Conservation Nature
amsl	Above mean sea level	Km	Kilometer
AP	Affected Person	LDO	Local Development Officer
BG	Building Group	LEP	Labour based, environment friendly and participatory
Ch	Chainage	LEST	Livelihood Enhancement and Skill Training
CBO	Community Based Organization	LRMP	Land Resource Management Project
CDC	Compensation Determination Committee	M	meter
CDO	Chief District Officer	MoU	Memorandum of Understanding
CEA	Country Environmental Analysis	MoE	Ministry of Environment
CGI	Corrugated Galvanized Iron	MoST	Ministry of Science and Technology
CF	Community Forest	MI	Milliliter
CFUG	Community Forest Users Group	MLD	Ministry of Local Development
CISC	Central Implementation Support Consultant	NGO	Non-Governmental Organization
CITES	Convention on International Trade in Endangered Species of Flora and Fauna	NRs	Nepali Rupees
DADO	District Agriculture Development Office	NTFPs	Non timber forest products
DDC	District Development Committee	OFID	OPEC Fund for International Development
DFID	Department for International Development	OP	Operational Plan
DFO	District Forest Office/Officer	OPEC	Organization of Petroleum Exporting Countries
DG	Director General	PAM	Project Administrative Memorandum
DIST	District Implementation Support Team	PCC	Plain Cement Concrete
DIT	District Implementation Team	PCU	Project Coordination Unit
DoLIDAR	Department of Local Infrastructure Development and Agricultural Roads	RBG	Road Building Group
DPO	District Project Office	RCC	Reinforced Cement Concrete
DPCC	District Project Coordination Committee	RCIW	Rural Community Infrastructure Works
DRSP	District Road Support Programme	REA	Rapid Environmental Assessment
DSCO	District Soil Conservation Office	RES	Rapid Environmental Screening
DTO	District Technical Office	RIDP	Rural Infrastructure Development Project
DTMP	District Transport Master Plan	RP	Resettlement Plan
EA	Environmental Assistant/Assessment	RRRSDP	Rural Reconstruction and Rehabilitation Sector Development Program
EARP	Environmental Assessment and Review Procedures	RS	Resettlement Specialist
ES	Environmental Specialist	SF	Social Funding
EIA	Environmental Impact Assessment	SA	Social Appraisal
EMP	Environmental Management Plan	SDC	Swiss Agency for Development and Cooperation
EMS	Environmental Management Section	SM	Social Mobilizer
EPA	Environmental Protection Act	SMC	Social Mobilization Coordinator
EPR	Environmental Protection Rules	SDS	Social Development Specialist
ESD	Environment Screening Document	TA	Technical Assistance
FGD	Focus Group Discussion	ToR	Terms of Reference
GoN	Government of Nepal	TWS	Technical Walkover Survey
GIS	Geographical Information System	VDC	Village Development Committee
Ha	Hectare	VICCC	Village Infrastructure Construction Coordination Committee
HH	Household	ZoI	Zone of Influence
IEE	Initial Environmental Examination		

NAME AND ADDRESS OF THE PROPONENT

Name of Proposal

Upgrading of Chisapani- Huwas- Barachaur Road Sub-project (including 25m bridge over Seti Khola), Parbat District, Nepal

Name and Address of Proponent

District Development Committee (DDC), District Technical Office (DTO), Parbat District
Kushma, Parbat District
Phone No: 067-421165, 067-421202
Fax No: 067-421165

Name of Preparer

Mr. Genalal Chaudhary (DIST Team Leader)
Mr. Bishnu Prasad Pathak (DIST DeputyTeam Leader)
Mr. S.K. Rai (DIST Social Development Specialist)

चिसापानी-हुवास-बराहचौर सडकको प्रारम्भिक वातावरणीय परीक्षण प्रतिवेदन कार्यकारी सारांश

पृष्ठभूमि

नेपाल सरकारले लामो दून्दले गर्दा क्षति भएका ग्रामीण पूर्वाधारहरुको पुनःनिर्माण र पुनःस्थापना को कार्य एशियाली विकास बैंक (ADB), स्विस् सरकार (SDC), ब्रिटिस सरकार (DFID) तथा ओपेक फण्ड (OFID)को आर्थिक सहयोगमा 'ग्रामीण पूर्वाधार पुनःनिर्माण र पुनःस्थापना आयोजना' नेपालको बिसवटा जिल्लाहरुमा संचालन गरिरहेको छ । पर्वत जिल्लामा अवस्थित प्रस्तावित चिसापानी-हुवास-बराहचौर ग्रामीण सडकको पुनःस्थापना सोही कार्यक्रम अन्तर्गत संचालन गर्न लागिएको एक उप-आयोजना हो । उप-आयोजना (प्रस्ताव) अन्तर्गत १६.०४ कि.मी. लामो उक्त कच्ची सडकको ग्राभेल स्तरमा स्तरउन्नती गर्न प्रस्ताव गरिएको छ ।

प्रस्तावक

प्रस्ताव (प्रस्तावित सडक उप-आयोजना) को प्रारम्भिक वातावरणीय परीक्षणको प्रस्तावक 'जिल्ला विकास समिति र जिल्ला प्राविधिक कार्यालय, पर्वत हुन् । प्रस्तावकको प्रारम्भिक वातावरणीय परीक्षण स्विकृत गर्ने सम्बन्धित निकाय 'स्थानिय विकास मन्त्रालय' हो ।

प्रारम्भिक वातावरणीय परीक्षण अध्ययनको उद्देश्य

प्रारम्भिक वातावरणीय परीक्षण अध्ययनको मुख्य उद्देश्य प्रस्तावित उप-आयोजना निर्माण तथा संचालन बाट उक्त क्षेत्रको भौतिक, जैविक, सामाजिक, आर्थिक तथा सांस्कृतिक वातावरणमा पर्न सक्ने प्रभावहरु पत्ता लगाई नकारात्मक प्रभावको न्यूनिकरण र सकारात्मक प्रभाव बढाउने उपायहरु बारे सुझाव दिनु, वातावरणीय अनुगमन योजना बनाई कार्यान्वयन गराउनु, तथा प्रस्तावित सडक आयोजनाको लागि प्रारम्भिक वातावरणीय परीक्षण गरे पुग्छ भन्ने कुराको यकिन गर्नु हो ।

प्रस्तावको सान्दर्भिकता

प्रस्तावित सडकले पर्वत जिल्लाको दक्षिण पूर्वी देखी दक्षिण पश्चिम भेगका वासिन्दाहरुलाई सदरमुकाम संगको पहुँच बढाउनेछ भने स्थानिय स्तरमा उत्पादन हुने तरकारी, दुध लाई बजार संग जोडी स्थानिय आय आर्जनमा अभिवृद्धि गर्नेछ । यस सडकले पर्वत जिल्लाको दक्षिणी भेगका ग्रामीण बस्तीहरु लाई सिदार्थ राजमार्ग संग वालिडमा जोडछ । यस सडक पर्वत जिल्लालाई सिदार्थ राजमार्ग संग जोडने छोटो दूरीको बाटो हुनेछ ।

अध्ययन प्रकृया

जुन, २००९ मा फिल्ड सर्वेक्षणबाट लिइएको तथ्याङ्क तथा अन्य उपलब्ध तथ्याङ्कहरुको साथै सामाजिक तथा प्राविधिक टोलीबाट पुनर्वास कार्यको सर्भेक्षणको सिलसिलामा संकलन गरेका तथ्याङ्कहरु केलाएर प्रारम्भिक वातावरणीय परीक्षण प्रतिवेदन तयार गरी निष्कर्ष तथा सुझावहरु दिइएको छ । यो प्रारम्भिक वातावरणीय परीक्षण प्रतिवेदन नेपाल सरकारको वातावरण संरक्षण ऐन १९९७, वातावरण संरक्षण नियामावली १९९७ अनुसार तथा स्थानिय विकास मन्त्रालयबाट मिति २०६६।०२।२५ मा स्विकृत गरिएको यसै प्रस्तावको कार्यसूची अनुसार तयार गरिएको छ । साथै एशियाली विकास बैंकको Environmental Assessment Guideline, 2003 तथा Safeguard Policy Statement, 2009 को समेत अनुसरण गरिएको छ ।

आयोजना को विवरण

प्रस्तावित सडकले पर्वत जिल्लाको दक्षिण पूर्वी देखी दक्षिण पश्चिम भेगका बस्तीहरुलाई जिल्लाको सदरमुकाम संग र सिदार्थ राजमार्ग संग वालिडमा जोड्दछ यसको कूल लम्बाइ १६.०४ कि.मि. छ । सेती खोलामा (६७२०) मा पुल प्रस्ताव गरिएको छ यो सडक ६ वटा गाउँ विकास समितिहरु क्रमशः हुवास, त्रीवेणी, वेउलीबास, उरामपोखरी, सालीग्राम र वहाकी भएर जाने प्रस्ताव गरिएको छ यस उप-आयोजनाको कूल अनुमानित लागत रु.९७,४५३,९९८ र प्रति कि.मी अनुमानित लागत रु.६,०७५,६८५ लाग्ने देखिन्छ ।

विद्यमान वातावरणीय स्थिति

यो सडक हुवास गा.वि.स. को चिसापानी (स्याङ्जा जिल्लाको सिमाना), समुद्री सतहदेखि ६८० मी. को उचाईबाट शुरु भएर समुद्री सतहदेखि ७७९ मी. उचाईको वहाकी गा.वि.स.को वहाकीभञ्ज्याङमा गइ टुङ्गिन्छ । यस सडक खण्डमा विभिन्न प्रकारका चट्टानहरु जस्तै क्वार्ट्जाइट, सिष्ट आदि पाईन्छन् । प्रायः एलुभियल तथा कोलिभियल प्रकारका बालुवा र गिट्टी मिसिएको माटोहरु सडक खण्डमा पाईन्छन् । सडक खण्डमा पर्ने पानीका मुख्य श्रोतहरुमा मर्दी खोला, सेती खोला आदि पर्दछन् । प्रस्तावित सडक क्षेत्रको वायु तथा पानीको स्तर सफा नै रहेको देखिन्छ साथै ध्वनि प्रदूषणको समस्या छैन । यो सडक प्रायः खेती गरिएको जमीन, बाक्लो जमीन र बस्तीहरु भएर जान्छ ।

यस सडक खण्डमा पाइने मुख्य रुखहरुको प्रजातिहरुमा खन्यू, चीलाउने, उतिश का रुख आदि पर्दछन् । यो सडक खण्ड कुनै वन भएर जादैन । स्याल, बाँदर, जंगली बिरालो, ब्यासो, दुम्सी र वनबिरालो आदि वन्य जन्तुका साथै काग, ढुकुर, भंगेरा, कालिज आदि पक्षीहरु यस सडक खण्डको वरिपरी पाईन्छन् । यो सडक खण्ड संरक्षित क्षेत्र वा मध्यवर्ती क्षेत्रमा पर्दैन ।

यो सडक खण्डको प्रभावित क्षेत्र भित्र हुवास, त्रिवणी, वेउलीबास, उरामपोखरी, शालीग्राम र वहाकी गा.वि.स. का गरी जम्मा ८ वटा प्रमुख बस्तीहरु क्रमशः अमोट, चिन्तनचोक, हातेमालोचोक, थुनबजार, डुंडा, कचहरे, विसुनडाडा र वहाकीभञ्ज्याङ्ग पर्दछन् । जम्मा घरधुरी संख्या ९३८ र जनसंख्या ५२५३ रहेको छ र सरदर परिवार संख्या ५.६ छ । यहाँ वसोवास गर्ने विभिन्न जात जातिका मानिसहरुमा मुख्य गरी बाहुन, क्षेत्री, गुरुङ्ग, मगर र दलीत पर्दछन् ।

यहाँका बासिन्दाहरुको मुख्य पेशा कृषि र पशुपालन हो । यातायातको राम्रो सुविधा नभएको तथा पहाडी क्षेत्र भएकोले कृषि उब्जनीले मात्र पर्याप्त नहुने हुँदा यहाँका अधिकांश मानिसहरु श्रम रोजगारीका अन्य पेशा गर्ने, थोरै मानिसहरु सरकारी तथा अन्य संस्थामा काम गर्ने गर्छन् भने केही मानिसहरुले व्यापार व्यवसाय गर्ने गर्दछन् । साथै जनसंख्याको केही प्रतिशत मानिसहरु जीविकोपार्जनको सिलसिलामा रोजगारीको लागि पोखरा, बुटवल र विदेशमा भारतमा जाने गर्दछन् ।

प्रमुख वातावरणीय प्रभावहरु

सकारात्मक प्रभाव

उप(आयोजना बाट तत्कालै हुने लाभमा स्थानीय स्तरमा रोजगारीको सिर्जना हुनेछ । आयोजना संचालनको लागि करिव ६२९५६ मानव(दिन वरावरको अदक्ष र १२५९१ मानव(दिन वरावरको दक्ष श्रमशक्तीको आवश्यकता पर्नेछ । यस चरणमा हुने अन्य लाभहरुमा वन्द व्यापारको बृद्धि, उपआयोजनाले प्रदान गरेको शीपमुलक तथा जनचेतनामुलक तालिम तथा उप(आयोजना निर्माण कार्यमा सहभागी भई स्थानीय जनताको शीप बृद्धि हुने अवसर पर्दछन् ।

सडकको निर्माण भई संचालनको अवस्थामा सडकसम्मको पहुँचमा हुने सुधारले त्यस क्षेत्रको खाद्य सुरक्षा तथा समग्री आर्थिक तथा सामाजिक स्थायित्वमा सुधार आउनेछ । साथै सडक यातायातले गर्दा ग्रामीण भेगबाट बजार क्षेत्र र बजार क्षेत्रबाट ग्रामीण भेगमा सेवा तथा सामानहरुको ओसार पसार छिटो, छरितो, सुलभ तथा सस्तो हुन जानेछ । यस सडकले पर्वत जिल्लाको ग्रामीण बस्तीहरु लाई सिदार्थ राजमार्ग संग वालिडमा जोडछ । यस सडक पर्वत जिल्लालाई सिदार्थ राजमार्ग संग जोडने छोटो दुरीको बाटो हुनेछ । कृषि उत्पादनमा विशेष गरी धान, गहुँ, मकै, बजारसम्म पहुँच बृद्धि हुने भएकोले कृषि उत्पादन बढाउन कृषकहरु उत्साही हुनेछन् । यसले गर्दा उत्पादकत्वमा बृद्धि हुने तथा शिक्षा, स्वास्थ्य जस्ता सामाजिक सेवासम्मको पहुँचले अन्ततोगत्वा ग्रामीण भेगका बासिन्दाको समग्री आर्थिक तथा सामाजिक अवस्थामा सुधार हुनेछ । सडक संचालन हुँदा व्यापार व्यवसायमा बृद्धि हुन जानेछ साथै बजार क्षेत्रको विकासले गर्दा जग्गाको मूल्यमा समेत बृद्धि हुन जानेछ ।

उप-आयोजना कार्यन्वयनबाट पर्न सक्ने नकारात्मक प्रभावहरु:

सडक निर्माणको क्रममा भिरहरु काट्दा, खन्दा निस्किएको माटो तथा गेगर थुपार्दा, निर्माण सामग्री फिक्कलाई खानी सञ्चालन गर्दा त्यस क्षेत्रको भिरालो ठाउँहरुमा असर पर्न गई पहिरो तथा भु-क्षय हुन सक्ने सम्भावना रहन्छ । फोहर तथा खन्दा निस्किएका माटो, गेगर को उचित व्यवस्थापन हुन सकेन भने यसले भुक्षय बढाउन तथा जल प्रदुषण गराउन सक्छ । सडक निर्माणको दौरान बाटो चौडाई ५मी. कायम गर्नको लागि विभिन्न जातका गरी करिव १६१ रुखहरु विरुवाहरु काटिनेछन् । सडक निर्माण क्रियाकलापबाट जीवजन्तुलाई असर पर्ने तथा सडक निर्माण कार्यमा खटिएका कामदारहरुले वनका जीवजन्तुलाई जिस्क्याउने तथा तिनको शिकार गर्नसक्ने सम्भावना रहेता पनि ति न्युन हुनेछ ।

सडक निर्माण कार्यको दौरान १.५८ हेक्टर खेती गरिएको जमीन अधिग्रहण गर्नुपर्ने हुन्छ, जसले गर्दा वार्षिक २.३ मेट्रिक टन वालीको उत्पादनमा असर पुग्नेछ । सडक निर्माण कार्यको दौरान १ वटा घर (Ch 6+600 - 6+610) लाई क्षति पुग्ने देखिन्छ । सडक निर्माण कार्यले खानेपानीको पाइप, कुलो, गोरेटो बाटो, पानीको मुहान आदिमा समेत असर पर्न सक्ने देखिन्छ । निर्माण कार्यको क्रममा श्रमिकहरु तथा स्थानीय जनतालाई स्वास्थ्य समस्या पर्न सक्छ तथा अप्रिय दुर्घटनाहरु घट्न सक्छन् ।

सडक सञ्चालनको चरणमा सवारी साधनको आवगमनबाट, वर्षायामको पानीबाट तथा स्थानीय भिरपहराहरुमा रुख विरुवा काट्दा भिरपहराहरुमा अस्थिरता बढ्न गई पहिरो जान सक्छ । सडक किनाराका नाला बाट वगेको अनियन्त्रित पानीले सडक मुनिका खेतवारीमा भुक्षय हुन सक्छ । सवारी साधनको बृद्धिले धुलो तथा ध्वनी प्रदुषण बढ्नेछ । त्यसैगरी सडकको सुधार संगै वन क्षेत्रसम्म भएको पहुँचको बृद्धिले वन सम्पदा तथा अन्य जन्तुमा चाप बढ्न गई वन सम्पदाको क्षय र जीवजन्तुलाई असर पर्न सक्छ । सडकको सुधार संगै बस्ती र बजारको अव्यवस्थित विस्तार हुने सम्भावना र सडक क्षेत्र मिच्ने प्रवृत्ति देखिन सक्छ ।

प्रभाव न्यूनिकरणका उपायहरू:

यस आयोजनाहरूलाई वातावरण मैत्री वनाउनका लागी सकारात्मक प्रभावलाई बढावा गर्ने तथा नकारात्मक प्रभावहरूलाई नियन्त्रण या न्यूनीकरण गर्ने थुप्रै उपायहरू यस प्रतिवेदनमा प्रस्तावित गरिएको छ । जनताले राजी खुशीले वाटोको लागी दिएको वाहेक आयोजनाले गरिवीका रेखामुनि परेका परिवारहरूको अधिग्रहण गर्ने सवै जग्गाको प्रचलित मुल्य अनुसार क्षतिपुर्ति दिनेछ । सडक संभव भएसम्म मानव श्रम प्रविधिमा आधारित हुनेछ, तथा LEP (श्रम मुलक वातावरण मैत्री सहभागीता मुलक) ढंगले निर्माण गरिने छ । आयोजनाले प्रभावित जनतालाई निर्माण कार्यमा रोजगारीमा तथा शिपमुलक तालिममा प्रथमिकता दिनेछ । आयोजना निर्माणको क्रममा जंगल फँडानी गर्दा, जमिन काट्दा, खानी सञ्चालन गर्दा, खन्दा निस्किएका माटो, गेगर थुपार्दा तथा अन्य संवेदनशील कार्य गर्दा त्यस क्षेत्रको वातावरणलाई सुरक्षित राख्न विशेष ध्यान दिनेछ । निर्माण कार्यको क्रममा श्रमिकहरूको बिमा गरिने छ, तथा सुरक्षाका सम्पूर्ण सामग्री श्रमिकहरूलाई प्रयोगमा ल्याउन दिइने छ । वन, जीवजन्तुको संरक्षण गर्न तथा सामाजिक अक्षुण्णतालाई कायम राख्न यस चरणमा जनचेतनामुलक कार्यक्रमहरू तथा तालिमहरू सञ्चालन गरिनेछ । निर्माण कार्यको क्रममा श्रमिकहरूको बिमा गरिने छ, तथा सुरक्षाका सम्पूर्ण सामग्री श्रमिकहरूलाई प्रयोगमा ल्याउन दिइने छ । निर्माण स्थलहरूमा प्राथमिक उपचारको सामग्रीहरूको व्यवस्था गरिने छ । काटिएका रुख विरुवाहरूको क्षतिपुर्ति वापत १:१ अनुपातमा १६१ रुखहरू वृक्षारोपण गरिनेछ । वृक्षारोपणमा संरक्षित प्रजातिकाहरूलाई प्राथमिकता दिइनेछ । सडक सञ्चालनका क्रममा सडकमा देखिएका अस्थिरताहरूलाई नियमित रुपमा मर्मत संभार गरिनेछ । सडकमा तथा सडकको कारण नजिकैको खेतवारीमा पानी जम्मा हुन नदिन उचित निकासको व्यवस्थापन गरिनेछ । सडक दुर्घटनाबाट बचाव गर्ने उपायहरू अवलम्बन गरिनेछ ।

वातावरण व्यवस्थापन योजना

यस प्रतिवेदनमा वातावरण व्यवस्थापन योजना अन्तर्गत आयोजनाबाट पर्ने संभावित असरहरू, असरहरूको प्रभाव, न्यूनिकरण विधि, अनुगमन विधि तथा कार्यतालिका प्रस्तावित गरिएको छ । यसका साथै न्यूनिकरणका उपायहरूको तथा अनुगमन कार्यको कार्यन्वयन गर्ने जिम्मेवार निकायहरूको पनि पहिचान गरिएको छ । अनुगमनका लागी आवश्यक भौतिक, जैविक, सामाजिक-आर्थिक तथा साँस्कृतिक वातावरणका विभिन्न अनुगमन सुचाङ्कहरूको पनि पहिचान गरिएको छ । वातावरण व्यवस्थापन योजना कार्यन्वयन गर्न निम्नानुसार खर्च हुने अनुमान गरिएको छ ।

क्र. सं.	विवरण	रकम (ने.र.)	कैफियत
१.	वातावरण सम्बन्धी जनचेतनामूलक तालिम तथा अन्य तालिम	३००,०००/-	आयोजनाको बजेटमा समावेश गरिने ।
२.	श्रमिकहरूको बिमा	४००,०००/-	BoQ मा समावेश गरिने ।
३.	बायो-इन्जिनियरिङ्ग/सडक छेउछाउ वृक्षारोपण	७०७,१५१/-	BoQ मा समावेश गरिने ।
४.	पुनर्वास तथा जग्गा अधिग्रहण	२,९६१,४२३/-	पुनर्वास योजनामा समावेश गरिने ।
५.	पुनर्निर्माण तथा अन्य	५००,०००/-	BoQ मा समावेश गरिने ।
६.	क्षतिपुर्ती वृक्षारोपण	१५०,१८०/-	आयोजनाको बजेटमा समावेश गरिने ।
७.	सामाजिक कार्य लागत	४५३,०००/-	सामाजिक योजना तथा आयोजनाको बजेटमा समावेश गरिने ।
८.	पेशागत स्वास्थ्य सुरक्षा तथा जानकारीमूलक सूचनापाटी	६५०,०००/-	BoQ मा समावेश गरिने ।
९.	अनुगमन तथा मुल्यांकन	२,००,०००/-	आयोजनाको बजेटमा समावेश गरिने ।
	जम्मा :	६,३२१,७५४/-	

निष्कर्ष

पहिचान गरिएका प्रायः वातावरणीय प्रभावहरू थोरै क्षेत्रमा तथा मुख्य गरी निर्माणकार्यका वखतमा सिमित रहेको पाइएको छ । प्रस्तावित न्यूनिकरण विधिको पालना गरिएमा पहिचान गरिएका वातावरणीय प्रभावहरूको न्यूनिकरण अथवा नियन्त्रण गर्न सकिनेछ । सडक निर्माण गर्दा प्रभावित व्यक्तिहरूको सम्पत्तीको क्षतिपुर्ति गर्न पुनर्वास योजनाको आवश्यकता पर्नेछ । वातावरण व्यवस्थापन योजना अन्तर्गत उल्लेख गरिएको उपायहरूको कार्यान्वयन गरिएमा यस आयोजनाको कार्यान्वयनले आयोजना क्षेत्रको भौतिक, जैविक, सामाजिक - आर्थिक तथा साँस्कृतिक वातावरणमा उल्लेखनीय नकारात्मक प्रभाव नपर्ने देखिन्छ । प्रारम्भिक वातावरणीय अध्ययनको आधारमा यस प्रतिवेदनमा उल्लेख गरिएको वातावरणीय व्यवस्थापन योजनालाई पूर्ण रुपमा लागु गरी प्रस्तावित आयोजना कार्यान्वयन गर्न सिफारिश गरिन्छ । आयोजनाको वातावरणीय प्रभाव मुल्याङ्कन स्तरमा अध्ययन गर्न आवश्यक नरहेको सिफारिश समेत गरिन्छ ।

EXECUTIVE SUMMARY IN ENGLISH

Background

Government of Nepal has received financial assistance from ADB, SDC, DFID and OFID for implementation of the Rural Reconstruction and Rehabilitation Sector Development Program (RRRSDP). The RRRSDP aims for reconstruction and rehabilitation of rural infrastructures damaged in the twenty conflict affected districts of the country. The Chisapani- Huwas- Barachaur Rural Road is one of the Sub Projects under RRRSDP, which is proposed by Parbat district for upgrading into gravel standard. The proposal also includes construction of 25m bridge over Seti Khola at Ch. 6+720. At present, the road is earthen all weather and total length of the road is 16.04 km.

Project Proponent

The proponent and executing agencies of the proposed road Subproject for Initial Environmental Examination (IEE) is District Development Committee (DDC)/District Technical Office (DTO) at the district level. Ministry of Local Development (MoLD) is the authorized body for approving the IEE of the proposed Subproject.

Objectives of the IEE Study

The main objective of the IEE study is to identify the impacts from the construction and operation of the proposed Subproject on the physical, biological, socio-economic and cultural environment of the Subproject area. The objective of IEE study is to recommend site specific environmental mitigation measures for adverse impacts, benefit augmentation measures for beneficial impacts, prepare and implement environmental monitoring plan and make sure that IEE is sufficient for the proposed road sub-project.

Relevancy of the Proposal

The proposed Subproject links with south east to south west part of Parbat district. As a result socio-economic condition of people living in that area will enhance as local products like vegetables, fruits will get access to market. This road helps to links rural areas of Parbat district with Siddhartha highway at Waling. This is shorter route to reach Siddhartha Highway from Southern part of Parbat district (only 22 KM from Chisapani).

Study Methodology

The IEE study has been conducted through review of secondary information collected from relevant agencies, and primary information collected from the field survey in June 2009. The survey methods included walk-through survey along the proposed alignment with checklists, conduction of sample household survey, organizing focus group discussions (FGD) in the related VDCs, and information supplemented by the resettlement and technical team of the Subproject.

The IEE report has been prepared following the Environmental Protection Act, 2053 BS (1997 AD) and Environmental Protection Rules, 2054 BS (1997 AD) (second amendment 2007) of the Government of Nepal (GoN); and Environmental Assessment Guidelines, 2003 and Safeguard Policy Statement, 2009 of ADB. The report follows the Terms of Reference for IEE Study approved by MoLD on 25/02/2066 BS.

Project Description

The proposed Subproject links with south east to south west part of Parbat district and joins the Siddhartha Highway at Waling. The total length of the road is 16.04 Km. The road alignment is already opened and motorable. A bridge is proposed at seti khola ch (6+720). The road passes six village development committees namely Huwas, Triveni, Beaulibas, Urampokhari, Saligram and Wahaki. The average width of the road is 5 m and geometry will be improved as per design required. The total project cost is NRs 97,453,998 and per km cost is NRs. 6,075,685.

Existing Environmental Condition

The road starts near Chisapani of Huwas VDC at 680 m amsl and ends at Wahakibhanjyang of Wahaki VDC at 779 m amsl. Various kind of rock such as quartzite, schist etc. was observed along the road alignment. Various types of soil such as residual, alluvial soil and clay mixed soil are found along the road alignment. Main water bodies found across the road alignment are Mardi khola and Seti khola. Ambient air and water quality of the proposed project area is observed to be good and there is no noise pollution. The road mainly passes through cultivated land, barren land and settlements.

The dominant forest species found in the road alignment are Khanyu (*Ficus semicordata*), Uttis (*Alnus nepalensis*), Chilaune (*Schima wallichii*). The road does not pass through any Forest. Jackal (*Canis aurieus*), Monkey (*Macaca mulatta*), Jungle Cat (*Felis chaus*), Fox (*Vulpes vulpes*), Dumsi (*Hystrix indica*) and are the wild animals found in ZoI. Similarly birds like Crow (*Corvus splendens*), Dove (*Zenaida macroura*), Sparrow (*Passer domesticus*), Kalij (*Lophura lencomelana*), and Pigeon (*Columba livia*) are found in the project area. The road does not fall under any protected areas.

There are 8 major settlements, Chisapani, Chitanchok, Hatemalochok, Arthunbazar, Dunda, Kachhare, Bisundada and Wahakibhanjyang along the ZoI of the proposed road alignment in Huwas, Triveni, Beulibas, Urampokhara, Shaligram and Wahaki VDCs with total population of 5253 persons (938 households) and household size is 5.6. Diverse ethnic groups such as Brahmin, Chhetri, Magar, Gurung and occupational caste (Damai, Kami, and Sarki) live along the ZoI of road alignment.

Subsistence agriculture and livestock farming are the main occupation. Due to limited transportation facilities and high altitude, agriculture farming is not enough for subsistence level due to small landholding size and lack of irrigation facilities. Therefore people are involved in government and non government services and few are involved in business. Moreover, significant percentage of the economically active male population also migrates to various places including Pokhara, Butwal and India seasonally during slack farming season for employment.

Major Environmental Impacts

Beneficial Impacts

The immediate benefit from this road Subproject is employment opportunities. The implementation of Subproject requires about 62956 person days of unskilled and 12591 person days of skilled manpower. The project will give priority to the poor, ethnic minorities and disadvantaged local people for employment opportunity. Other beneficial impacts include enhancement of local business, development in skills of local people from skill developing training, awareness raising training and involvement in the construction of the project.

During operation stage of road, the people from the ZoI will get easy and fast accessibility to markets, social services and other regions of the country. This road helps to link rural areas of Parbat district with Siddhartha highway at Waling. This is shorter route to reach Siddhartha Highway from Southern part of Parbat district (only 22 KM from Chisapani). This will ensure better economic condition and food security of the people living in the ZoI of the project area. Moreover this will promote the small agro based industries that use local resources. Easy access and opportunity of better transportation system will develop other sectors like education, health, communication, market, banking and other socio-economic sectors. This will increase the overall living condition of the people living in ZoI of project area. The better land network will result in increased land price which will be beneficial for land owners.

Adverse Impacts

During the road construction, the cutting of slopes and consequently disposal of soil and earth material, operation of quarries might result in erosion and landslide during construction and operation. Furthermore, spoils generated during construction can create water pollution to the nearby water sources.

During road widening and construction required different type of tree total 161 nos. will have to be cleared. Also during construction of road there might be possible impacts on wildlife as workers might harass/ hunt the wildlife in the nearby forests, however, such effects are very minimum.

During construction stage, there will be loss 1.58 Ha of agricultural land which results in 2.3 MT annual reduction of different agricultural production. 1 residential houses (Ch 6+600 to 6+610) will be affected. Also water supply lines, irrigation and water sources, footpath will be affected during construction of road. Labours and local people are prone to health effects and accidents relating to construction activities.

During operation stage, vehicular movement, monsoon rain, cutting of trees on the unstable slopes might result in slope instability and hence erosion and landslides might occur. The flowing water on the side drain of the road might cause erosion of soil on adjacent agricultural land. Vehicular emissions will result in air and noise pollution. Because of easy accessibility to the forest areas will deplete forest resources and wildlife. New settlement, bazaar area will be expanded and this may increase encroachment of the RoW.

Mitigation measures

The various benefit augmentation measures and adverse impact mitigation measures have been proposed in the report to make this project environment friendly. Other than land donated by local people for the projects, adequate compensation will be provided to affected poor and marginalize household for all the lands that need to acquire. The construction of road will be based on Labour-based, Environment friendly and Participatory (LEP) Approach to extend feasible. Affected families will be given high priority for employment and skill development trainings. Necessary measures will be taken to reduce the adverse effects that might arise from site clearance, cutting of slopes, disposal of spoils and quarrying activities. Necessary trainings and awareness programs will be conducted. Necessary measures will be adopted for protection of flora and fauna. At construction site, the workers will be provided insurance, first aid facilities and safety equipments. Loss of trees will be compensated by planting 161 numbers of trees in the ratio of 1:1 for the numbers of trees that need to be cut down. Proper maintenance and proper drain system will be provided to prevent accumulation of water on the nearby agricultural lands during operation. Adequate road safety measures will be provided to minimize road accident.

Environmental Management Plan

Environmental management plan is prepared to ensure the implementation and monitoring of mitigation measures for minimizing adverse impacts and maximizing the beneficial impacts. The necessary mitigation measures together with environmental monitoring process and responsible bodies for environmental monitoring have been identified. Similarly, for environmental monitoring various sections of physical, biological, socio-economic and cultural environment have been identified to generate useful information and improves the quality of implementation of mitigation measures.

The cost for implementing environmental management plan has been identified as follows:

SN.	Description	Amount (NRs.)	Remarks
1	Awareness raising training and other training	300,000.00	To be included in project cost
2	Insurance of workers	400,000.00	To be included in BoQ
3	Bio-engineering/ Roadside Plantation	707,151.00	To be included in BoQ
4	Resettlement Cost (Compensatory for properties)	2,961,423.00	To be included in Resettlement plan
5	Restoration or relocation of affected infrastructures, Spoil management, Reinstatement of quarry, stockpiling etc.	500,000.00	To be included in BoQ
6	Compensatory Plantation cost	150,180.00	To be included in project cost
7	Social Cost	453,000.00	To be included in Social plan, project cost
8	Occupational health and safety, Health awareness, Information signboard	650,000.00	To be included in BoQ
9	Monitoring	200,000.00	To be included in project cost
	Total	6,321,754.00	

Conclusion and Recommendation

The the identified environment impacts will be seen in limited small areas and mainly during construction period. The implementation of proposed mitigation measures for identified adverse impacts will minimize as well as mitigate the adverse impacts on environment. The Resettlement Plan and compensation to the affected households should be ensured. The implementation of measures as described in environmental management plan will mitigate the negative impacts on physical, biological, socio-economic and cultural environment. Therefore, this IEE is sufficient for approval of the proposed sub-project, and recommended for implementation with incorporation of mitigation measures and environmental management plan. Therefore, the proposed Subproject does not require Environmental Impact Assessment.

1.0 Introduction

1.1 Background

1. The Rural Reconstruction and Rehabilitation Sector Development Program (RRRSDP) 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 Program is financed by the Government of Nepal (GoN), Asian Development Bank (ADB), Department for International Development (DFID), Swiss Development Cooperation (SDC), Nepal and OPEC Fund for International Development (OFID). The Program covers twenty districts spread over the country. Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR) under the Ministry of Local Development (MLD) is the executing agency (EA). The District Development Committees (DDCs) / District Technical Office (DTO) are the Project Implementing Agencies. The DDC, DTO are supported by District Implementation Support Team (DIST) with engineering, safeguards and social mobilization responsibilities.

2. Parbat District is one of the project districts under RRRSDP. This Proposal is for rehabilitation (upgrading) of existing 16.04 km long Chisapani- Huwas- Barachaur district road in gravel standard.

1.2 The Name and Address of Proposal

Name of Proposal	:	Upgrading of Chisapani- Huwas- Barachaur Road Sub-project (including 25m bridge over Seti Khola), Parbat District, Nepal
Name of Proponent	:	District Development Committee, District Technical Office, Parbat
Address of Proponent	:	Kushma, Parbat District
		Phone No: 067-420151, 067-421202
		Fax No: 067-421165

1.3 Need and Objectives of the IEE Study

3. **Need:** IEE study of the Proposal is a legal necessity according to Environment Protection Act, 2053 BS (1997 AD); and Environment Protection Rule, 2054 BS (1997 AD) of GON. Similarly, an IEE study is required according to provision of Environmental Assessment Guidelines, 2003; and Safeguard Policy Statement, 2009 of ADB.

4. **Objectives:** The main objective of the IEE study is to identify the impacts from the implementation and operation of the Proposal on the physical, biological, socio-economic and cultural environment of the sub-project area. The IEE study recommends practical and site specific environmental mitigation and enhancement measures, prepare and implement environmental monitoring plan and make sure that IEE is sufficient for the proposed road sub-project.

1.4 Methodology adopted

5. The IEE study has followed the provisions of the EPA, 2053 BS (1997 AD) and EPR, 2054 BS (1997 AD), and the provisions of ADB. It follows methodology suggested in the approved Terms of Reference for IEE Study (please refer Annex 1). For the collection of environmental features related to bio physical environment, maximum 100 meter distance observable from the centre of the road alignment was taken as an influence area and socio-economic and cultural environment was taken of ZoI (one and half hour walking distance from the centre line of the road) information of the Subproject area. Data collection on physical, biological, socio-economic and cultural environment of the Subproject area was done in May/June 2009. Field survey, sample household survey, organization of Focus Group Discussions in the related VDCs was carried out and necessary information was collected. The DDCs officials, VDC and Community Groups were also contacted to verify information to solicit their concerns. Based on the analysis of information the impacts have been predicted, mitigation measures prepared and monitoring plan has been developed.

1.5 Public Consultation

6. In order to ensure the public involvement, the following procedures were followed during IEE report preparation:

- **Publication of notice-** a 15 days public notice was published on **Shrawan 10, 2066** in the Naya Patrika, a national daily newspaper (see **Annex V**) seeking written opinion from concerned VDCs, DDC, schools, health posts and related local organizations. A copy of the public notice was also affixed in the above mentioned organizations and deed of enquiry (muchulka) was collected (see **Annex VI** for deed of inquiry and **Annex VII** for the names of organizations).
- IEE team also carried out interaction with local communities and related stakeholders like District Forest Office, District Soil Conservation Office, District Agricultural Development Office and others during field survey to collect the public concerns and suggestions (see **Annex VIII** for the list of persons consulted). Moreover, Focus Group Discussions were conducted to collect and solicit information regarding the bio-physical and socio-economic and cultural aspects of the road. Summary of minutes of meeting with local people is given in **Annex IX** and following **Table 1.1**.
- Draft IEE report will be sent to Huwas, Tribeni, Beulibas, Uram Pokhara, Shaligram and Wahaki VDCs for Public disclosure. Recommendation letters were also obtained from above mentioned VDCs as given in **Annex X**. A copy of draft IEE will also be kept in information center of DDC, Parbat for Public disclosure. After reviewing draft IEE report and incorporating the suggestions from the concerned stakeholders, final IEE report will be prepared and sent to PCU for approval from MLD and ADB.

Table 1.1: Summary of FGD Meeting

Location	Date	No. of Participants		Issues and Suggestions	Decision
		Male	Female		
Beulibas	2067 /08/07	15	2	1. There will not be adverse impacts on the environment due to implementation of this project.	1. Adequate benefit augmentation and mitigation measures will be taken to enhance the beneficial impacts and mitigate adverse impacts.
Huwas	2066 /04/18	18	5		
Shaligram	2067 /08/12	12	1		
Triveni	2067 /08/9	18	6		
Uram Pokhara	2067 /08/10	16	5		
Wahaki	2067 /08/13	7	1		

1.6 Information Disclosure

7. Draft IEE was kept at information center of DDC Parbat for public disclosure. Information was also disseminated through person to person contacts and interviews and group discussions. However, available institutions at the local level were informed through notice distribution or pasting at concerned VDCs, school, health posts and public places within the road alignment corridors. The approved IEE report will be accessible to interested parties and general public through websites of ADB, DoLIDAR and RRRSDP. Following offices will get the IEE report:

1. District Development Committee, Parbat
2. District Technical Office, Parbat
3. District Project Office, Parbat
4. District Implementation Support Team, Parbat
5. Huwas, Tribeni, Beulibas, Uram Pokhara, Shaligram and Wahaki VDCs
6. Ministry of Local Development, Environment Management Section
7. Department of Local Infrastructure Development and Agricultural Roads
8. Project Coordination Unit, RRRSDP
9. Asian Development Bank, Nepal Resident Mission

2.0 Public Consultation and Information Disclosure

8. The 16.04 km long earthen Chisapani-Huwas-Barrachaur road Subproject links with south east to south west part of Parbat district in Western Development Region of Nepal. This road helps to links rural areas of Parbat district with Siddhartha highway at Waling. This is shorter route to reach Siddhartha Highway from Parbat district (only 22 KM from Chisapani). This road starts from Chisapani of Huwas VDC and ends at Wahakibhanjyang of Wahaki (Bujel Chowk) VDC. Although the road links till Barachaur VDC of Parbat district, under this subproject the road will be upgraded till Wahakibhanjyang of Wahaki VDC. In between, the road passes through Huwas, Tribeni, Beulibas, Uram Pokhara, Shaligram and Wahaki VDCs. The road was opened in 2001 and vehicles ply during dry and rainy season. The alignment requires widening, geometrical correction in bends, and grade improvements. Activities included during the road construction are: Site clearance, Pavement work, Structures work (toe wall, retaining wall, breast wall, river training etc.), Earthwork, Bio-engineering, Cross drainage works and Side drain works and Bridge work. The location and alignment of the road is given in Figure 2.1 and 2.2. The total project cost is NRs. 97,453,998.00 and per km cost is NRs. 6,075,685.00 as shown in Annex III.

9. Salient features of the Road Subproject

1. Name of the Project	:	Upgrading of Chisapani- Huwas- Barachaur Road
Project Components	:	Sub-project (including 25m bridge over Seti Khola) Road and Bridge
Project Activities	:	Construction Stage Site clearance, Pavement work, Structures work (toe wall, retaining wall, breast wall, river training etc.), Earthwork, Bio- engineering, Cross drainage works and Side drain works. Operation Stage Maintenance Works
2. Geographical Locations		
Start Point	:	Chisapani of Huwas VDC
End Point	:	Wahakibhanjyang of Wahaki VDC
3. Geographical Feature		
Terrain	:	Hilly
Altitude	:	680 m amsl at Huwas to 779 m amsl at Wahaki
Climate	:	Sub-tropical
Soil	:	Alluvial soil, colluvial soil
4. Classification of Road	:	District Road (Rural Road Class 'A')
5. Standard of Road	:	Gravel
6. Length of Road	:	16.04 km
7. Design speed	:	20 km/hr
8. Major Settlements	:	Chisapani, Chitanchok, Hatemalochok, Arthunbazar, Dunda, Kachhare, Bisundada and Wahakibhanjyang.
9. No. of Household	:	938 HHs
10. VDCs along the Road	:	Huwas, Tribeni, Beulibas, Uram Pokhara, Shaligram and Wahaki.
11. Design Standard		
Right of way	:	5 m each side (from center line)
Formation width	:	5 m having 5% outward slope
Carriageway width	:	3.5 m
Lane	:	Single
Minimum radius of Horizontal curve	:	10m
Minimum radius of Vertical curve	:	20m
Maximum gradient	:	12%
Minimum gradient	:	1%
Cross Slope in carriageway	:	4%
Cross Slope in shoulder	:	5%
12. Drainage		
Side Drain	:	Masonry/Earthen
Cross Drain	:	PCC causeway, Hume pipe Culvert
Number of Causeway	:	6 nos.

13. Retaining Structures		
Proposed Gabion Retaining wall	:	2104.00Cum
Proposed Dry stone Masonary	:	640.74 Cum
14. Earth Work		
Cutting	:	63029.6 Cum
Filling	:	18169.00 Cum
15. Bio-Engineering	:	NRs 707,152.00
16. Project cost		
Total Cost (NRs)	:	NRs 97,453,998.00
Costs per km (NRs.)	:	NRs 6,075,685.00
17. Employment generation:		
Total employment	:	75547
Skilled	:	12591
Unskilled	:	62956
18. Gradient	:	Max. 12%
19. Radius	:	Min. 10
20. Bridge:		
Chainages/Location/Length	:	Span (25 m) at 6+720,
Type of Bridge	:	RCC Bridge
21. Total Cost of Bridge	:	Detail design is not completed

2.1 Relevancy of the proposal

10. The proposed Subproject links with south east to south west part of Parbat district. The road is currently earthen. The area has high potential in livestock and dairy production, production of crops like rice, maize, wheat, vegetables and fruits, proposed rehabilitation of the road will enhance access of people to social services and market centers with significantly reduced travel time and cost, and will contribute in their socio-economic development. Access shall also attract other development infrastructures and open door to further development opportunities in the area. It makes quicker access to Parbat, and connection of Southern region of Parbat with Siddhartha highway at Waling and other part of the country after construction of road. Better access will also open door to new development opportunities.

2.2 Construction Approach and Activities

11. The construction approach will be labour-based, environment-friendly and participatory (LEP) ensuring minimum damage to local environment and Contractor approach where manual works are not possible. The important features of the approach are (i) construction with balanced cut and fill; (ii) manual work and use of hand tools and small equipment rather than heavy machinery; (iii) bio-engineering for slope stabilization; (v) use soft engineering structures; and (vi) use of contractors only in the works that cannot be done through manual labor. Activities included during the road and bridge construction are: Site clearance, Pavement work, Structures work (toe wall, retaining wall, breast wall, river training etc.), Earthwork, Bio-engineering, Cross drainage works and Side drain works and Bridge work.

2.3 Proposed Schedule for Implementation of Sub-project

12. Following table shows the proposed implementation schedule for Chisapani-Huwas-Barachaur road sub-project:

Table 2.1: Sub-project implementation schedule

SN	Activity	2008 IV	2009				2010				2011			
			I	II	III	IV	I	II	III	IV	I	II	III	IV
1	Detailed survey, design and estimate													
2	Preparation of resettlement plan													
2.1	Life skill and income generation training													
3	Environment Assessment and implementation													
3.1	IEE report preparation and approval from MoLD													
3.2	Implementation of EMP													
3.3	Environmental monitoring													
4	Work implementation													
4.1	Civil construction work by contractors													
4.2	Civil construction work by RBGs													

Note:

I - January, February, March
II - April, May, June

III - July, August, September
IV - October, November, December

Figure 2.1 Map of Nepal showing Parbat District

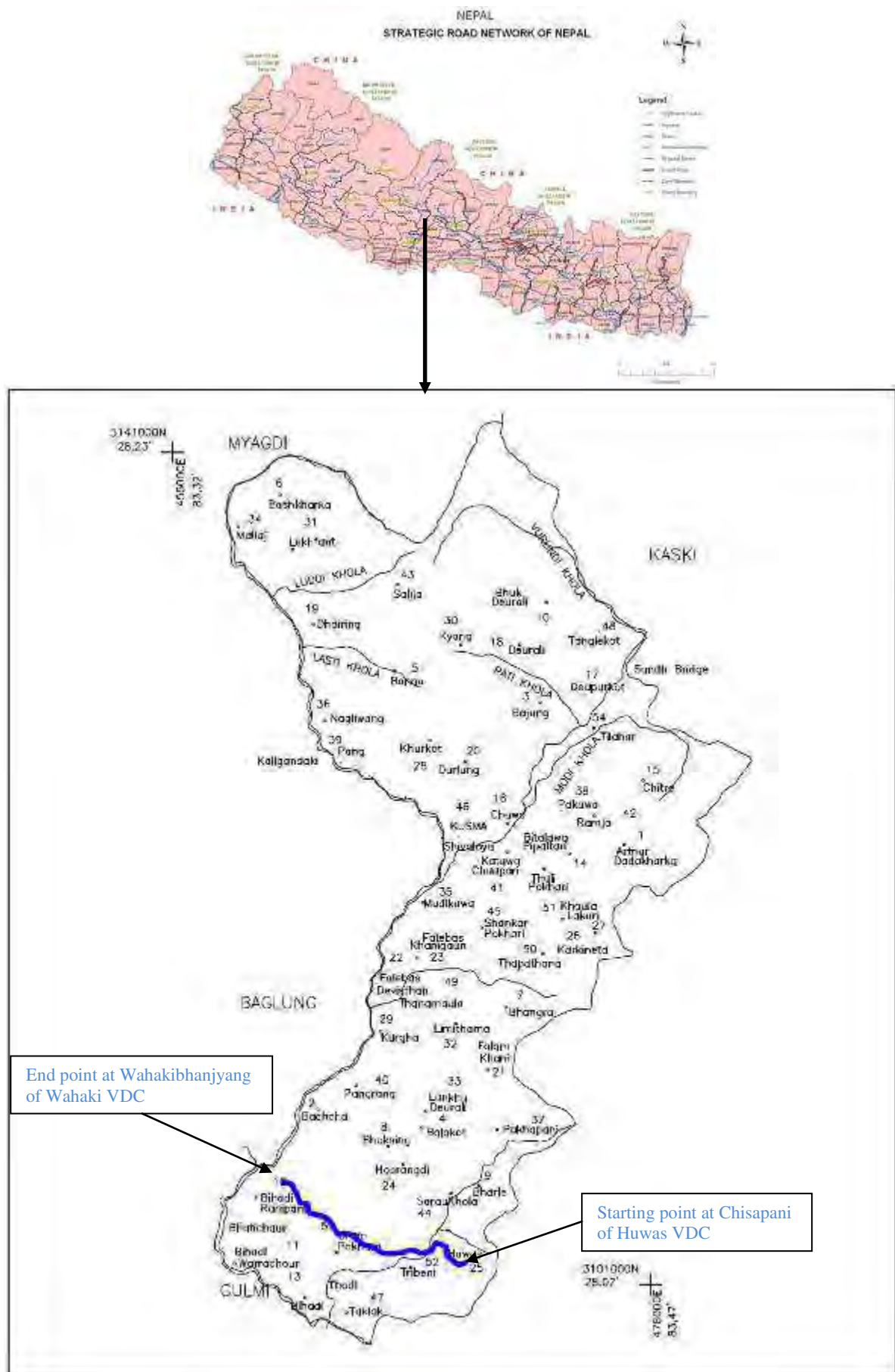


Figure 2.2. Topo Map, showing the alignment of Chisapani- Huwas- Barachaur road



3.0 Review of Relevant Acts, Regulations and Guidelines

13 The IEE study has followed the provisions of following acts, regulations and guidelines of Government of Nepal and ADB to ensure development and conservation of environment.

Table 3.1: Review of Environmental Acts, Regulations and Guidelines

SN	Environmental Acts, Regulations and Guidelines	Description of Requirements
1	Three Years Interim Plan, 2007/08-2009/10, GoN	Requires all projects will be formulated and constructed based on methods that optimally utilize the local skill and resources and generate employment opportunities.
2	Environmental Protection Act, 2053 BS (1997 AD), GoN	Any development project, before implementation, shall pass through environmental assessment, which will be either IEE or an EIA depending upon the location, type and size of the projects.
3	Environmental Protection Rule 2054 BS (1997 AD) (amendment, 2007), GoN	The EPR and its schedules clearly provide various step-wise requirements to be followed while conducting the IEE study. It also obliges the Proponent to timely consult and inform the public on the contents of the proposal and IEE study.
4	Forest Act, 2049 BS (1993 AD) (amendment, 2007), GoN	Requires decision makers to take account of all forest values, including environmental services and biodiversity, not just the production of timber and other commodities. It includes several provisions to ensure development, conservation, management, and sustainable use of forest resources based on approved work plan.
5	Forest Rules, 2051 BS (1995 AD), GoN	Elaborates legal measures for the conservation of forests and wildlife. Expenses incurred for cutting trees and transportation shall be borne by proponent.
6	Batabaraniya Nirdesika (Nepal; MLD), 2057, GoN	The directive is focused in the practical implementation of small rural infrastructures through the minimization of environmental impacts. This directive includes the simple methods of environmental management in the different phases of the project cycle.
7	National Park and Wildlife Conservation Act, 2029 BS (1973 AD), GoN	Addresses for conservation of ecologically valuable areas and indigenous wildlife. The Act prohibits trespassing in park areas, prohibits wildlife Poaching, construction works in park area, damage to plant and animal, construction of huts and house in park area without permission of authorized person. It lists 26 species of mammals, 9 species of birds, and 3 species of reptile as protected wildlife.
8	Local Self Governance Act 2055 BS (1999 AD) (1999) and Regulation 2055 BS (1999 AD), GoN	Empowers the local bodies for the conservation of soil, forest and other natural resources and implements environmental conservation activities
9	Land Acquisition Act, 2034 BS (1977 AD) and Land Acquisition Rules, 2026 BS (1969 AD), GoN	Specifies procedural matters on land acquisition and compensation
10	National Environmental Impact Assessment Guidelines, 1993 (2050 BS), GoN	Provides guidance to project proponent on integrating environmental mitigation measures, particularly on the management of quarries, borrow pits, stockpiling of materials and spoil disposal, operation of the work camps, earthworks and slope stabilization, location of stone crushing plants etc.
11	APPROACH for the Development of Agricultural and Rural Roads, 1999 (2055 BS), GoN	Emphasizes labor based technology and environmental friendly, local resource oriented construction methods to be incorporated actively in rural infrastructure process.
12	RRRSDP Environmental Assessment & Review Procedures (EARP), 2007, GoN	For preparation of environmental assessments of future subprojects under Rural Reconstruction and Rehabilitation Sector Development Program (RRRSDP), this EARP includes: i) The process to be adopted while preparing environmental reports, ii) the potential environmental impacts that could result from undertaking the Project based on the Initial Environmental Examinations (IEEs) of sample core subprojects; iii) the

		proposed mitigation measures to avoid the identified impacts; iv) institutional capacity assessment and strengthening arrangements; v) legal framework for environmental assessment, domestic and the Asian Development Bank (ADB) environmental assessment and review procedures; and finally vi) the approaches to be adopted during implementation of the Project in order to ensure that environmental aspects are dealt with in a comprehensive manner.
13	Reference Manual for Environmental and Social Aspects of Integrated Road Development, 2003 (2060 BS), GoN	Suggests stepwise process of addressing environmental and social issues alongside the technical, financial and others
14	Green Roads in Nepal, Best Practices Report: An Innovative Approach for Rural Infrastructure Development in the Himalayas and Other Mountainous Regions, 1999 (2055 BS), GoN	Focuses on participatory, labor based and environment friendly technology with proper alignment selection, mass balancing, proper water management, bioengineering and phased construction
15	Environmental Assessment Guidelines, 2003, ADB	Requires that environmental considerations be incorporated into ADB operations where environmental assessment is the primary administrative tool to integrate environmental considerations into decision-making of all types of development initiatives
16	Safeguard Policy Statement, 2009, ADB.	ADB's Safeguard Policy Framework consists of three operational policies on the Environment, Indigenous people and Involuntary resettlement. It requires that (i) impacts are identified and assessed early in the project cycle, (ii) plans to avoid, minimize, mitigate or compensate for the potential adverse impacts are developed and implemented and (iii) affected people are informed and consulted during project preparation and implementation.
17	The Interim Constitution of Nepal, 2063 (2007).	Has provision of right regarding environment - Every person shall have the right to live in clean environment.
18	The Labor Act, 2048 BS (1992 AD)	Regulates the working environment and deals with occupational health and safety.
19	Child Labor (Prohibition and Regulation) Act, 2056 (2000)	No child having not attained the age of 14 years shall be engaged in works as a laborer.

4.0 Existing Environmental Condition

14 Baseline information on the existing physical, biological as well as socio-economic and cultural environment of the proposed Subproject is described in this chapter.

4.1 Physical Environment

15 This section describes the physical condition of the area that comes under the ZoI of the road section.

4.1.1 Topography

16 The elevation of the starting point of the road at Chisapani of Huwas is 680 m amsl and at the end of road at Wahakibhanjyang 779m amsl. The road alignment passes through the valley and ridge. The grade of the road varies from 5% to 16%. Major portion of the road passes along the south-west facing slope.

4.1.2 Geology and Soil Type

17 The road section comprises of sedimented highly weathered types of rocks. The road corridor falls in the Lesser Himalayan Sediments zone that comprises rocks such as quartzite and schists. Generally, residual, alluvial soil and clay mixed soil are found along the road alignment.

4.1.3 Climate

18 The road lies in the Sub- tropical region. Generally, rainy season starts from June and ends in September. The meteorological record shows unevenly distributed monsoon rain in the project area with the total average annual rainfall of 1532 mm. Average minimum temperature of 5° C and average maximum temperature of 25°C is observed in the area. (Source: District Profile of Parbat,2058)

4.1.4 Hydrology and Drainage System

19 There are many natural drainage along the alignment. Many dry streams are across the road alignment. Main water bodies found across the road alignment are Mardi Khola (Ch 4+040) and Seti Khola (Ch 6+720). The section at Ch 2+900 to 3+800 has water logging problem. No wetlands and river are found within the vicinity of the road. The summary of the cross drainage works along the road alignment is given in **Annex XIV**.

4.1.5 Soil Erosion and Sedimentation

20 Proposed alignment does not pass through major landslides or erosion prone area. Small slide has been observed at Ch 0+100, 9+500, 11+400 and 13+070.

4.1.6 Existing Road Condition

21 The existing maximum and the minimum gradient along the road alignment is 16% and 5% respectively. The whole length of the road alignment is motorable with earthen surface. The width of the road alignment in average is about 4.0 m. The road is operable in rainy season. Bridge at Ch. 6+720 is proposed to upgrade as all weather road.



Existing Road alignment

4.1.7 Existing Traffic Situation

22 Daily 2 buses number of 10 mini truck/pick up and Jeep 8 nos ply on the road. In rainy season, vehicles dos not ply.



Passenger Jeep daily plys on the road

4.1.8 Land Use

23 Land use pattern of the area through which the road passes have been classified into three types: cultivated land, built up area and barren as shown in **Table 4.1**.

Table 4.1. Summary of Land use pattern along the road alignment

Type of Land	Chainage		Length (m)	Existing width (m)	Additional width (m)	Additional Area (ha)
	From	To				
Settlement area	0+000	0+100	100	4	1	0.01
	0+100	0+250	150	4	1	0.015
	0+250	0+350	100	3.5	1.5	0.015
	0+350	0+500	150	4	1	0.015
	1+550	1+750	200	4	1	0.02
	2+400	2+500	100	3.5	1.5	0.015
	2+950	3+050	100	4	1	0.01
	3+150	3+250	100	4	1	0.01
	3+650	3+800	150	3.5	1.5	0.0225
	4+250	4+300	50	3.5	1.5	0.0075
	5+350	6+650	1300	4	1	0.13
	11+400	11+600	200	3.5	1.5	0.03
	13+500	13+650	150	3	1.5	0.0225
	15+900	16+040	140	3.5	1.5	0.021
Total						0.34
Barren land	0+000	0+750	750	4	1	0.075
	0+850	0+950	100	4	1	0.01
	1+150	1+550	400	4	1	0.04
	4+950	2+300	350	4	1	0.035
	4+250	4+550	300	4	1	0.03
	9+300	9+650	350	3.5	1.5	0.0525
	10+400	10+750	350	3.5	1.5	0.0525
	10+950	11+250	300	3.5	1.5	0.045
	13+300	13+550	250	3.5	1.5	0.0375
	14+600	14+850	250	3.5	1.5	0.04
Total						0.415
Cultivated land	0+100	0+250	150	4	1	0.015
	0+600	0+850	250	4	1	0.025
	0+900	2+900	2000	4	1	0.2
	3+050	3+150	100	4	1	0.01
	3+200	3+650	450	4	1	0.045
	3+850	4+250	400	4	1	0.04
	4+550	5+250	300	4	1	0.03
	5+300	5+350	50	4	1	0.005
	6+700	9+550	2850	3.5	1.5	0.4275
	9+650	10+400	750	3.5	1.5	0.1125
	10+750	10+950	200	3.5	1.5	0.03
	11+00	11+400	400	3.5	1.5	0.06
	11+600	13+400	1800	3.5	1.5	0.27
	13+650	14+600	950	3.5	1.5	0.1425
	14+750	15+850	1100	3.5	1.5	0.165
Total						1.58

Source: Field Survey, May/June, 2009

4.1.9 Air, Noise and Water Quality

24 The air, noise and water quality are not tested, but are observed to be within acceptable limit. Dust emission during vehicle operation has become common phenomena in the existing road and it is more significant during dry and winter season.

4.2 Biological Environment

25 This alignment does not pass through any protected area.

4.2.1 Vegetation

26 The dominant forest and fodder species reported in the road alignment are Khanyu (*Ficus semicordata*), Uttis (*Alnus nepalensis*), Chilaune (*Schima wallichii*). Other plant species found within ZoI of the sub-project are Bhimsen pati (*Buddleja asiatica*), Kutmiro (*Litsea monopelata*), Khirro (*Sapium insigne*), Lankuri (*Fraxinus floribunda*), Simali (*Vitex negundo*), Sajiyon (*Jatropha curcas*), Asuro (*Adhatoda vasica*), Dhangeri (*Woodfodia fruticosa*), Painyu (*Prunus cerasoides*), Tanki (*Bahunia purpurea*), Koiralo (*Bahunia variegata*), Sirish (*Albizia labbeck*), Mauwa (*Bassia latifolia*), Amba (*Pisidium guyava*), Gogan (*Sauravia nepauensis*), Bans (*Dendrocalamus strictus*), Bilaune (*Maesa chisia*), Sisnoo (*Urtica dioica*), Mauwa (*Bassia latifolia*), Amliso (*Thysanolaena maxima*) etc.

27 No major NTFPs found along the road alignment. The road alignment does not pass through any Community Forest.

4.2.2 Wildlife

28 Jackal (*Canis aurieus*), Monkey (*Macaca mulatta*), Jungle Cat (*Felis chaus*), Fox (*Vulpes vulpes*), Dumsi (*Hystrix indica*) and are the wild animals found in ZoI. Similarly birds like Crow (*Corvus splendens*), Dove (*Zenaida macroura*), Sparrow (*Passer domesticus*), Kalij (*Lophura lencomelana*), Pigeon (*Columba livia*) are found in the surrounding forest along the road alignment.

4.2.3 Endangered and protected species

29 **Faunal species:** Among the fauna present in the forest area along the road alignment Monkey (*Macaca mulatta*) is listed in CITES Appendix-II. Jackal (*Canis aurieus*) is listed in CITES Appendix III.

4.2.4 Aquatic Life

30 Fish species found in water bodies i.e. streams and kholas across the road alignment are Asala (*Schizothorax plagiostomus*), Katle (*Accrocheilus spp.*), Hile and Budhuna (*Garra annandalei*). These fish species are mainly found in Mardi Khola and Seti Khola.

4.3 Socio-economic and Cultural Environment

4.3.1 Population, Household and Ethnicity

31 The proposed road alignment in Huwas, Tribeni, Beulibas, Uram Pokhara, Shaligram and Wahaki VDCs with total population of 5253 persons (938 households) and average household size is 5.6. Major castes in the area are Brahman, Chhetri, Magar, Gurung and occupational caste (Damai, Kami and Sarki).

4.3.2 Main Occupation

32 The main occupation of all people residing within the ZoI of the proposed road alignment is agriculture and livestock (65.9 percent). However, agriculture farming is not enough for subsistence level due to small landholding size and lack of irrigation facilities. People are carrying out other economic activities like labour and porters (10.6%), Business and commerce (14.8%), working in government and non government organizations (3.5%), cottage industry (2.0 %) and business (5.16%). Details of occupations of the people according to the settlements are shown in **Annex XI a**.



Source: Field Survey 2009

4.3.3 Market Centres and Business Facilities

33 Major settlements along the road alignment are Chitanchok, Hatemalochok, Arthunbazar, Dunda, Kachhare, Bisundada and Wahakibhanjyang. There are grocery shops and tea stalls available in the almost all settlements. Hatemalochok, Arthunbazar and Dunda have also some hotels and restaurants. Other smaller market centres with shops of daily commodities are also found along the road alignment.

4.3.4 Local Economy

34 The economy of the area is predominantly agriculture based. Local people are gradually attracted towards cultivation of cash crops such as vegetables, orange, mustard. With growing closeness of the project area with Siddhartha highway due to transportaion facility, cultivation of fruits, vegetables in a commercial scale seems to gain momentum. Diversity in employment pattern has been also observed in recent years. Local people have increasingly engaged in business activities of different areas.

4.3.5 Agriculture Pattern

35 Major crops that are cultivated in the project area are rice, wheat, maize. Local peoples are also found to be encouraged in cash crops in recent days. Major cash crops that are grown in the project area are mustard, vegetables and fruits.

4.3.6 Livestock

36 Due to availability of good number of fodder trees, the project area has also immense potentiality of cow and buffalo farming for dairy and goat farming for meat.

4.3.7 Industry

37 Some local people are engaged in making of furniture, grills, mills and tailoring. The area has the potentiality of agro-based industries such as food processing as well as furniture.

4.3.8 Trade and Commerce

38 Goods of daily commodities are major imports in the project area, which includes salt, sugar, packed food items, spices, clothes and other items of daily uses. Similarly, major items exported from the project area are rice, vegetables and fruits.

4.3.9 Tourism Related Services

39 Some hotel, lodges are in operation in Hatemalo Bazar Arthunbazar and Dunda. Since the ZoI of the project and its surrounding area has potentiality of various types of tourism promotion, more lodge, restaurant and resorts are expected to be established in the area.

4.3.10 Health and Sanitation

40 People use piped water with source at high altitude springs. Sanitation awareness among local people is increasing and many of them have toilets in their home, but there is no public sewerage system. There are toilets in few (more than 50%) Hatemalo Bazar and Arthunbazar settlements. Major health problems observed in the area are gastric, water borne diseases, gout, respiratory diseases, and skin disease. There are 6 health posts/sub health post in the project areas.

4.3.11 Public Services and Infrastructures

Table 4.2: Infrastructure Facilities in the Project Area

Infrastructure Facilities	Details
Education	28 educational institutions ranging from primary level to college level exists in the area. Most of the families send their children to school. Female enrollment in schools is lower than that of male students. Literacy rate in the project area has been estimated around 70 percent.
Health	6 health posts/sub- health posts.
Communication	All of the settlements have telephone facilities mostly with Cell phone and wireless phone.
Electricity	Almost all settlements in ZoI are connected with national grid transmission line.
Water Supply	Generally, piped Drinking water supply facility is available to all settlements from the sources to the public taps through gravity flow. These taps are located in common places so that each serves a few households
Other Infrastructures	There are some rice and flour mills in various settlements. Agricultural Service Sub-Centre, and Veterinary Service Sub Centres are also available in the project area.
Financial Institutions	There are 3 saving and credit cooperatives in ZoI.

Table 4.3: Public Services and Infrastructures along the Road Alignment

Type of Public Service and Infrastructure	Chainage/ Location	Distance from the Road
Irrigation Crossing	1+000, 1+200, 1+990, 2+150, 2+250, 2+600, 2+900, 2+457, 2+750, 2+980, 4+000, 5+300, 5+740, 5+820, 6+000, 6+780, 6+960, 7+200, 7+300, 7+577, 7+920, 7+980, 8+080, 8+200	Across the road
Water Supply Pipe	6+300	Across the road
Foot Trail	4+800, 10+100 and 16+000	
School		ZoI
Water Source	6+720 (tap), 12+800 (tap)	above the road
Access road	5+060, 5+600, 9+100, 9+750	

4.3.12 Land Holding Pattern

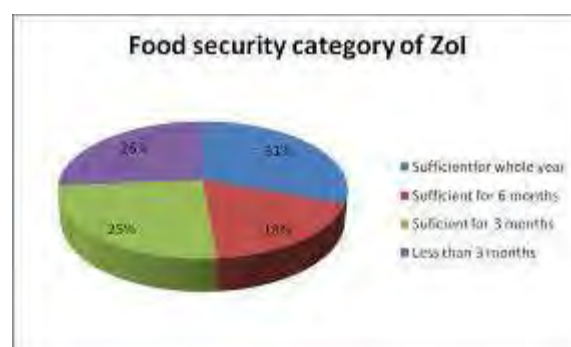
41 Land holding pattern within the ZoI of the road project demonstrates that None of the households are landless. 37.8% households have 1-5 ropani (approximately 1 ha = 20 ropani) land while 30.8% households fall under 5-10 ropani land holding category. Very few households have >50 ropani of land and 11.0% households have less than one ropani land. While 16.10 % of the households have 10-20 ropani land and 3.9% households have land holding between 20 to 50 ropani. Detail about land holding pattern is given in **Annex XI c**.



Source: Field Survey 2009

4.3.13 Food Security

42 About 26.3% of households have enough food for less than three months. 18.1% households have enough food for Six months; where as 25.1 % HHs have enough food for three months and 30.5 percent households are reported as food surplus ones who are in the well off category of selling their surplus farm products. This shows the poverty situation within the ZoI of the project area. The detail is given in **Annex XI d**.



Source: Field Survey 2009

4.3.14 Migration Pattern

43 Permanent migration takes place in limited scale towards Syanja and Pokhara. Similarly, seasonal migration also takes place from all the settlements. Majority of them migrate during slack farming season from Mangsir to Poush mainly in Pokhara, Butwal and various parts of India to work as a labourer. This could be reduced by providing employment opportunities at the local level.

4.3.15 Settlement Pattern

44 Most of the settlements within ZoI of the project are scattered type. Housing pattern of these settlements are mostly one or two storied, CGI sheet roofed buildings. Some of them are also thatch roofed buildings. RCC buildings have been started to appear in market centres such as Chitanchok, Hatemalochok and Arthunbazar.

4.3.16 Potential for Development

45 Many of the places, areas and settlements within ZoI of the project have the potentialities in various sectors. These sectors and their potentialities have been mentioned in **Table 4.5** below.

Table 4.4: Development Potentialities in Various Sectors

SN	Sector	Development potentiality
1	Agriculture	Rice, vegetables, mustard farming, within the whole ZoI
2	Tourism Promotion	This road helps to enhance tourism promotion for Hatemalochok, Arthunbazar, Dunda, and Wahakibhanjyang.
3	Small and Cottage Industry	Grill, Rice and flour Mills, furniture
4	Trade and business	Development several rural market centres at various places along the road alignment and main market centres at Hatemalochok, Arthunbazar, and Wahakibhanjyang.

Source: Field Survey, 2009

4.3.17 Religious, Cultural and Historical Sites

46 There are no Religious, Cultural and Historical Sites along the road alignment.

5.0 Project Alternatives

47 The various alternatives to achieve the project objectives with minimum environmental impacts are discussed as in the following subsections.

5.1 No Action Option

48 This alternative does not allow the implementation of the Proposal. An earthen road currently exists, which is only all weather road. As the road connects few major settlements with high potential in rice, maize, wheat, vegetables and fruits products, the no action option will increase the transportation time and cost for the local people to the district headquarter and Siddhartha highway for markets and vice versa resulting into low level of productivity and prevalence of poverty. The no action option will conserve some of the environmental adverse impacts at the cost of poverty and hardship of the people.

5.2 Proposal Alternatives

49 Construction of other supporting roads could be the options for achieving the transportation and access. Considering other project alternatives, the proposed road project can be the best option to serve the home to home services. Upgrading of Chisapani- Huwas- Barachaur road links Parbat district with Siddhartha highway at Waling (only 22 KM from Chisapani). The proposed road project is the best alternative for cheap and efficient transportation.

5.3 Alternative Alignment

50 Alignment of the Chisapani- Huwas- Barachaur road is an existing earthen road and proposed for the upgrading as a graveled standard, in which requirement to acquire land and cutting trees will be minimum than in new alignment opening. Hence, new alternative alignment is not feasible and the proposed road can be the best option.

5.4 Alternative Design and Construction Approach

51 The proposed road has been designed considering the both LEP and Contractor based approach. The construction work will not be carried by only using the labours but equipment and machineries will also be used where manual work is not possible.

5.5 Alternative Schedule and Process

52 During the rainy season, the construction work is stopped to allow the natural compaction of the road. Rehabilitation and construction work will be carried out during the remaining months. The construction period is more appropriate from October to June as the local people are generally free from farming activities.

5.6 Alternative Resources

53 There are no alternative resources for construction of the proposed road will mainly include boulders for gabions and stone for dry masonry wall. Stones are easily available in nearby areas of various sections of the road whereas fine aggregates and sand has to be transported from Seti Khola. The proposed construction will optimally use the local labour force and local materials.

6.0 Identification and Evaluation of Impacts, Benefit Augmentation of Mitigation Measures

54 The identification, evaluation and assessment of impacts has been carried out by considering the proposed proposal activities examined in terms of its current condition and likely impacts during construction and subsequent operation phases. Several such impacts have been identified based on site observation, field survey, and information obtained from the stakeholders and few were identified on value judgment. Impacts from the proposed road sub-project can be both beneficial as well as adverse. Most of the identified impacts have been quantified to the extent possible. The impacts have been predicted in terms of their magnitude, extent and duration. The possible impacts (positive and negative) in construction and operation phase are presented in the following sub-sections.

55 An effective implementation of benefit maximization measures and adverse impacts mitigation measures are also suggested hereunder. (See also **Table 7.2**).

6.1 Beneficial Impacts and Benefit Augmentation Measures

6.1.1 Construction Stage

Employment Generation and Increase in Income

56 Impacts: One of the major direct beneficial impacts of the road during construction stage is the creation of employment opportunity to the local community. Total employment during construction of this road alignment is 75547 person days in which 12591 person days as skilled and 62956 person days as unskilled. Further employment will be generated during construction of bridge. Employment generation for the local people will minimize seasonal migration through for a short period. The amount of money that is earned by the wages will directly enhance various economic activities and enterprise development with multiplier effect. This is one of the direct and significant impacts of the project but it is of short-term and local in nature.

57 Measures: Benefit augmentation measures will be implementing the work as much as possible through the local Road Building Groups (RBGs) the local people particularly poor; dalit (occupational caste), ethnic minority and women will be given priority for employment. Proponent will conduct Livelihood Enhancement Skills Training (LEST) program and awareness programs. The costs of these training are included in cost of Social Action Plan.

Skill Enhancement

58 Impacts: Working in construction of the road is likely to enhance skills of local people in construction works. Trainings on construction and maintenance of structures will further enhance their skill. The skill and knowledge thus acquired will make them find employment opportunities in future projects. This impact is direct, medium, local and for long-term.

59 Measures: Road Building group members will be given on the job training on masonry, gabion wires, construction of dry and foundation walls, slope cutting and stabilization, bio-engineering works. Proponent will conduct Livelihood Enhancement Skills Training (LEST) program and awareness programs.

Enterprise Development and Business Promotion

60 Impacts: During construction period, different types of commercial activities will come into operation in order to meet the demand of workers. Since the workers will have good purchasing power due to money earned from wages, they will regularly demand for different types of food, beverage and other daily necessary items. More local shops and restaurants will be opened to meet these demands around the vicinity of the construction sites at Arthunbazar, Dunda, Kachhare, Bisundada and Wahakibhanjyang. This impact is also direct, low significance, local and short terms in nature.

61 Measures: Proponent will conduct Livelihood Enhancement Skills Training (LEST) and awareness programs. The costs of these training are included in cost of Social Action Plan.

Community Empowerment and Ownership

62 Impacts: During construction period, various road construction coordination committees and road building groups will be constituted in order to proceed and implement the road construction activities. In this process, they

will be oriented and trained to build and safeguard community infrastructures which will result in community empowerment and feeling of ownership among them. This impact is also indirect, low, local and short terms in nature.

63 Measures: The coordination committees will be constituted and training will be given to them. Training such as Advocacy Training, Leadership Training under Empowerment related Training of LEST program will be given by proponent. The costs of these training are included in cost of Social Action Plan.

6.1.2 Operation Stage

Improvement in Accessibility and Saving of Time and Transportation Cost

64 Impacts: Once the road project is completed, the people living within the road corridor will have easy access to cities and markets. This road helps to links rural areas of Parbat district with Siddhartha highway at Waling. This is shorter route to reach Siddhartha Highway from Southern part of Parbat district (only 22 KM from Chisapani). Currently it takes 3 hours to travel from Huwas to Wahaki VDC by local vehicle. The travel time will reduce upto 1 to 1.5 hours after upgrading of road and furthermore, cost will further reduce by 50 % to travel this distance by local people. This will enhance the transaction of goods and access to social services. Access to input and services will increase, which will be cheaper due to transportation facility. After completion of bridge construction, it makes all weather road and makes easier access for local people and vehicles on rainy season.

65 This impact is direct, high, regional and for long term.

66 Measures: Regular maintenance of the road will be done by the Proponent.

Increase in Trade, Commerce and Development of Market centers

67 Impacts: There is a possibility of increased economic opportunities and significant growth and extension of the minor local markets along the road like in Chisapani, Chitanchok and Hatemalochok. The farmers will be more interested to increase agricultural production due to market accessibility. Similarly, there will be diversification in occupational pattern of local people and non-farm employment will grow to those who are till now mainly dependent on subsistence farming. This will lessen pressure on local natural resources. The impact will be indirect, low, local and long term in nature.

68 Measures: DDC/VDCs shall manage planned growth with required infrastructure facilities in the market areas.

Appreciation of Land Value

69 Impacts: The construction of road leads to appreciation of land values particularly near the market and settlement areas. The land price would increase due to the availability of reliable transportation facilities. This would uplift the economic condition of the local people. The impact is indirect, medium, local and long term in nature.

70 Measures: Promotion of land development activities and control of encroachment within RoW. The local people will be made aware that high value lands are acceptable to the banks and microfinance institutions to provide loans for them to start their own economic/social ventures.

Increased Crop Productivity and Sale of Farm Products

71 Impacts: Due to easy and cheaper availability of agricultural inputs and technologies, productivity will be increased along the road. Sale of farm and livestock products will be increased in the settlements along the road corridor like Arthunbazar, Dunda, Kachhare, Bisundada and Wahakibhanjyang settlements which are potential areas for the production of vegetables, fruits and cash crops such as mustard, orange, vegetables etc. Operation of road will further commercialize the subsistence agriculture of rural area. The economy of rural area will be further monetized and it will help the rural economy. This is the indirect, significant, local and long term impacts from the proposed road.

72 Measures: Promotion of market linkages and networking for better market price.

Enhancement of Community Development Services

73 Impacts: Due to increase in employment opportunities, trade, business and income, it is expected that there will be improvement in social service such as education, health, government offices, saving and credits. The improvement can also be expected with more frequent visit of extension workers, longer stay of professionals such as teacher, doctors to their rural duty areas. Similarly, enhanced income level will encourage local people to spend

more on health and sanitation, development of education facilities by employing qualified and professional teachers and upgrading the existing health posts. Production of educated manpower will also help to increase the number of employees in government/non government services. This is direct, significant, local and long-term impact of the proposed project.

74 Measures: The access will be kept maintained so that other development and services will follow in the project area.

Women and Indigenous People Enhancement

75 Impacts: Women and disadvantaged people in particular may be benefited more from improved access to the market centers and various service providing agencies like health centers, banks, training institutions, women development office etc. Frequency of visit to such agencies will increase awareness level and empower the women and indigenous people. Thus, the project will have indirect, significant, local and long-term impact in ZoI.

76 Measures: During the road construction and rehabilitation, more emphasis will be given to women, dalit and vulnerable workers. Various training programs will be conducted under Gender Action Plan (GAP) of the project. Trainings programs include Legal and women human right literacy classes, Reproductive cum maternity health care orientation classes, Gender sensitization and social inclusion training and Trimester GAP implementation review workshops will be conducted as per GAP of social plan.

6.2 Adverse Impacts and Mitigation Measures

6.2.1 Construction Stage

77 The proposed road will be constructed according to LEP where manual works are possible; and contractor approach where the work cannot be done manually. The likely impacts on physical, biological, socio-economic and cultural resources of the proposed road area and respective mitigation measures are presented hereunder.

Physical Impacts

Change in Land Use

78 Impacts: Construction of road will convert 1.58 ha. of cultivated land, 0.415 ha. of barren land, 0.34ha. of settlement areas into built-up area. Further there will be loss of 0.04 ha. of cultivated land during construction of bridges. This may reduce product of wheat, maize and millet annually. The impact from changes in land use will be high, direct, local and long term in nature.

79 Measures: The mitigation measures will be compensatory. Proponent will assist the farmers in coordination with district agriculture office for better agriculture extension services.

Spoil Disposal

80 Impacts: The common likely problems from the inappropriate disposal of spoils are: gulying and erosion of spoil tips especially when combined with unmanaged surface water runoff, damage to farm lands, and destruction of vegetation, crops and property at downhill through direct deposition or indirectly as result of mass flow. The impact from spoil disposal will be direct, medium, site specific and short term in nature.

81 Measures: Spoil will be safely disposed and managed at designated site with minimum environmental damage. Engineer will give approval for disposal site of spoil. Proposed Safe spoil disposal sites for road and bridge are Ch 4+200 and 6+800. There is minimum suitable sites for spoil disposal so cut and fill will be balanced and re-use of excavated materials will be given emphasis. Spoil will be used to reclaim land or eroded areas. Disposal site will be provided with proper toe wall, vegetation and adequate protection against erosion.

Slope Instability

82 Impacts: Small slide has been observed at Ch 0+100, 9+500, 11+400 and 13+070. Removal of vegetation and open cuts with exposed soil to rain may cause soil erosion as well as landslide. As the road is an existing corridor, hill slopes will not be disturbed by new cuttings of slope. Majority of work will be done manually under LEP approach by RBGs, which is an environment friendly method. The likely impact of slope instability and soil erosion is indirect, medium, site specific and mid-term nature.

83 The mitigation measures will be balance cut and fill; ensuring minimum cut slope depending upon the soil type; Re-vegetation of exposed areas; adoption of bio-engineering techniques at Ch 0+100, 9+500 and 11+400 (Grass plantation, Brush layering, Palisades, Shrub/Tree plantation), at Ch. 13+070 bioengineering measures

together with gabion breast wall is proposed; no construction work during rainy season; and use of soft engineering structures (dry wall, check dams) before disposing spoil. Soil conservation will be done by providing cross drainage structures with protection works at outlet for safe discharge of drain water on eroded roadside slopes. Recommended engineering structures necessary at various chainages for slope stabilization have been given in **Annex XVI**.

Drainage Management

84 Impacts: The concentrated water from the road outlet causes erosion and landslide eventually affecting the stability of the road itself. Water logging section is at Ch 2+900 to 3+800. The impact will be indirect, medium, site specific and medium term.

85 Measures: The mitigation measures will be to provide adequate numbers of drainage structures in order to have minimum interference with natural drainage pattern of the area; channelize surface water discharge from side drains with outlet management. Embankment filling is required from Ch. 2+900 to 3+800. Details about necessary structures required to mitigate the water induced adverse impacts are as given in **Annex XIV**.

Air Dust, Noise and Water Pollution

86 Impacts: Although the air quality of the project area is not measured, the air does not appear to be polluted. During the construction of the road, there is a strong possibility of dust emission. This may affect the local people and workers, agricultural crops, markets, schools and health posts. Contractor may use heavy equipment during surfacing works, which might be source of dust nuisance. Impact on air quality will be direct, low, local and short term in nature. The project area at present does not experience high levels of noise. However, during construction, the increased construction activities may increase the noise level to some extent. The impact of road construction on the noise level will be direct, low, local, reversible and short term in nature.

87 The water quality data within the project area is not tested. Nevertheless the quality of water in the water bodies, within the project area appears to be good, as they are widely utilized households for drinking. During construction these water bodies may be polluted by spoil and construction wastes. The impact will be direct, low, local, short term and reversible in nature.

88 Measures: The mitigation measures will include use of face mask by the workers working in the areas of high dust generation; avoid disposal of excavated materials in the water bodies; cover dry material or make it wet during transportation. Both sides of the road will be planted with trees, as far as possible which will act as sound and noise barrier. Use of ear muffs, helmet to lessen noise pollution during quarrying and bridge works.

Quarry Operation

89 Impacts: The extraction of materials from inappropriate places or in excessive amount can damage the local environment. The potential adverse impacts of quarrying are accelerated erosion, landslides, disturbance in natural drainage patterns, water logging and water pollution and vector proliferation. The likely impact from the operation of quarry sites will be direct, low in magnitude, local nature and short term in duration.

90 Measures: Quarry and borrow operation sites will be identified and approved by Engineer; unstable sites, erosion prone area, forest area, settlements, fertile farm land will be avoided for quarry / borrow operation; quarry sites will be rehabilitated by providing appropriate civil engineering structures and bioengineering measures after the extraction is complete. Recommended quarry sites in the area are given in Table 6.1.

Table 6.1: Recommended Quarry sites

SN	Chainages	Places of recommended quarry sites
1	4+100	Sand ,Aggregates and boulder from seti khola

Source: Field Survey May/June, 2009

Location of Camp Sites, Storage Depots

91 Impacts: The siting of labor camp/ storage depots by contractors for carrying out contractor-based works may cause encroachment of forest, agriculture land, alteration of drainage, disposal of solid waste, and waste water etc. which may cause degradation in the environment. Impact will be direct, medium significance, local and for short-term.

92 Measures: The mitigation measures will be use of local labors as far as possible; siting camp away from productive lands; pay compensation for using private farm or lands for storage or camp; electricity and first aid

facilities will be provided in camp sites; provision of soak pit and pit latrine will be made. For waste water and solid waste management, soak pit will be made and proper management will be done. Appropriate camp sites during road and bridge construction are at 4+100, 6+600 and 13+200.

Decline in Aesthetic Value

93 Impact: Landscape degradation relates particularly to poorly designed or monitored activities resulting from quarrying operations and from indiscriminate dumping of spoil material. Road may create scars on the landscape. The likely impact will be direct, low in magnitude, local nature and short term in duration

94 The following mitigation measures will be adopted:

- Indiscriminate dumping of spoil material will be discouraged.
- After the extraction is completed, the quarry site will be rehabilitated to suit the local landscape.
- Plantation of local species along the roadside to cover the scar by greenery.

Construction Equipment Vehicles

95 Impacts: The contractor based construction will use machineries and tools. During construction vehicles such as roller, spreader, tipper, loader will be in use which increase in air pollution due to emission of smoke and dust, and increase in vibration due to vehicular movement. Impact will be direct, high significance, site specific and short-term.

96 Measures: All equipment/vehicles deployed for construction activities shall be regularly maintained. All the vehicles deployed for material movement shall be spill proof to the extent possible. In any case all material movement routes shall be inspected daily twice to clear off any accidental spills.

Chemical Issues

97 Impacts: Petrol, diesel and grease required for vehicle to operate and kerosene to workers to cook meals. Spillage of these chemicals also damage soil productivity. Storage of fuels and chemicals and operation of vehicles and machineries result in the spillage of hazardous chemicals that can pollute nearby water sources and soil; and affects health of the workers.

98 Measures: The mitigation measures will be to store fuels and chemicals on paved surface with surrounding catch drain to protect soil from leakage. Proper storage of hazardous chemicals and providing information signboards. Use of safety gears to workers during handling of chemicals and fuels. Close monitoring during operation of machineries.

Biological Impacts

Loss or Degradation of Forests and Vegetation

99 Impacts: The road alignment does not pass through forest areas but trees need to be cut down from private and public land during widening of the road. There will be loss of 161 number of trees from private land during road construction. During bridge construction there is no need of removing tree. The adverse impacts on vegetation/forest resources due to the clearance for construction of the road have been considered to be direct, high in magnitude, local in extent and long term in duration.

100 Measures: Compensatory plantation will be done in the ratio of 1:1. Bio-engineering measures will be done for bridge embankment protection.

Impact on Wildlife Due To Loss of Habitat and Poaching

101 Impacts: The road alignment does not pass through forest and moreover, surrounding forest within the ZoI are not the major habitat of wildlife. Therefore, the impact due to construction of road will be minimum as construction of road might disturb some bird species present in ZoI of surrounding forests. The impact will be indirect, low, local and long term in nature.

102 Measures: The measures such as no vegetation shall be cut unless absolutely necessary and minimum site clearance and construction work to be carried out only in day will be adopted.

Impacts on Flora and Fauna (as listed in CITES and IUCN Red Data Book)

103 Impacts: Protected wildlife species such as Monkey (*Macaca mulatta*) and Jackal (*Canis aurieus*) are found in the surrounding forests within ZoI. However, activities involved in construction will not affect these species as road alignment doesn't pass through major forest areas and habitat of these wildlife.

104 Measures: As there are no major impacts. However, the measures as no vegetation shall be cut unless absolutely necessary and minimum site clearance, discouraging workers for collecting fuel wood from forest or Poaching/harassing faunas; shall be followed.

Impact on Aquatic Life

105 Impacts: During bridge construction there will be loss fishes of Seti Khola. There is small number of fishes are found so the impact will be direct, low, local and short term in nature.

106 Measures: Avoid disposal of construction materials on river, do not block river flow, workers shall be strictly prohibited for fishing.

Socio-economic Impacts

Loss or Degradation of Farm Land and Productivity

107 Impacts: There will be permanent loss of 1.58 ha of agricultural land due to road rehabilitation. This will lead to 2.3 MT annual loss of food grain production among the families losing lands to the project. Moreover, spoils on farm land will also affect the production of agricultural crops. This impact is expected to be of high in magnitude, local in extent and of long term in duration

108 Measures: Compensation for the loss of property will be provided to the affected people. A separate Resettlement Plan will address land acquisition and compensation issues. Camp sites and spoil sites shall away from productive agricultural land.

Loss of Private Properties

109 Impacts: One residential house will be affected during construction of road. Affected household will suffer from their property losses and hardship during road construction. The impact will be direct, significant, long term and local. Details about property loss and damage will be described in Resettlement Plan Report (See **Annex XV**).

110 Measures: Compensation and resettlement measures will be dealt as per decision made by Compensation Determination Committee (CDC). The total resettlement and rehabilitation cost is NRs. 2961423.00.

Impact on Community Infrastructure

111 Impacts: The community infrastructure that requires reconstruction / rehabilitation during construction works, and the mitigation measures are as presented in following Table 6.2. The impact due to loss of community infrastructure will be direct, site specific, short term and medium in magnitude

Table 6.2: Affected Community Infrastructures and Mitigation Measures

Type of Public Service and Infrastructure	Chainage/ Location	Potential Impact	Mitigation measures
Irrigation Crossing	1+000, 1+200, 1+990, 2+150, 2+250, 2+600, 2+900, 2+457, 2+750, 2+980, 4+000, 5+300, 5+740, 5+820, 6+000, 6+780, 6+960, 7+200, 7+300, 7+577, 7+920, 7+980, 8+080, 8+200	Damaged during road construction	Will be reinstated and 30 dia. HP will be provided for water crossing.
Water Supply Pipe	6+300	Damaged during road construction	Will be reinstated
Foot Trail	4+800, 10+100 and 16+000	Damaged	Will be reinstated by providing drain cover and damage foot steps
School	2+650 and 5+212	Noise pollution	Information signboard will be placed
Water Source	6+720 (tap), 12+800 (tap)	ZoI	Tap at 6+720 requires protection during construction of bridge. Spoils shall not be deposited near the tap

			stand.
Access road	5+060, 5+600, 9+100, 9+750	Damaged	Will be reinstated

Impacts on Cultural, Religious and Archeological Sites

112 Impacts: There are no any cultural, religious and archeological sites along the road alignment.

Impacts on Health and Safety Matters

113 Impacts: During construction, workers will be exposed to various risks and hazards. Potential impacts to health are respiration and eye diseases due to exposure to dust, risk of accident during work. The lack of proper sanitary measures and increase in waste and water pollution can lead to an outbreak of epidemics and diseases. This impact is considered to be of the direct, high in magnitude, for short term and localized.

114 Measures: The workers shall be provided and made mandatory the use of helmets, safety belts, masks, gloves and boot depending on nature of work; provide clean drinking water at sites and camp; pit toilets at sites and camp; first aid facilities at sites and camp with training to use them; provide group accidental insurance for workers. Awareness generation to local people and workers on HIV/AIDS and other communicable diseases. Safety measures (Helmets, boots, Gloves) will be used for bridge construction.

6. 2.2 Operation Stage

Physical Environment

Road Slope Instability and Management

115 Impacts: The destabilization of slope may also be expedited due to human activities in the road neighborhood such as quarrying stones or soil, irrigated cultivation, opening of branch roads that will connect the road with other village settlements. This may cause damage to road section, disruption to transportation and other social impacts in the nearby areas. The inadequate maintenance of the road, blockage of drains, damages the road surface can lead to slides and slope failure. Major area of concern is at Ch. 11+400 and 13+070. The impact will be direct, medium local and long term nature.

116 Measures: The mitigation measures to be adopted include immediate clearance of slides and restoration of slopes; regular maintenance of bio-engineering and civil structures for slope protection; restoration of rill and gully formation; and conservation of soil.

Impact Due to Air, Noise and Water Pollution

117 Impacts: During operation period, vehicles will ply along the road and will emit gaseous pollutants. This will increase the pollution level of ambient air along the road corridor due to emission of gaseous pollutants. However, air pollution due to dust will be minimized to greater extent after upgrading of earthen road to the gravel standard. As the road is of district road category and the vehicular movement is not expected to be very high, the overall impact of air pollution will, thus, be direct, low, local and medium term. Noise level during the operation period will increase due to the movement of vehicles and other activities. However, due to low traffic volume, the impact due to noise pollution will be direct, low, local and short term. The disposal of spoil and other construction materials and wastes, washing of vehicles in water bodies may degrade the water quality. The impact of this kind will be direct, low, local and long term.

118 Measures: Plantation of trees on both sides of the road as far as possible; Use of horns should be restricted near health posts, schools and settlements; for control of dust nuisance, speed limit of vehicle and vegetative barrier by planting trees along roadsides will be designed.

Biological Environment

Depletion of Forest Resources

119 Impacts: There are forests within the ZoI. The market centers might develop and exert pressure on forest resources and eventually deplete the forest resources. To meet the increasing needs of the forest products, illegal felling/cutting of trees may occur. Operation of road may increase in timber smuggling due to easy access and easy transportation facilities. The impact will be indirect, medium, local and long term in nature.

120 Measures: Support local community for controlling illegal harvesting of forest resources; awareness programmes shall be organized to educate local people on the conservation of forest.

Disturbance to the Wildlife and Illegal Poaching

121 Impacts: There are surrounding forests only in the ZoI and the wildlife population in these forests is reported low, however wildlife might be affected due to increased pressure on the forest resources resulting in loss of habitat and illegal poaching during operation period by the people from outside due to easy accessibility. The impact will be indirect, low, local and long term in nature.

122 Measures: Aware CFUG, VDCs to control illegal harvesting of forest resources and illegal poaching of wildlife and birds from surrounding forest of ZoI.

Socio-economic and Cultural Impacts

Unplanned Settlement and Market Center Development

123 Impacts: The existing trend is to settle along the road side for the economic activities through the establishment of shops, restaurants, stalls and hotels. Expansion of settlement area and market can be observed in Chisapani, Hatemalochok, Arthunbazar and Wahakibhanjyang. This may trigger the practice of encroaching right of way (RoW). Consequently, this will reduce road capacity and increase road accidents. The increasing trend of roadside settlement is likely to increase household waste as well as wastewater on the road. The impact will be direct, medium, local and long term in nature.

124 Measures: Awareness raising program through local organizations for planned settlements; include regulation of settlement with proper planning; plantations of trees in the RoW so that it is not encroached; provide sewerage in market areas. Authorities and VDCs will control encroachment of road.

Change in Social behavior

125 Impacts: Access facilities will bring social nuisance like increase in alcohol consumption, gambling, prostitution, and will increase girl trafficking. The impact will be indirect, medium, local and short term in nature.

126 Measures: The mitigation measures recommended will be facilitating awareness raising programs to the communities about negative social behavior like gambling, excess use of alcohol.

Road Safety Measures

127 Impacts: Movement of vehicles in the road will invite accidents. Inadequate provisions of road safety measures like no provisions of signals and lack of enforcement of traffic rules during operation period may invite accidents. The impact will be direct, medium, local and long term in nature.

128 Measures: The mitigation measures to be adopted will be applying appropriate road safety measures and required safety signs will be used along the road.

7.0 Environmental Management Plan

129 The EMP is prepared to guide implementation of mitigation measures and monitoring requirements.

7.1 Institutions and Their Roles

Table 7.1: Institution and their roles

Institution	Role	Responsibility in the Project	Remark
Ministry of Environment	Mandated to formulate and implement environmental policies, plans and programs at national level	Facilitate when needed on environmental safeguards	No direct responsibility in the project
Ministry of Local Development (MLD)	It is concerned line ministry, executive agency and concerned agency as per EPA/EPR. Environment Management Section is responsible to look into safeguard matters for the ministry.	<ul style="list-style-type: none"> To review IEE ToR and Report, and give approval. Coordinate with project on safeguard issues Conduct environmental monitoring from central level. 	
Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR)	Department under MLD responsible to execute infrastructure projects under MLD. Provides back-up support to DDCs in technical matters through DTO.	RRRSDP is being executed under overall coordination and supervision of the Department for the Ministry. It is also supporting DDCs through DTOs to implement the project.	
RRRSDP- Project Coordination Unit	Project specific unit.	Technical Unit to support and coordinate all activities for implementation of RRRSDP. Review, comment, and forward IEE ToR and Report for review to ADB and for approval to MLD	First Class Officer / DDG of DoLIDAR have been heading the PCU.
District Development Committee / District Technical Office	DDC/DTO is Project Implementing Agency.	<ul style="list-style-type: none"> Prepare IEE ToR and submit for approval to PCU/MLD Conduct IEE Study, Public Consultation, and prepare IEE Report Receive comments from PCU/ADB/MLD and modify accordingly. Get final approval from MLD. Conduct environmental safeguard monitoring Reporting 	District Technical Officer is the Project Manager
District Project Office	Project implementation office working directly under DDC/DTO.	Responsible for overall activities related to implementation of the works at field level.	
Central Implementation Support Consultant (CISC)	Support consultants at central level	Technical and management support to PCU	
District Implementation Support Team (DIST)	Support consultants at district level	Technical and management support to DPO	

130 To support for smooth implementation of the project, there are various district level committees and groups including District Project Coordination Committee (a sub- committee of DDC), Village Infrastructure Construction Coordination Committee (to coordinate at VDC level). Road Building Groups are formed under participation of local people from ZoI. They carryout the construction works tat can be conducted manually. Contractor will be appointed for works requiring higher skill and mechanized support.

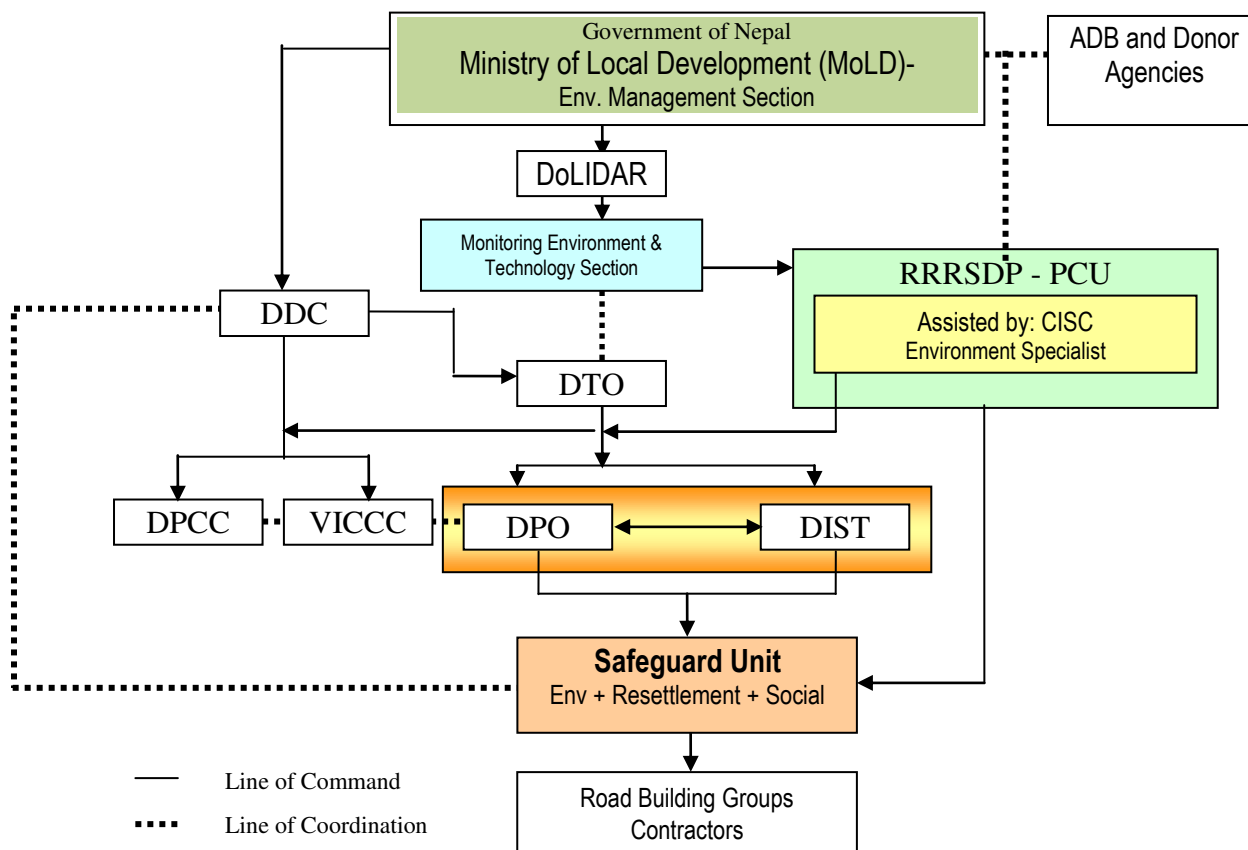
7.2. Reporting

131 Monitoring checklist will be developed as per the Environment Management Action Plan (EMP). The checklist will be used for regular monitoring. Trimersearly EMP compliance report will be prepared and submitted to the DDC, and DDC will forward it to PCU / DoLIDAR.

132 The monthly reports will be based on recurrent site inspections and will report on the effectiveness of the mitigation measures; the contractor's compliance with the environmental specifications; measures recommended in the events of non-compliance, and recommendations for any other corrective plan.

133 The trimester environment monitoring report will be submitted for the first year of operation of the road by the Proponent (DDC/DTO) to Executing Agency (PCU/DoLIDAR), who will forward the report to ADB. This is to ensure that post project monitoring is also carried out at least for one year.

Fig. 7.1: Environmental Management Organization Structure



7.3. Benefit Augmentation and Mitigation Measures Implementation Strategy

134 The DDC/DTO with support of DPO/DIST at local level and PCU/CISC at central level will be responsible for conducting careful and routine monitoring of environmental safeguard and ensure the implementation of mitigation measures and according to EMAP. Overall implementation of the EMP will become proponent's responsibility. Framework for implementing environmental management plan is shown by Table 7.2.

Table 7.2: Beneficial Impacts and Proposed Enhancement Measures

Activity	Effect	Related Beneficial Impacts	Type of Impact *)				Benefit Augmentation Measures	Responsible Agencies		
			Nat	Ma g	Ext	Dur		Executing Agency	Supporting Agency	
Construction Stage										
Construction of road	Employment Generation and Increase in Income	Increase in income level Employment generation of Skilled 12591 person days and unskilled 62956 person days.	D	H	L	ST	Maximize manual work through local, poor, vulnerable and women. Proponent will conduct Livelihood Enhancement Skills Training (LEST) program	DDC/DTO/ DIST	DPCC / VICCC / CISC/PCU	
Construction of road	Skill Enhancement	Increase in income generating activities, employment opportunities	D	M	L	LT	Priority to Affected Peoples (APs) and vulnerable groups, job training on various constructions works.	DPO/DIST	DDC/DTO / CISC/PCU	
Construction of road	Enterprise development and commercialization	Enhancement in local economy	D	M	L	ST	Proponent will conduct Livelihood Enhancement Skills Training (LEST) program. The costs of these training are included in cost of Social Action Plan.	DPO/DIST	DDC/DTO / CISC/PCU	
Construction coordination committee and RBG program	Community Empowerment and Ownership	Increase in income and ownership.	IN	L	L	ST	Coordination committees will be constituted and training will be given to them. Training such as Advocacy Training, Leadership Training under Empowerment related Training of LEST program will be given by proponent.	DPO/DIST	DDC/DTO / CISC/PCU	
Operation Stage										
Operation of Road	Improvement in Accessibility and Saving of Time and Transportation Cost	Saving in travel time and travel cost. This road helps to links rural areas of Parbat district with Siddhartha highway at Lunkhu. This is shorter route to reach Siddhartha Highway from Parbat district (only 22 KM from Chisapani). This road helps to reduce travel time and cost of local people to access other part of the country	D	H	R	LT	Proper maintenance (regular, emergency) , continuation of bioengineering	DTO/DDC	DoLIDAR	
Operation of Road	Increase in Trade, Commerce and Development of Market centers	Shifts towards improved and commercial agriculture. Growth and extension of the minor local markets along the road like in Chisapani, Chitanchok and Hatemalochok.	IN	L	L	LT	Manage planned growth with required infrastructure facilities in the market areas. Agriculture extension services, market linkages and networking for better market price.	DPO	DDC/VDC	
Operation of Road	Appreciation of Land Value	Improvement in local economic condition	IN	M	L	LT	Promotion of land development activities and control of encroachment within RoW. Awareness program shall be organized on use of high value land to get bank loans for setting	DDC/DPO	DDC/VDC	

Activity	Effect	Related Beneficial Impacts	Type of Impact *)				Benefit Augmentation Measures	Responsible Agencies	
			Nat	Ma g	Ext	Dur		Executing Agency	Supporting Agency
							up enterprise ventures.		
Operation of Road	Increased Crop Productivity and Sale of Farm Products	Socioeconomic development and raise in quality service. Sale of farm and livestock products will increase in Arthunbazar, Dunda, Kachhare, Bisundada and Wahakibhanjyang settlements which are potential areas for the production of vegetables, fruits and cash crops such as ginger, Orange, Vegetables etc.	IN	H	L	LT	Promotion of market linkages and networking for better market price.	DDC, VDC	DDC, VDC
Operation of Road	Enhancement of Community Development Services	Ease of access to social service and raise in quality service	D	H	L	LT	Keep road maintained to ensure access facility that will attract development of other social services facilities	Local people, DDC, VDC	DDC, VDC
Operation of Road	Women and Indigenous People Enhancement	Poor, disadvantaged groups and women will have easy and frequent access to social services (education, health, community development, bank, training, CBOs and networking)	IN	H	L	LT	Trainings under GAP will be provided which include programs like Legal and women human right literacy classes, Reproductive cum maternity health care orientation classes, Gender sensitization and social inclusion training and Trimester GAP implementation review workshops will be conducted as per GAP of social plan.	VDC / DDC	VDC / DDC

Table 7.3: Adverse Impacts and Proposed Mitigation Measures

Activity	Potential Negative Effects	Related Adverse Impacts	Type of Impact *)					Mitigation Measures	Responsibility for Mitigation Measure	
			Nat	Mag	Ext	Dur	Rev		Responsible Executing Agency	Relevant Supporting Agency
Construction Stage										
Physical Environment										
Construction of Road, site clearance	Change in land use	Loss of 1.58 ha. of cultivated land, 0.415 ha.of barren land and 0.34 ha.of settlement areas .Reduce product of wheat, maize and millet annually.	D	H	L	LT	IR	Compensation will be given for loss of private properties. Proponent will assist the farmers in coordination with district agriculture office for better agriculture extension services.	DDC/DTO	DIST
Construction of Road, earth	Spoil Disposal and imposed weight of spoil on fragile slopes	Gully erosion, landslide, disruption of road, damage to farmland, water	D	M	SS	ST	Re	Proper site selection and management of spoil at designated areas approved by Engineer; provision of	DDC/DTO	DIST/VICCC/ VDC

Activity	Potential Negative Effects	Related Adverse Impacts	Type of Impact *)					Mitigation Measures	Responsibility for Mitigation Measure	
			Nat	Mag	Ext	Dur	Rev		Responsible Executing Agency	Relevant Supporting Agency
excavation		pollution etc.						proper drainages, toe walls; Proposed Safe spoil disposal sites are Ch 4+200 and 6+800		
Site clearance, excavation	Slope Instability	Erosion, landslide, loss of property. Areas of concern are at Ch 0+100, 9+500, 11+400 and 13+070	IN	M	SS	MT	Re	Re-vegetation of exposed areas; adoption of bio-engineering techniques at Ch 0+100, 9+500 and 11+400 (Grass plantation, Brush layering, Palisades, Shrub/Tree plantation), at Ch. 13+070 bioengineering measures together with gabion breast wall is proposed; no construction work during rainy season; and use of soft engineering structures. Soil conservation will be done by providing cross drainage structures with protection works at outlet for safe discharge of drain water on eroded roadside slopes.	DDC/DTO	DIST
Construction of Road	Drainage Management, generation of large volume of surface runoff	Erosion, landslide, damage to farmland	IN	M	SS	MT	IR	Proper management of spoil disposal; channelize surface water discharge from side drains with proper outlet management. Embankment filling is required from Ch. 2+900 to 3+800	DDC/DTO	DIST
Operation of quarry	River bank cutting and erosion, change in river regime, instability, land slide,	Damage to farmland, water pollution etc.	D	L	L	ST	Re	Proper selection and management of quarry sites, rehabilitation of quarry sites after completion of work. Recommended quarry sites are at Ch. 4+100 for sand, aggregates and boulder from Seti khola.	DDC/DTO/ Contractor/ RBGs	PCU/CISC/ DIST/VICCC
Construction works, operation of construction vehicles, material hauling and unloading etc	Dust from exposed surface, from construction equipments and vehicles	Air pollution, public health risks	D	L	L	ST	Re	Use of face mask while working on dust prone areas, covering of dust sources	DDC/DTO / RBGs	DIST
	Increase in level of noise around school, forest areas	Noise pollution, disturbance and annoyance.	D	L	L	ST	Re	Restrict horn near school and forest etc.	DDC/DTO / Contractor	DIST
Slope cutting, spoil and waste disposal during road construction	Increase in sediment level, spills and leakage of oils and chemicals to water bodies	Water pollution and impact on users	D	L	L	ST	Re	Proper spoil management, avoid disposal of excavated materials in the water bodies areas.	DDC/DTO/ Contractor/RBG s	DIST/VICCC
Construction of road	Location of Camp Sites, Storage Depots	Encroachment of forest, agriculture land, solid waste, and waste water may cause pollution	D	M	L	ST	Re	Use of local labours; Siting camp away from productive lands; pay compensation for using private farm or lands for storage or camp; electricity	DPO assisted by DIST/ Contractor	DIST/VICCC

Activity	Potential Negative Effects	Related Adverse Impacts	Type of Impact *)					Mitigation Measures	Responsibility for Mitigation Measure	
			Nat	Mag	Ext	Dur	Rev		Responsible Executing Agency	Relevant Supporting Agency
								and first aid facilities will be provided in camp sites; provision of soak pit and pit latrine will be made. Appropriate camp site should be at 4+100, 6+600 and 13+200.		
Operation of construction equipments	Construction equipment vehicles (Rollers, tippers, spreader, water tanker etc.)	Air pollution due to emission of smoke, increase in vibration and noise pollution	D	H	SS	ST	Re	Equipment/vehicles deployed for construction activities shall be regularly maintained. All the vehicles deployed for material movement shall be spill proof to the extent possible	DPO assisted by DIST/ Contractor	DIST/CISC/PCU
Construction of Road	Decrease in aesthetic value	Disturbances in working areas and scar on topography	D	L	L	ST	Re	Cover the road alignment by planting tree on both sides; manage working areas.	DPO in assistance by DIST / Contractors	PCU / CISC / Users Committee / VDC
Operation of construction vehicles fuel, Kerosene and spoil productivity.	Storage of Petrol, diesel and grease for vehicles. Kerosene for workers to used for light.	Water sources and soil are polluted. Affects health of the workers.	IN	L	SS	ST	IR	Store fuels and chemicals on paved surface with surrounding catch drain to protect soil from leakage. Proper storage of hazardous chemicals and providing information signboards. Use of safety gears to workers during handling of chemicals and fuels. Close monitoring during operation of machineries.	DIST/Contractor	DIST/CISC/PCU
Biological Environment										
Clearance of vegetation necessary for road formation	Loss or Degradation of Vegetation. Loss of 161 number of trees	Loss of environmental benefits from vegetation, disturbance in ecological function (dust and noise absorbance, aesthetic value etc.)	D	H	L	LT	Re	Minimize cutting of tree, vegetation and bio-engineering measures. Compensatory plantation of trees in forest at ratio of 1:1 will be done in the private land.	DDC/DTO/DPO /DFO	DFO/CFUGs/ DIST
Construction activity	Impact on Wildlife Due To Loss of Habitat and Poaching	Disturbance to birds to due construction activities.	IN	L	L	ST	Re	No vegetation shall be cut unless absolutely necessary. Work only in day time, do not disturb wildlife, aware workers	DDC/DTO/DFO	DFO/CFUGs/ DIST
Construction activity	Impacts on Flora and Fauna	Loss of biodiversity	IN	L	L	MT	IR	Minimum site clearance, discouraging workers for collecting fuel wood from forest or Poaching/harassing faunas	DDC/DTO/DFO	DFO/CFUGs/ DIST
Social-economic Environment										

Activity	Potential Negative Effects	Related Adverse Impacts	Type of Impact *)					Mitigation Measures	Responsibility for Mitigation Measure	
			Nat	Mag	Ext	Dur	Rev		Responsible Executing Agency	Relevant Supporting Agency
Acquisition of land for maintaining road width	Loss or Degradation of Farm Land and Productivity (0.165 Ha), annual loss of food grain production	Reduced production, hardship, food shortage	D	H	L	LT	IR	Compensation for affected people. A separate Resettlement Plan will be prepared to address land acquisition and compensation issues. Camp sites and spoil sites shall away from productive agricultural land.	DDC/DTO	CFC ¹ DIST/VICCC
Acquisition of land and property for maintaining road width	Loss of Private Properties. oneresidential house will be affected	Displacement of people, hardship	D	H	L	LT	IR	Compensation and resettlement measures will be dealt as per decision made by Compensation Determination Committee (CDC). The total resettlement and rehabilitation cost is NRs. 2961423.00.	DTO / DIST	CFC
Demolition of structures along road alignment	Impact on Community Infrastructure	Loss of services (see table 6.2)	D	H	L	MT	Re	Restoration or relocation of affected infrastructures: Irrigation Crossing (1+000, 1+200, 1+990, 2+150, 2+250, 2+600, 2+900, 2+457, 2+750, 2+980, 4+000, 5+300, 5+740, 5+820, 6+000, 6+780, 6+960, 7+200, 7+300, 7+577, 7+920, 7+980, 8+080, 8+200), Water source 6+720 (tap), 12+800 (tap) , Access road (5+060, 5+600, 9+100, 9+750)	DDC/DTO	PCU DIST/CISC/VI CCC/VDC
Occupational health and safety aspects	Health and safety matters	Injury, fatal accidents, outbreak of epidemics and diseases, decline in capacity to work	D	H	L	ST	IR	Occupational health and safety regulations, first aid facility at sites with health treatment arrangements, contingency planning; Proper drinking water and toilet facility for construction crew	DDC/DTO / Contractors	DIST/CISC
Operation Stage										
Physical Environment										
Quarrying, operation of road	Road Slope Stability and Management	Slides and slope failure, Disturbance to traffic flow, pollution of water bodies, impacts on agriculture land, loss of vegetation.	D	M	L	LT	Re	Major area of concern is at Ch. 11+400, 13+070. include Immediate clearance of slides and restoration of slopes; regular maintenance of bio-engineering and civil structures for slope protection; restoration of rill and gully formation; and conservation of soil.	DDC/DTO/VDC	DoLIDAR , DFO, District Watershed and Soil Conservation Office (DWSSC)

¹ The Land Acquisition Guidelines, 1991 specify the establishment of an Acquisition and Rehabilitation Committee (also known as Compensation Fixation Committee, “CFC”) for fixing the rate of compensation of private properties to be acquired, consisting of the concerned Chief District Officer (Chair), Land Revenue Officer, representative of the DDC and the Project Manager and others as deemed necessary.

Activity	Potential Negative Effects	Related Adverse Impacts	Type of Impact *)					Mitigation Measures	Responsibility for Mitigation Measure	
			Nat	Mag	Ext	Dur	Rev		Responsible Executing Agency	Relevant Supporting Agency
Operation of vehicles, Inadequate drainage	Air, Noise and Water Pollution	Disturbance to students, patients, wildlife, effect to nearby agriculture land and crops	D	L	L	LT	Re	Speed limit for vehicles, no horn signs, use vegetation barrier; Regular maintenance of drainage.	DDC/DTO	DoLIDAR/ Local administration
Biological Environment										
Road operation	Disturbance to the Wildlife and Illegal Poaching	Affect wildlife and bird species due to loss of habitat from increased pressure in forest resources.	IN	L	L	LT	IR	Aware CFUG, VDCs to control illegal harvesting of forest resources and illegal poaching of wildlife and birds from surrounding forest of ZoI.	DTO/ CFUGs	DDC/CDO / DFO
Social-economic Environment										
Easy Access by road operation	Unplanned New Settlement and Market Center Development	Encroachment of RoW, increased accidents, delay in traffic movement, depletion of local resources, water pollution	D	M	L	LT	IR	Awareness program, enforcement of law, planning of land development, plantation of trees.	DDC/DTO	CDO / VICCC
Operation of Road	Change in Social behavior	Social and cultural conflicts	IN	M	L	ST	Re	Awareness, Enforcement of law and order, Provision of training for skill	DTO	DDC/ DoLIDAR
Operation of Road	Road Safety Measures	Increase in accidents	D	M	L	LT	IR	Appropriate road safety measures, Safety signs along the road.	DTO	DDC/ DoLIDAR

7.4: Beneficial Impacts and Proposed Enhancement Measures of Bridge

Activity	Effect	Related Beneficial Impacts	Type of Impact *)				Benefit Augmentation Measures	Responsible Agencies		
			Nat	Ma g	Ext	Dur		Executing Agency	Supporting Agency	
Construction Stage										
Construction of bridge	Employment Generation and Increase in Income, temporary tea stall, shop	Increase in income level , Enhancement in some peoples economy	D	H	L	ST	Involve local people to the extent possible , skilled and unskilled labour will be employed for bridge construction	DDC/DTO/DI ST	DPCC / VICCO / CISC/PCU	
On the job training to local labour	Skill Enhancement	Increase in income generating activities, employment opportunities	IN	M	L	LT	Priority to Affected Peoples (APs) and vulnerable groups, job training on Bridge maintenance.	DPO/DIST	DDC/DTO / CISC/PCU	
Operation Stage										
Operation of bridge	Improvement in Accessibility and Saving of Time and Transportation Cost	Saving in travel time and travel cost. Easy transportation of goods and daily commodities and local	D	H	R	LT	Proper maintenance (regular, emergency) , continuation of bioengineering	DTO/DDC	DoLIDAR	

Activity	Effect	Related Beneficial Impacts	Type of Impact *)				Benefit Augmentation Measures	Responsible Agencies	
			Nat	Mag	Ext	Dur		Executing Agency	Supporting Agency
		people gets transport facilities in all weather condition.							
Operation of bridge	Appreciation of Land Value	Improvement in local economic condition	IN	M	L	LT	Management, observe that RoW is not encroached. Locals will be made aware on this fact so that they can rip its benefit.	DDC/DPO	DDC/VDC

Tabel 7.5. Adverse Impacts and Proposed Mitigation Measures of Bridge

Activity	Potential Negative Effects	Related Adverse Impacts	Type of Impact *)					Mitigation Measures	Responsibility for Mitigation Measure	
			Nat	Mag	Ext	Dur	Rev		Executing Agency	Supporting Agency
Construction Stage										
Construction of bridge, site clearance	Change in land use Loss of 0.04 ha. of cultivated land needs to clear during construction of bridges.	Loss of cultivated land.	D	H	L	LT	IR	Project site is selected to minimum loss or damage of agriculture land, forest, private land or property.	DDC/DTO	DIST
Construction of bridge, earth excavation	Spoil disposal and imposed weight of spoil on fragile slopes	Gully erosion, landslide, disruption of road, damage to farmland, water pollution etc.	D	M	SS	ST	Re	Proper management of spoils and waste, provision of proper drainages, toe walls Proposed spoil disposal sites are Ch 4+200 and 6+800.	DDC/DTO	DIST/VICCC/VDC
Construction of bridge	Water Management	Affected on river flow, Erosion, landslide, damage to farmland	IN	M	SS	MT	Re	Site is selected maximum flow of water location for bridge so water can easily flow out and events of flooding, and further damage of the road and other nearby infrastructures can be prevented. No affect on river flow during bridge construction. Bridge protection work such as Bio-engineering, Gabion protection work, Lunching apron are proposed.	DDC/DTO	DIST
Construction works, operation of construction vehicles, material hauling and unloading etc.	Air , dust, noise and water pollution	Affect on local people and workers health and affect on agriculture, excavated material of bridge affect on rivers aquatic life	D	L	L	ST	Re	Use of ear muffs, helmet to lessen noise pollution during rock breaking and quarrying and bridge works. Strictly follow excavated materials will be disposed in proposed location.	DDC/DTO/ Contractor/RBGs	DIST

Activity	Potential Negative Effects	Related Adverse Impacts	Type of Impact *)					Mitigation Measures	Responsibility for Mitigation Measure	
			Nat	Mag	Ext	Dur	Rev		Executing Agency	Supporting Agency
Collection of Construction materials	Quarry site, or boulder, sand and aggregates	Water pollution, damage to farmland, disturbance in natural drainage damage forest and vegetation	D	L	L	ST	Re	Proper selection and management of quarry sites, rehabilitation of quarry sites after completion of work. Ch. 4+100 for sand ,aggregates and boulder from Seti khola.	DDC/DTO/ Contractor/RBGs	CISC/DIST/ VICCC/
Construction of Bridge	Location of Camp Sites, Storage Depots	Encroachment of forest, agriculture land, alteration of drainage, disposal of solid waste, and waste water	D	L	L	ST	Re	Appropriate camp site for bridge is at 6+600.	DDC/DTO/ Contractor	DIST/VICCC
Construction of Bridge	Impact on Aquatic Life	Potential loss of fishes during road construction due to disposal of spoils and river flow blockage.	D	L	L	ST	Re	Avoid disposal of construction materials on river, do not block river flow, workers shall be strictly prohibited for fishing	DDC/DTO/ Contractor	DIST/VICCC
Construction of bridge	Impact on Community Infrastructure	Potential affect on water tap stand at Ch. 6+720 Due to unmanaged spoils.	D	L	L	ST	Re	Protection of water tap stand during construction of bridge. Prohibit disposal of spoil near water tap.	DDC/DTO	PCU DIST/CISC/VICCC/VDC
Occupational health and safety aspects	Health and safety matters	Injury, fatal accidents, outbreak of epidemics and diseases, decline in capacity to work	D	H	L	ST	Re	During bridge construction safety measures (ear muffs, helmet, boots) will be provided to workers, first aid facility at sites with health treatment arrangements, contingency planning; Proper drinking water and toilet facility for construction crew.	DDC/DTO / Contractor	DIST/CISC/PCU
Operation Stage										
Operation of bridge	River bank erosion near bridge site.	Slides and slope failure	D	L	L	ST	R	Continuation of Bioengineering and slope protection near bridge site.	DDC/DTO/VD C	DDC, DFO,

* Legend Value in parenthesis is level of significance:

Nature- IN= Indirect; D= Direct

Magnitude- L= Low ; M= Medium ; H= High ;

Extent- SS= Site Specific ; L= Local; R= Regional ; N= National ; CB=Cross-boundary

Duration- ST= Short Term ; MT= Medium Term ; LT= Long term

Re=Reversible; IR= Irreversible

7.4. Mitigation cost

135 The estimated cost for beneficial augmentation measures like awareness raising program, skill training, promotion of small scale industries, and income generation activities will be covered by the Community Empowerment Component and Livelihood Enhancement Skills Training (LEST) program of the RRRSDP. Costs for income generation and awareness program activities for Affected Persons (APs) are included in Social Action Plan. The design and cost estimate for most of the suggested mitigation measures such as slope stabilization, quarry site management, spoil disposal, supply of face masks, helmets, muffles, accidental insurance, bioengineering measures, plantation, land slide rehabilitation shall be incorporated in the design and cost estimates. Therefore, most of the mitigation measures suggested would be a part of main project cost. All proposed mitigation measures will be integrated in the project design so that these measures may automatically form part of the construction and operational phases of the project. The indicative cost for environmental enhancement and mitigation is presented in the **Table 7.6**.

Table 7.6: Cost Estimate for Environmental Enhancement and Mitigation Measures

SN.	Environmental Protection Measures	Estimated Budget (NRs.)	Remarks
1. Benefits Augmentation Measures			
1.1	Training to DC/DTO/DPO/DIST to conduct environmental monitoring and reporting	50,000.00	To be included in project cost
1.2	Training to Naik of RBGs	50,000.00	To be included in project cost
1.3	Enhancement in Technical Skills	200,000.00	To be included in project cost
	Sub-Total (1)	300,000.00	
2. Adverse Impacts Mitigation Measures			
2.1	Bio-engineering work/Road side plantation	707,151.00	To be included in BoQ
2.2	RBG Insurance	400,000.00	To be included in project cost
2.3	Information Signboard	50,000.00	To be included in BoQ
2.4	Resettlement Cost (Compensation for properties)	2,961,423.00	To be included in Resettlement plan
2.5	Restoration or relocation of affected infrastructures, spoils disposal site management and rehabilitation, reinstate of quarry etc.	500,000.00	To be included in BoQ
2.6	Compensatory plantation Re-plantation / Re-forestation	150,180.00	To be included in project cost
2.7	Social Cost	453,000.00	To be included in Social plan, project cost
2.8	Occupational health and safety; First aid boxes, campsite sanitation (Pit latrine); solid waste management, Safety measures for workers (Helmets, gloves, masks, boots, etc.)	600,000.00	To be included in BoQ
	Sub-Total (2)	5,821,754.00	
	Total	6,121,754.00	

7.5. Implementation of Mitigation Measures

136 The mitigation measures will be integrated into project design and tender documents. Using this approach, the mitigation measures will automatically become part of the project construction and operation phase. By including mitigation measures in the contract or in specific items in the Bill of Quantities, monitoring and supervision of mitigation implementation could be covered under the normal engineering supervision provisions of the contract. The project contractor will be bound by the parameters identified in the environmental assessment pertaining to specific mitigation measures in the contract. The final acceptance of the completed works should not occur until the environmental clauses have been satisfactorily implemented.

137 The tender instruction to bidders will explicitly mention the site-specific mitigation measures to be performed, the materials to be used, labor camp arrangements, and waste disposal areas, as well as other site specific environmental requirements. Action to be taken against failure to comply with EMAP requirements will also be clearly agreed in the contract agreement document.

7.6. Environmental Monitoring

138 The IEE prescribes the mitigation measures in order to minimize adverse impacts and to enhance beneficial impacts. Environmental monitoring plan is an important tool to ensure the implementation of mitigation measures.

7.6.1 Monitoring Responsibility

139 Monitoring is an integral part of the project proponent. The Proponent, DDC/DTO Parbat will develop in-built monitoring mechanism to safeguard environment construction and operational stages. DDC/DTO will be supported by District Implementation Team (DPO and DIST) team in the district and Environmental Management Specialist from the CISC will ensure meaningful monitoring and undertaking corrective actions.

140 According to EPR, 1997, the MLD/DoLIDAR is responsible for monitoring and evaluation of the impact of the implementation of the project. The MLD/DoLIDAR checks whether the DDC/DTO is carrying out monitoring activities as per the IEE, and if the prescribed mitigation measures are being implemented. Total cost estimated for central level environmental monitoring is NRs. 50,000.

141 DDC/DTO with support from PCU/CISC will make arrangements for sub-project level monitoring. It will constitute a monitoring team. Project's district management team should be responsible for forming the monitoring team, financing the monitoring works, providing logistics and other necessary support. Thus, it is recommended that an external team hired by DDC/DTO take responsibility for periodic monitoring of the environmental performance, in addition to the regular supervision and guidance provided by the DIST at the site. The sub-project specific monitoring plan as given in **Table 7.4 and 7.5** shall be followed. At least one monitoring in each construction season is necessary.

142 The sub-project level monitoring team should submit its report to RRRSDP district management, which should forward a copy to the RRRSDP-PCU. Total cost of environmental monitoring (field visits, observation, review of reports and report preparation) is estimated NRs.200, 000.00 as given in **Table 7.7**.

Table 7.7: Environmental Monitoring Cost

S. No.	Detail	Unit	Quantity	Rate	Total (NRs.)
1	Environmental Management Specialist	Man-month			Included in the Cost of DIST
2	Sociologist / Public Relation Expert	Man-month			Included in the Cost of DIST
3	Stationary		LS		70,000.00
4	Printing and Photocopies		LS		30,000.00
5	Transportation		LS		50,000.00
6	Cost for Monitoring by MoLD/DoLIDAR		LS		50,000.00
	TOTAL				200,000.00

Thus, total environmental monitoring and management cost is NRs. 6,321,754.00

7.6.2 Types of Monitoring and Monitoring Parameters

143 Monitoring is an on going component of the environmental assessment process and subsequent environmental management and mitigation activities. There are basically three types of monitoring: Baseline monitoring, Compliance Monitoring and Impact Monitoring.

144 Environmental Monitoring for this sub project are:

- Compliance Monitoring** - It verifies whether contract environmental clauses and the mitigation measures are properly implemented in the field. The frame work for compliance monitoring is given in the **Table 7.8**.
- Impact Monitoring** - It confirms whether the environmental mitigation measures specified in the project design and contract are correctly formulated. The frame work for impact monitoring is given in the **Table 7.9**.

Table 7.8: Compliance Monitoring for Chisapani –Huwas-Barachaur Road Construction Works

Parameters/Issues	Responsible Implementing Agency	Verifiable Indicators	Verification Methods	Schedule	Responsible Monitoring Agency
Final alignment selection as per IEE /EMP recommendation	DIST	Incorporation of IEE / EMP recommendations into alignment selection process and design document	Walkthrough along final road alignment, verifying sensitive areas	Initial stage preconstruction phase	Proponent through CISC; DoLIDAR
Land and property acquisition and compensation	Proponent with assistance of DIST	Cadastral records, Land and properties acquisition procedures; Procedures followed during voluntary donation of Land; Preparation of inventory of infrastructures likely to be affected	Public consultation, photos; geo-referencing; Check inventory against cadastral records and discuss with people	Initial stage pre-construction phase - well ahead of construction	CFC / PCU (CISC) / DOLIDAR / MoLD
Resettlement, assistance and compensation	Proponent / DIST	Legal provisions by GoN; Compensations paid	Check compliance to legal procedures	Well ahead of construction	CFC / PCU (CISC) / DOLIDAR / MoLD
Site selection and preparation of construction logistics	Proponent / VICCC	Project's arrangement for materials storage, and construction activities	Site observation, geo-referencing and photographic documentation	Beginning of construction period	DIST/ DPO
Use of local labour, particularly vulnerable groups and women	DPCC / VICCC / DIST	Specifications which obligate the contractors/BG to observe certain quotas for employing local labour, specially vulnerable groups and women, prohibition of child labour	Records of the that facilitates and coordinates the process for local people's employment, interviews	During the entire period where labour work is contracted, trimester	Proponent / DPO
Awareness and orientation training on road construction to technicians, and locally employed labourers	Proponent in assistance of DIST	Training programmes for skill development, occupational safety and environmental protection associated with road construction works	Specifications; Training records, check training programme reports, assess feedback from participants	Beginning of construction and during construction	DIST / Proponent (DTO)
Compliance to Occupational health and safety matters	DIST / Contractor (if involved)	Health and safety regulations, first aid and medical arrangements, contingency plan, number and type of safety equipments such as mask, helmet, glove, safety belt, First Aid, Emergency Rescue	Spot checks at work sites, photos, accident records, interviews	throughout construction activities, trimester	Proponent / DPO
Compliance to Environmental Protection Measures, including pollution prevention, water and		Arrangement specified in the Code of Practice and in Manuals relating to environmental protection; EMP detail in IEE Document; records and observations on	Site inspection, DISTussion with Project management, consultants, and local people. Quantifying site-specific impacts,	Before and during construction period	DPO/Proponent

Parameters/Issues	Responsible Implementing Agency	Verifiable Indicators	Verification Methods	Schedule	Responsible Monitoring Agency
soil management, slope stabilisation, cut and fill, waste management, spoils, sensitive habitats and critical sites, protection of fauna and flora	Contractor /RBG/ DIST	pollution, waste management, spoil deposit. Training programmes for labourers to prevent impacts on wildlife sensitive habitats, forests and fuel wood use.	photos, laboratory tests where required. Existing patrol, control and enforcement mechanisms, enforcement records		
Vegetation clearance	Contractor / RBG / DIST	Actual number of trees felled during construction works; Location (in Formation Width or RoW	Record, inspection and interview with local people and CFUGs	After detail design and before construction work	DPO CFUGs / Proponent
Measures to avoid pressure on forest and wildlife	Contractor / RBG / DIST	Use of firewood or fossil fuel by construction crew, events of Poaching and poaching of wildlife	Inspection, interview with local people and CFUGs	Once a month during construction	DPO / CFUGs / Proponent
Measures to protect environment from air & noise pollution	Contractor / RBG / DIST	Dust level and noise level at work sites, major settlements and sensitive spots like health centres and schools	Visual observation, Observation of good construction practices and DISTussion with residents and workers	Once in a month during construction	Proponent / DPO
Measures to protect water bodies from pollution	Contractor / RBG / DIST	Visual observation, observation of open defecation/waste/spoil disposal around water sources near construction sites .	Site inspection, test of site-selected samples of local streams water using standard field kit, interview	Once in a month during construction; Upon demand for testing with field kit	Proponent / DPO
Restoration, rehabilitation, reconstruction of all infrastructure services disrupted or damaged by the proposal activities	Contractor / RBG / DIST	Continued services by the facilities and functional public life	Site observation; VDC records; Public Consultation Meetings; Photos	Once in 15 days during construction	Proponent / DPO
Adequate technical and environmental supervision	DIST	Adequate number of technicians regularly at site Ability to implement labour based road construction concept	Check number and type of technicians available at site; Skill of work carried out; Discussion	Twice a month during construction	DPO , Proponent

Parameters/Issues	Responsible Implementing Agency	Verifiable Indicators	Verification Methods	Schedule	Responsible Monitoring Agency
Clean up and reinstatement of the construction sites (camps, quarries, borrow pits)	Contractor / RBG / DIST	Decommissioned sites indicate no adverse/residual environmental impacts, and are rehabilitated to the satisfaction of the supervisor and land owners	Site observation; Comparing photos; Consultation with land owners and CBOs	At end of construction period	Proponent / DPO

Table 7.7: Impact / Effect Monitoring for Chisapani –Huwas-Barachaur Road Construction Works

Parameters /Issues	Verifiable Indicators	Verification Methods	Location	Schedule	Responsible Implementation and Monitoring Agency
Slope stability and erosion	Inclination, slope failures causes; Drainage facilities such as catch drain, side drains and functionality of cross drainage structures; Fresh gullies and erosion; Success/failure of bio-engineering solutions	Site observation, photos DISTussion with people and technicians	Near steep slopes and at landslide areas and sites where bio-engineering failed	Continuously during construction and operation	DIST during construction; Proponent / DPO / Soil Conservation Office during operation
Bio-engineering of disturbed slopes	Re-vegetation through bio-engineering application on disturbed slope; Establishment of nursery	Site observation; Inspection of nursery and its production rate, photos, measurements	Cut slope area, where vegetation is cleared; Nursery	During and at end of Project construction	DIST/ Proponent
Disposal of Spoils and construction wastes	Affected aesthetic value, affected forest and agriculture, initiated land erosion by local blocked drainage, hazard to downhill slope residents and agricultural lands	Site observation and interviews, photos, geo-referencing sites	At specific locations where such sites occur	During construction	DIST/ Proponent
Quarrying of construction materials	Initiated erosion, changes in river regime, erosion by river systems, landslide due to quarrying, degradation of vegetation, water logging, waterborne diseases	Site observation, photos, records from local health centres	Quarry site areas	During construction	DIST/ Proponent
Disruption of drainage system	Status of rehabilitation Service status of irrigation and water supply system; Operation and maintenance requirement	Observation and interviews, photos, fisheries data, wildlife records	Disrupted aquatic system, irrigation schemes	During construction	DIST / Proponent
Loss or degradation of farmland , houses and properties	Status of road side land; Production / yield; Status of road side houses; Status of standing crop along alignment	Observation, data collection and analysis and interview with stakeholders	Road side land and houses	During construction	Proponent / DIST/ VICCC
Water quality	observation of open defecation and waste disposal around water sources near construction sites ; Parameters like pH, hardness, DO etc.	Visual observation, measurement of water sample using standard field kit	local streams	During construction; Upon demand for testing	DIST / Proponent

Parameters /Issues	Verifiable Indicators	Verification Methods	Location	Schedule	Responsible Implementation and Monitoring Agency
				with field kit	
Air quality	Dust level in ambient air	Visual inspection and comparison with baseline condition	At construction sites and at sensitive spots (schools, health spots, major settlements)	During construction and operation	DIST / Proponent
Forest and vegetation	Numbers of trees, presence of ground vegetation, signs of illicit logging and extraction of NTFPs	Observations, DFO records, photos; interview with CFUGs members	In and around the construction sites, markets,	During construction and operation	DIST/ CFUGs/DFO during construction; CFUGs / DFO during operation
Wildlife	Wildlife Poaching trapping and poaching by work force, trade of wildlife, biological survey on selected biota, road accidents inflicting wildlife	Interview with local people / DFO/ CFUGs members, photos, observations	Forest areas at roadside	Twice a year during construction and routine during operation	DIST during construction; CFUGs/DFO during operation
Change in economy	Numbers of people employed by the Project during construction Numbers of women in work forces	Records kept by the Project management, DISTussion with stakeholders	Project Area	Trimester during construction phase	DIST /Proponent
Trade and commerce	Numbers of shops increased or decreased, rental of houses and land spaces	Records, interviews, observations, photos	Project Area	Throughout Project, once in a year	Proponent / VDC
Cottage industries	Establishment of industries in the vicinity of Project Area	Records and interviews, photos	Project Area/ zone of influence	Throughout Project	Proponent / VDC
Occupational safety and hazard	Type and number of accident occurred during construction; Adequacy of occupational safety measured provided; Compensation provided in case of fatal accidents or invalidity	Observations, photos, spot checks, contractors' and health centre records interview with labourers	Project Area	During construction	DIST/Proponent
Change in socio-economic structure	No and extent of new settlements / types and ethnic groups; Nos and extent of new businesses; Nos and extent of new services and utilities, social conflicts	Observations, interview with local people, DDC Police and VDC records	Project Area	During operation	Proponent / VDC
Ribbon settlement	Congestions to road users Nos. of accidents, RoW encroachment	Records, observations	Project Area	During operation	DDC/CDO

8.0 Conclusion and Recommendations

8.1 Conclusion

145 The IEE study of the proposed Chisapani-Huwas-Barachaur road sub-project does not pass through any environmentally sensitive area and have minimal detrimental effects associated with loss of forest and agricultural land. This road helps to link rural areas of Parbat district with Siddhartha highway at Waling. This is shorter route to reach Siddhartha Highway from Southern Part of Parbat district (only 22 KM from Chisapani). Most of the adverse impacts predicted are of low significance and short term as well as of reversible nature. The beneficial impacts with the facility of access to market centers and location of social services will enhance productivity in rural area and improve the quality of life of the people. In addition, local people will get direct employment as workers which will contribute significantly in improving their livelihood. These benefits from the implementation of the proposed road project are more significant and long term in nature against the adverse impacts most of which could be mitigated or avoided.

146 The IEE has shown that none of the anticipated environmental impacts of constructing the proposed road is significant enough to need a detailed follow-up EIA or special environmental study. Therefore, this IEE is sufficient for approval of the sub-project.

8.2 Recommendation

147 A key consideration in selecting the road alignment is to minimize the acquisition of valuable agricultural and forest land. However, some agricultural and forest land and possibly some built areas will have to be acquired for construction of the proposed road. A Resettlement Plan will be required to ensure that the persons affected by these losses are properly compensated.

148 The proposed road project is recommended for implementation with incorporation of mitigation measures and environmental management plan.

9.0 Miscellaneous

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ANNEXES

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मिति: २०६६/१/२५

लिपि: - प्राचिनकालाख्येय परिकल्प (1113) का त्रयसंख्य (1138) स्वीकृत भाग्ये ।

प्रारम्भिक पुनर्वसन तथा पुनर्स्थापना कार्यक्रम (REHABILITATION PROGRAM) अन्तर्गत विभिन्न शिक्षित निम्नतम शैक्षिकीय स्तरमा रहेका विभिन्न उमेरका सहकर्मचारी प्रारम्भिक स्वास्थ्यसुधार, परीक्षणको आवश्यकता (आहार) कार्यसूची (TOAR) तथा गरी तल्लो विवाह शर्पक स्वास्थ्यसुधार सहजता विभागावली, २०१४ अनुसार स्वीकृतको तल्लो यस सम्बन्धमा पेश भएकोमा नेपाल सरकारको मिति २०१६/२/२४ को निर्णय (प्रतिबन्धक) अनुसार स्वीकृत भएको प्रतिवेदन मा.२/२ गरी सरकारबाट गठानको जारीसँग अनुमति भएको ।

1. चिन्तामणी-हवाम बाग चौक, डोमिनिका-फ्लोरेन्स, गुल्ताब-सोलेजा, कार्जिनिया-गुडगु सडक बागबागपर्वत जिल्हा। ✓
2. गडुवा-राडीवेडवा, कास्कीडोल-हुकम गाईकोट, धिब्रोल-रुपानु सडक बागड (गडुवा जिल्हा)। ✓
3. धनेलपरी-गिरीरड, सौकु-अर्दिह, पौवा-फटकेकर, सोडिपौवा-भोटेपौर, ज्यामिरी-बागबागजलाड (जाहमपारी जिल्हा)। ✓
4. नाम्बु-मार्बु-पुल (दोलखा जिल्हा)। ✓
5. तेलकोट-झुलंड-चंगु, ज्यामोतिव-बमराडोल-माला (प्रतपुर् जिल्हा)। ✓
6. पिपरा-मगलगाड-हैरा (सिन्धुली जिल्हा)। ✓
7. काले गुडीली-लिम्बू, चोरफेसरी-आलवा-दोडा-परी भज्यवाड-जोगमा, किदिम-राली गाँव-बागोफ, काले गुडीली-दुर्बिम्बा (पौवथ जिल्हा)। ✓
8. फायम-वहचौर-हर्जय-सिउरी (रोल्वा)। ✓

विजयराज भुवेंदी
शास्त्र अभिज्ञ



स्वीकृत मिति: २०६६/१२/२२

Terms of Reference (ToR)
for
Initial Environmental Examination (IEE)
of
**Chisapani-Huwas-Barachour
Road Sub-Project**

Submitted to:
**Ministry of Local Development,
Government of Nepal**

१६
२०६६/०८/१६

Proponent:
**District Development Committee (DDC)
District Technical Office (DTO)
Parbat**

Telephone No. -067-421165

March 2009

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[Signature]



[Signature]

ABBREVIATIONS

ADB	Asian Development Bank
Ch	Chainage
CF	Community Forest
CISC	Central Implementation Support Consultants
CITES	Convention on International Trade in Endangered Species of Flora and Fauna
DDC	District Development Committee
DG	Director General
DIST	District Implementation Support Team
DoLIDAR	Department of Local Infrastructure Development and Agricultural Roads
DPO	District Project Office
DPCC	District Coordination Committee
DTO	District Technical Office
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMS	Environmental Management Section
EPA	Environmental Protection Act
EPR	Environmental Protection Rules
FGD	Focus Group Discussion
GoN	Government of Nepal
IEE	Initial Environmental Examination
IUCN	The World Conservation Union
Km	Kilometer
LEP	Labour based, environment friendly and participatory
MLD	Ministry of Local Development
NGO	Non-Governmental Organization
PAM	Project Administrative Memorandum
PCU	Project Coordination Unit
REA	Rapid Environmental Checklist
RRRSDP	Rural Reconstruction and Rehabilitation Sector Development Project
SF	Social Funding
SDC	Swiss Agency for Development and Cooperation
SDS	Social Development Specialist
SM	Social Mobilizer
TA	Technical Assistance
ToR	Terms of Reference
VDC	Village Development Committee
ZoI	Zone of Influence



1.0 NAME AND ADDRESS OF THE PROPONENT

The District Development Committee (DDC)/District Technical Office (DTO), Parbat is the executing agency at the district level and the proponent of the Initial Environmental Examination (IEE) study for the rehabilitation of Chisapani-Huwas-Barahachaur sub-project. 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)
Kushma, Parbat

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.

This Terms of Reference (ToR) is prepared to conduct an IEE study of Chisapani-Huwas-Barahachaur road sub-project in Parbat District.

2.2 BACKGROUND OF THE SUB-PROJECT

The proposed of Chisapani-Huwas- Wahaki VDC road sub-project lies in the South-Western part of Parbat district of Western Development region of Nepal. This sub-project starts from Chisapani of Huwas VDC ward no. 6 and ends at Vanjayang of of Wahaki VDC ward no.9. Major settlements along the road alignment are Hatemalochouk of

ToR for IEE Chisapani-Huwas-Barahachaur sub-project in Parbat District



Huwas VDC, Arthun Bazar of Triveni VDC, Dunda and Kachahari of Beulibas VDC, Tari and Bishudada of Urapohara VDC, and Wahakiyanjayang of Wahaki VDC. Total length of the road alignment is 15 km.

The starting point of the road Chisapani-6, Huwas is a point of border of Parbat and Syanja. This road is not link with Kusma, district headquarter of Parbat. Up to 3.5 km section, the road width is 4.0 m or more because of gabion wall construction at different sections. For the remaining length of the road, width is 3 m in general, but some sections of road are having 2.5 to 3.5 m width also. Almost all alignment of the road passes from lower valley to upper valley. Out of 15 km, approximately 500m long stretch needed to be realigned for grade improvement of the road.

The people in this project area are having many types of transportation problems due to the steep topography. Local people have no access to the market centres of the district to fulfil their daily needs, for the market purpose, they are going to other district market like in Walling bazaar of Synja District. This road is not link with District headquarter Kusma. Hence the locally produced materials like Paddy, Wheat, Maize are main product of that areas and due to lack of link road that product getting low prices than it may fetch. Other development facilities are also far from the reach of people because it is very difficult to create a system like water supply, electricity, bio-gas plant and telephone without a road corridor. Having lots of transportation difficulties, people of the road corridors initiated to construct a road by using excavating machine through DDC from FY 062/063.

The rehabilitation of road will mainly enhance the transportation of *Paddy, Wheat, Maize* produced in remote areas of Saligram and 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 minimise migration to Kathmandu, Pokhara and Syanja in search of work. Consequently, local people will get long-term benefit which will enhance their economic status within the ZoI of road corridor and adjoining area of Parbat district.

This road is identified as a priority road in the District Transport Master Plan (DTMP). Rehabilitation of this road with gravelling will provide physical and economical access to the people of South-Western 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**.







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 will connect Huwas, Treveni, Beulibas, Urampokhara, Saligram and Wahaki VDCs with connect to the Waling of Syanja District,. This road starts from Chisapani of Huwas VDC to river pass through Mardi river. The end point of this rehabilitation section of road is Wahaki-9, Bhanjyang (770 m amsl).

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 assesment (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 Nirdesika* (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.

[Signature]
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5. ALTERNATIVES FOR THE IMPLEMENTATION OF THE PROPOSAL

Alternative analysis has been considered as an integral part of IEE study, which involves 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. REQUIREMENT OF THE IEE STUDY

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

6.1. TIME SCHEDULE

The 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

S	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

Normally 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 a DIST team Parbat, 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 CISC, no separate budget and manpower is required. However, specific subject matter experts will be hired for short term basis if needed.

7. ENVIRONMENTAL BASELINE

The IEE 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. ANALYSIS AND INTERPRETATION

The 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.

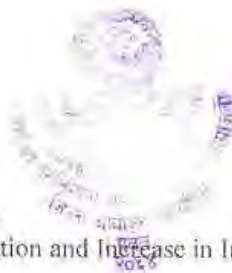
9. IDENTIFICATION, PREDICTION AND EVALUATION OF IMPACT

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 impacts shall be assessed covering both adverse and beneficial ones. The methodology used 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

The 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 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
- Road safety measures

10.0 BENEFIT AUGUMENTATION/MITIGATION MEASURES

The IEE study will propose site-specific benefit augmentation 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 augmentation 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)**
- v. **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
- vi. **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 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 Zol
 - 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 / RRRSDP

Name of the sub Project:

Chisapani- Huwas- Barachaur Road Sub-Project

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Sitting			
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)?		✓	

SCREENING QUESTIONS	Yes	No	REMARKS
<ul style="list-style-type: none"> Alteration of surface water hydrology of waterways crossed by roads, resulting in increased sediment in streams affected by increased soil erosion at construction site? 		✓	
<ul style="list-style-type: none"> Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction? 		✓	
<ul style="list-style-type: none"> Increased local air pollution due to rock crushing, cutting and filling works, and chemicals from asphalt processing? 	✓		During road construction there will be increase in human and different construction activities that may cause the air pollution.
<ul style="list-style-type: none"> Noise and vibration due to blasting and other civil works? dislocation or involuntary resettlement of people 		✓	
<ul style="list-style-type: none"> Other social concerns relating to inconveniences in living conditions in the project areas that may trigger cases of upper respiratory problems and stress? 		✓	
<ul style="list-style-type: none"> Hazardous driving conditions where construction interferes with pre-existing roads? 		✓	
<ul style="list-style-type: none"> Poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from workers to local populations? 		✓	
<ul style="list-style-type: none"> Creation of temporary breeding habitats for mosquito vectors of disease? 		✓	
<ul style="list-style-type: none"> Dislocation and compulsory resettlement of people living in right-of-way? 		✓	
<ul style="list-style-type: none"> Accident risks associated with increased vehicular traffic, leading to accidental spills of toxic materials and loss of life? 		✓	
<ul style="list-style-type: none"> Increased noise and air pollution resulting from traffic volume? 		✓	
<ul style="list-style-type: none"> Increased risk of water pollution from oil, grease and fuel spills, and other materials from vehicles using the road? 		✓	

Source: field survey, May/June, 2009

Annex III: Abstract of Cost

SN	Description of works	Unit	Estimated	Rate(NRs)	Amount	Remarks
			Quantity	In Figure	(NRs)	
A	General					
1	Insurance of works, Plants and materials, construction equipments and against accident to workmen including third party insurance.	Lump Sum		300,000.00	300,000.00	
2	Carry out additional tests for material and works as required and instructed by the Engineer.	Lump Sum		150,000.00	150,000.00	
3	Providing Site Office for Supervision team	Lump Sum		72,000.00	72,000.00	
4	Providing motorbike for supervision team @ 2Nos.	Lump Sum		300,000.00	300,000.00	
5	Relocation of public utilities structures (Irrigation canal, Water supply pipelines etc) as instructed by Engineer	Lump Sum		300,000.00	300,000.00	
6	Provide and maintain traffic safety, control measures and temporary diversions during Construction as instructed by the Engineer.	Lump Sum		70,000.00	70,000.00	
				Sub-Total (A)	1,192,000.00	
B.	Roadway Works					
1	Site clearance work	Sq.m	8,020.00	12.00	96,240.00	
				Sub-Total (B)	96,240.00	
2	Excavation in roadway, drain and foundation for gabion, dry and cement masonry retaining wall structures including removal and satisfactory disposal upto lead of 50m and stacking or hauling (to sites of embankment construction) of suitable cut materials as required (Respective clause of specifications 2-1.2.2,2-1.8 and 2-1.9) for:-					
2.1	a) ordinary soil	Cum.	19,919.110	55.00	1,095,551.05	
2.2	b) hard soil	Cum.	32,522.480	66.00	2,146,483.68	
2.3	c) Ordinary Rock	Cum.	7,778.480	150.00	1,166,772.00	
2.4	d) Medium rock	Cum.	2,334.720	300.00	700,416.00	
2.5	e) hard Rock	Cum.	474.810	1,000.00	474,810.00	
				Sub-Total (C)	5,584,032.73	
3	Construction of roadway in embankment and miscellaneous backfilling areas with approved material obtained from roadway excavation including average transportation distance up to 50 m along the lead route, spreading in layers, watering and compaction; (Respective clause of specifications 2-5)					
3.1	a) ordinary soil	Cum.	18,169.030	75.00	1,362,677.25	
4	Transportation and Safe disposal of Surplus excavated materials to the tipping site by Tractor or Truck up to 2 km	Cum.	14,568.010	213.14	3,105,025.65	
				Sub Total (D)	4,467,702.90	
C.	Structure Works					
1	Stone Masonry work in (1:4) in Drain work along the road(Respective clause of specifications 8 A a)	Cum.	3,118.650	4,714.910	14,704,154.072	
2	Cement Concrete works: It includes all labour and material required for mixing, placing in position, vibrating, compacting, finishing, curing and all other incidentals required to produce concrete of specific strength as per the specification. The rate includes the work of making, fixing and removing of all centres and forms required for the work.(Respective clause of specifications 11 A a)					
2.1	Cement concrete work (1:3:6)	Cum.	23.160	7,588.84	175,757.53	
2.2	Cement Concrete work(1:2:4)	Cum.	827.580	9,223.62	7,633,283.44	
3	Dry Stone wall	Cum	640.740	1,496.35	958,771.30	
4	Reinforcement work	Kg	3,314.760	76.71	254,260.32	
5	Form Work It includes all labour, materials and other incidentals required for the construction and removal of forms as described in the specifications. It further covers the framing work that is required for properly supporting the members until the concrete is sufficiently cured, set and hardened.(Respective clause of specifications 9)	Sq.m	198.720	425.75	84,605.04	
				Sub-Total (E)	23,810,831.71	

6	Supply and laying RCC Hume pipe (NP3). It includes all operations required to complete the work upto a trench depth below the ground level and jointing of pipes with 1:2 cement sand mortar. For ever subsequent pipe having a length of minimum 1 m. (Respective clause of specifications 15-5 and 15-6)					
6.1	30cm Dia	Rm.	127.500	2,741.28	349,513.20	
6.2	60cm Dia	Rm.	195.000	5,225.74	1,019,019.30	
Sub-Total (F)					1,368,532.50	
7	Gabion Works					
7.1	Fabrication of gabion boxes including rolling, cutting, weaving and supply to the site (Hexagonal Mesh Size: 100mm*120mm, selvedge wire-7swg, mesh wire-10 swg & binding wire-12 swg, all heavy coated)(2x1x1)	Cum.	1,366.000	1,392.84	1,902,612.61	
7.2	Fabrication of gabion boxes including rolling, cutting, weaving and supply to the site (Hexagonal Mesh Size: 100mm*120mm, selvedge wire-7swg, mesh wire-10 swg & binding wire-12 swg, all heavy coated)(1.5x1x1)	Cum.	882.000	1,350.63	1,191,252.72	
7.3	Assembling of gabion baskets and placing them in position including stretching, binding them together and tying down lids and Stone Packing in Gabion Crates including stone supply(2x1x1)	Cum.	1,366.000	1,194.85	1,632,165.10	
7.4	Assembling of gabion baskets and placing them in position including stretching, binding them together and tying down lids and Stone Packing in Gabion Crates including stone supply(1.5x1x1)	Cum.	882.000	1,194.00	1,053,108.00	
Sub-Total (G)					5,779,138.43	
8	20 cm thick stone pitching on the prepared bedding including supply of stone and river spalls for sealing of voids	Cum.	3,728.640	1,383.02	5,156,783.69	
9	5cm thick beddig for stone pitching with screened Granular material	Cum.	295.730	1,738.05	513,993.53	
Sub total (H)					5,670,777.22	
D.	Pavement work					
1	Subgrade preparation work(Loosing and recompact at subgrade level including breaking of clods, spreading in layers, watering and compaction) Respective clause of specifications 2-1.6, 2-1.7, 2-1.8, 2-1.9 a	Sq.m	64,160.000	38.50	2,470,160.00	
2	15 cm thick gravelling work (63mm down) Lead average 10km	Cum.	8,989.800	2,252.61	20,250,513.38	
Sub total (I)					22,720,673.38	
E	Cutting of trees					
1	Cutting of trees having girth of above 30 cm when measured at 1m above the ground including the removal of trunk, branches and stumps up to a lead of 100m along the lead route for trees of size: (above 30cm to 60cm girth)(Respective clause of specifications 1-1.5(a), 1-1.5(b) and 1-1.6)	Nos.	130.000	87.00	11,310.00	
2	Cutting of trees having girth of above 30 cm when measured at 1m above the ground including the removal of trunk, branches and stumps up to a lead of 100m along the lead route for trees of size:(above 90cm to 180cm girth),(Respective clause of specifications 1-1.5(a), 1-1.5(b) and 1-1.6)	Nos.	31.000	450.00	13,950.00	
Sum Total (J)					25,260.00	
(K) Total of Sub-Total A,B,C,D,E,F,G,H,I and J					70,715,188.87	
Bio-Engineering 1% of Total cost					707,151.89	
(A) Total					71,422,340.76	
15% OVERHEAD					10,713,351.11	
(B) Total					82,135,691.87	
13% VAT					10,677,639.94	
(C) Total					92,813,331.81	
Contingency @5% of total					4,640,666.59	
Grand total					97,453,998.40	
Cost Per KM					6,075,685.69	

Annex IV: RRRSDP Environmental Checklist

A. GENERAL SOCIO-ECONOMIC SITUATION OF THE INFLUENCE AREA²

1. Overview of settlements in the zone of influence (ZoI) area

VDC	Name of Settlement	Household and Population	Caste/ethnic distribution	General Comment

* Use the same codes as in strip map and topographical map.

2. Economic activities/main occupation

VDC	Settlement	Number of HH and Percentage of Population engaged in					
		Agriculture & Livestock	Labor & Porter	Business/Commerce	Cottage Industry	GO/NGO Employees	Others (specify)

3. Existing services and infrastructures

[illegible]

A. _____ B. _____ C. _____ D. _____

2. Food grain availability

S N	VDC	Settlement	Number of HHs having food sufficiency for					Total HHs
			Surplus (Sufficient for > 12 months)	Sufficient for whole years	Sufficient for 6 months	Sufficient for 3 months	Hand to mouth existence	
1								
2								

Source: field survey, May/June, 2009

3. Major existing agriculture production (denotes the most dominant by 1, second dominant by 2 and so on).

S. No.	Type of Agriculture Production	Settlements									
		A	B	C	D	E	F	G	H	I	
1.0	CEREALS										
1.1	Rice										
1.2	Wheat										
1.3	Maize										
1.4	Millet										
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. Bayaleneta

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. Also mention the place.

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

Name of settlement:

- (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
1		
2		

- 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
1		
2		

C. HISTORIC AND CULTURAL RESOURCES WITHIN THE SETTLEMENT

Type of Resource	Name/specification	Affecting activities	Location from project

गर्भर्त्तुमा...

* પૃષ્ઠ ૮૬ નાટક પ્રસંગ:

१ परछाँ

॥ वैद्य भण्डालाल खमिली व
जने, जुलमे धराला ॥
हा नांगे निवृत्तपत्र सुधला
ही वैद्यकी शास्त्र मरणा २६
यात शास्त्र तीन भागांमध्ये

टमेल्ट

हाइपा १९औं रास्ता स्वयंपा
इन पडाव गन सल्लिने वक्त
साली, विदेशी मुद्रा सट्टी,
कमि अनायासी छः
दुद सेवा दिने जेवयभनार
धरा लागतखेल, धरान,
मादको छुः आगामी दुद
ज्याउने समय रैखने छः
५६ लाख ६२ करोड ५०
सैठ ५० जना प्रवाह गरियो
५० करोड ३० लाख रैखे
१९९ करोड ४० लाख

गलीन सेवा

१. जर्मनी की लवण खेपसर पारि
लुडर २. २०१४ दिने मैक्सिड
बिान, कोटवयर, जोरपाटी,
(१) मैक्सिड लवणखाने एन
करेड कर्जा प्रवाह मरेको
मानने बताए । २१ लाख
हन्सी दिा ।

मास

लक्ष्मणस्य शब्दान् अनुसराम्य
 स्ने मागं नैपातं दुरसम्भारं
 । अश्वत्थामा कर्मक्षारीणां
 तं गन्तुं अण्णमसौ लक्ष्मणस्य
 ६।

१. दुःख-भय-अज्ञानवशं राज्ञो
 भावयन्तीमं शरीरिणः शत्रवन्ति
 उन्मत्तो भवति ह्येतादृशं दुःखं
 ये ज्ञान्यं वैश्वर्यं सेवन् मुक्तं मनः
 तस्माद् वैश्वर्यं युज्यते ज्ञानेन योगेन
 निवर्तयन् सर्वः साधकः शरीरक
 । धनं, शक्तिरूपं विद्यादौ सान्द्रं
 भावयन्तीमं कर्तव्यं शक्तिविद्
 रं मार्गं हि विना सत्तवे सर्वको
 प्रयः संभवः इति ध्यातुम् ।
 अत्र वैश्वर्यं वैश्वर्यरूपं शक्त्या
 देते निर्णयते । यथासौ वैश्वर्यको
 योग्यकलादौ सान्द्रं वैश्वर्यं
 रजःकालौ प्रतिपद्यते अयोग्यकालौ
 पुनः । शक्तिविद् रं स्वात्मशक्तिं
 हि शरीरं कथं विवेकयामा विस्तार
 मर सौ र्गमि अक्षिते विश्व
 शक्त्या शब्धं ब्रह्म नमस्कृत्य
 विना शक्त्या नान्यत् ।

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जाने सम्बन्धमा निर्वाह गरिसकेको बताए । 'सम्बन्धमा आएको कुराका आधारमा सरकारको निर्वाचक विभागमा पुग्ने टिप्पणी रैद' देखिने थियो । सरकारको मान्नामा आधारमा टिप्पणी गर्ने थियो ।

पारिश्रमिक पाएनन

संख्या: २५५/२०१८



नेपाल सरकार
स्थानीय विकास मन्त्रालय
जिल्ला विकास समितिको कार्यालय
जिल्ला प्राविधिक कार्यालय

ग्रामिण पुनर्निर्माण तथा पुनर्स्थापना आयोजना
जिल्हा आयोजना कार्यालय, पर्वत, कश्मा

**प्रारम्भिक वातावरणीय परीक्षण (IEE) सम्बन्धी
राय सुझावका लागि सार्वजनिक सुचना**

सूचना प्रकाशित मिति : २०१६/४/१०

प्रमिष्ठ पुनर्विनिर्माण तथा पुनर्स्थापना आयोजना (RRRSDP) अन्तर्गत एग्रीकल्चर डेवलपमेन्ट बैंक (ADB), अन्तर्राष्ट्रिय विकास विभाग (DFID), स्वीस सरकार विकास विभागको (SDC) अनुदान सहयोग तथा जर्मनीको (GIZ) कृषि सहयोग तथा नेचल सरकार, निजामिकायम समिति र ताम्रशरीर समेतको वित्तियानीया स्थानान्तरीय बचको लागि प्रस्ताव गरिएको गिम्प डेवेलपमेन्ट-फलेबल, कुम्हा-पुनर्व-सावित्वा, चिसापानी-हुलाङ-दरौचौर र काकभिट्टा-मुन्हु सडक उप आयोजनाको प्राथमिक वातावरणीय परीक्षण (IEE) प्रतिवेदन कार्यन्वाहक गैर निर्यातायोग्य वातावरणीय सर्वेक्षण विभागको २०२४ (पछिल्लो संशोधन २०२४, समेत) को नियम ३३.२ अनुसार को कार्यनिर्वाह सुचना प्रकाशित गरिएको छ।

प्रस्तावकको नाम : जिल्ला विकास समितिको कार्यालय/जिल्ला शैक्षिक कार्यालय/ जिल्ला आयोजना कार्यालय/पर्वत।
प्रस्तावित सहक उपआयोजनाहरूको विवरण :-

क्र.सं.	सङ्घको नाम	प्रभाव पार्ने गा.वि.स.हरू	प्रस्तावको विवरण	नम्बर
१	दीर्घलला- फलेवास सङ्घ उप आयोजना	चुवा, पकवा, पिपलटारि, कटुवापौपारी, मडिकुवा र देविस्थान	यो उपआयोजना चुवा गा.वि.स अन्तर्गत पोखरा बगरासुङ्ग राजमार्गको खुम्चे खोलाबाट शुरू भई देविस्थान गा.वि.स को फलेवास ब्यापक भौममा गई दुईछ्छ । यो सङ्घमा दीर्घलला, गिल्ली, मोभगाउ, सासाचौर, नडहरे, देवनिखार, साईकुलचौक, सिता, एकधरे, सतगीरी,छाङ्ग, सेराचौर, राहाले, बरुनटार फलेवास गा.वि.स वस्ति हरु पर्दछन् ।	१५ को.मी.
२	कुशमा-दुर्लङ -सोहिजा सङ्घ उप आयोजना	शिकारय, दुर्लङ र नयाङ	यो उपआयोजना शिकारय गा.वि.स को दुर्लङ खोक (पोखरा-बगरासुङ्ग राजमार्ग) बाट शुरू भई ब्याङ्ग गा.वि.स को लेखार खोलासम्म गई दुईछ्छ । यो सङ्घमा दुर्लङ चोक, कामि डाडा, पारिटोल, गढान्ग, रासोट, भाटचौर, खोटेला, देउदाली, गौडामनी, काफ्लेबाट, साकिटोल, कोटथर, मुजेनथान, सलरी हलसले, भगेरीचौर, माथिल्लो हलसले, मेख्यार १ र लेखार आदि वस्ति हरु पर्दछन् ।	२० को.मी.
३	चिसापानी बजार, बराचौर सङ्घ उप आयोजना	हुवास, विरेणी, मडलियास, उरामौखरा, भालिगाम र बराचौर ।	यो उप आयोजना हुवास, गा.वि.स को चिसापानीबाट शुरू भई बराचौर गा.वि.सको बराची भन्जारासम्म गई दुईछ्छ । यो सङ्घमा जित्तनचोक, इतेमालोचौक, अर्जुन बजार, डाडा, कचहरे, बिस्मडाङ, र बराची भन्जारासम्म आदि वस्ति हरु पर्दछन् ।	१५- को.मी.
४	काकीनेटा सुङ्ग सङ्घ उप आयोजना	काकीनेटा, बाफाधाना र भगेरा ।	यो उप आयोजना काकीनेटा, गा.वि.स को हिसेखोला बाट शुरू भई भगेरा गा.वि.स र ख्याङ्गजा जिल्लाको धिमाना बगालेनेटामा गई दुईछ्छ । यो सङ्घमा बुङ्गे घाटी टोल, सतागाटा, घोप्टे चौर, काकीनेटा बजार, खगालेनेटा, आदि वस्ति हरु पर्दछन् ।	१० को.मी.

उक्त प्रसंगको कथानुसार वातावरणमा पर्ने सबै प्रभावका बारेमा सम्बन्धित गा बि से विभागले व्याख्या नौको
बम उपभोक्ता समिति तथा अन्य संस्थाहरूलाई व्यक्तित्व वा संस्थाले यो सूचना प्रकाशित भएको बित्तिकै १५
(पन्ध्र) दिन भित्र निम्न ठेगानामा उपभोक्ता राय सुझाव पठाई सम्बन्धी गरी यिन्सु हाम अनुरोध गरिन्थ्यो।
राय संकलन पठाउने ठेगाना:-

जिल्हा विकास समितिको कार्यालय धरंवत फोन नं ०६७-४२०२५६ फ्याक्स नं ०६७-४२०२४४	जिल्हा प्राथमिक कार्यालय धरंवत फोन नं ०६७-४२०१५१, ०६७-४२११६५
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Annex VI: Deed of Enquiry (Muchulka)

श्री आर्थिक पुनर्निर्माण तथा पुनर्स्थापना आयोजना (RRRSDP) अन्तर्गत एशियाली विकास बैंक, डिफिड तथा स्वीस सरकार विकास नियोगको अनुदान सहयोग तथा ओफिडको ऋण सहयोग तथा नेपाल सरकार, जिल्ला विकास समिति र लाभग्राही समेतको लगानीमा निर्माण गर्न प्रस्ताव गरिएको दोविला-फलेवास, कुश्मा-दुर्लुङ-सालिजा, चिसापानी-हुवास-बराचौर र कार्कीनेटा-लुंबु सडक उपआयोजनाको प्रारम्भिक वातावरणीय परिक्षण प्रतिवेदन (IEE) कार्यान्वयन गर्ने सिलसिलामा वातावरण संरक्षण नियमावली २०५४ (पहिलो संसोधन, २०५४) को नियम ७ (२) अनुसार यो सार्वजनिक सूचना प्रकाशित गरिएको छ ।

नेपाल सरकार
स्थानीय विकास मन्त्रालय
जिल्ला विकास समितिको कार्यालय/
जिल्ला प्राविधिक कार्यालय
पर्वत

प्रारम्भिक वातावरणीय परीक्षण सम्बन्धि राय सुझावका लागि सार्वजनिक सूचना
(प्रकाशित मिति : ०६/०८/२०७४)

ग्रामीण पुनर्निर्माण तथा पुनर्स्थापना आयोजना (RRRSDP) अन्तर्गत एशियाली विकास बैंक, डिफिड तथा स्वीस सरकार विकास नियोगको अनुदान सहयोग तथा ओफिडको ऋण सहयोग तथा नेपाल सरकार, जिल्ला विकास समिति र लाभग्राही समेतको लगानीमा निर्माण गर्न प्रस्ताव गरिएको दोविला-फलेवास, कुश्मा-दुर्लुङ-सालिजा, चिसापानी-हुवास-बराचौर र कार्कीनेटा-लुंबु सडक उपआयोजनाको प्रारम्भिक वातावरणीय परिक्षण प्रतिवेदन (IEE) कार्यान्वयन गर्ने सिलसिलामा वातावरण संरक्षण नियमावली २०५४ (पहिलो संसोधन, २०५४) को नियम ७ (२) अनुसार यो सार्वजनिक सूचना प्रकाशित गरिएको छ ।

प्रस्तावकको नाम : प्रस्तावकको नाम : जिल्ला विकास समितिको कार्यालय/जिल्ला प्राविधिक कार्यालय, पर्वत

प्रस्तावित सडक उपआयोजनाहरूको विवरण :-

क्र.सं.	सडकको नाम	प्रभाव पार्ने गा.वि.स.हरु	प्रस्तावकको विवरण	सम्बाई
१	दोविला-फलेवास सडक उप आयोजना	चुवा, पकुवा, पिपलटारी, कटुवाचौपारी, मडिकुवा र देविस्थान	यो उपआयोजना चुवा गा.वि.स अन्तर्गत पोखरा बाग्लुङ राजमार्गको सुन्दरे खोला बाट शुरु भई देविस्थान गा.वि.स को फलेवास क्याम्पस चौकमा गई दुईन्छ। यो सडकमा दोविला, सिल्मी, माझगाउँ, लामाचौर, बडहरे, देउतिबजार, साईकलचौक, सिरुवा, एकघरे, सातवीसे,डाडा, सेराचौर, राहाले, चन्दनटार फलेवास आदि बस्ति हरू पर्दछन्।	१५ की मी.
२	कुश्मा -दुर्लुङ -सालिजा सडक उप आयोजना	शिवालय, दुर्लुङ र क्याङ्ग	यो उपआयोजना शिवालय गा.वि.स को दुर्लुङ चौक (पोखरा-बाग्लुङ राजमार्ग) बाट शुरु भई क्याङ्ग गा.वि.स को लेस्पा चौतारामा गई दुईन्छ। यो सडकमा दुर्लुङ चौक, कामि डाडा, परिटोल, गोदामे रोहोटे, भाटचौर, खोरटोल, देउराली, गौडामनी, काफलबोट, साकिटोल, कोटघर, भुजेलथान, तल्लो हलहले, भगेरीचौर, माथिल्लो हलहले, मेक्सार र लेस्पा आदि बस्ति हरू पर्दछन्।	२० की मी
३	चिसापानी हुवास बराचौर सडक उप आयोजना	हुवास, विरेणी, बेउलिवास, उरामपोखरा, सालिग्राम र बहाकि ।	यो उप आयोजना हुवास, गा.वि.स को चिसापानी बाट शुरु भई बहाकी गा.वि.स को बहाकी भन्ज्याङमा गई दुईन्छ। यो सडकमा चिन्तनचौक हातेमालोचौक अर्थुन बजार, डाडा कचहरे, बिस्नुडाडा, र बहाकी भन्ज्याङ आदि बस्ति हरू पर्दछन्।	१५ की मी.
४	कार्कीनेटा लुंबु सडक उप आयोजना	कार्कीनेटा, थापाथाना र भंगारा ।	यो उप आयोजना कार्कीनेटा, गा.वि.स को हिलेखोला बाट शुरु भई भंगारा गा.वि.स र स्याङ्गजा जिल्लाको सिमाना बगालेनेटामा गई दुईन्छ। यो सडकमा दुई खाटी टोल, रातोमाटा, घोप्टे चौर, कार्कीनेटा बजार, बगालेनेटा, आदि बस्ति हरू पर्दछन्।	१० की मी

उक्त प्रस्तावकको कार्यान्वयन बाट वातावरणमा पर्नसक्ने प्रभावको बारेमा सम्बन्धित गा.वि.स., विद्यालय, स्वास्थ्य चौकी, वन उपभोक्ता समिति तथा अन्य सरोकारवाला व्यक्ति वा संस्थाले यो सूचना गोरखापत्रमा प्रकाशित भएको मितिले १५ (पन्ध्र) दिन भित्र आफ्नो राय सुझाव पठाई सहयोग गरिदिनुहुन अनुरोध गरिन्छ । साथै यसै बमोजिमको राय सुझाव स्थानीय पूर्वाधार विकास तथा कृषि सडक विभाग, जाबलाखेल तथा स्थानीय विकास मन्त्रालय पुल्चोक, काठमाण्डौ मा पनि पठाउन सकिन्छ ।

राय सुझाव पठाउने ठेगाना:

जिल्ला विकास समितिको कार्यालय, पर्वत फोन नं ०६७-४२०२५६ फ्याक्स नं ०६७-४२०१४४	जिल्ला प्राविधिक कार्यालय, पर्वत फोन नं ०६७-४२०१५१, ०६७-४२११६५ फ्याक्स नं
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सूचना टाँसेको प्रमाणित गर्ने कर्मचारीको नाम:
पद:

हस्ताक्षर:
कार्यालयको नाम:

नेपाल सरकार
स्थानीय विकास मन्त्रालय
जिल्ला विकास समितिको कार्यालय/
जिल्ला प्राविधिक कार्यालय
पुनर्बत

कार्यालयको नाम:

०३/०१/१९

श्री ग्रामीण पुनर्निर्माण तथा पुनर्स्थापना आयोजना
ले निम्नानुसारको सूचना यस कार्यालयको सूचना पाटीमा टाँसेको व्योहोरा प्रमाणित गरिन्छ।

नेपाल सरकार
स्थानीय विकास मन्त्रालय
जिल्ला विकास समितिको कार्यालय/
जिल्ला प्राविधिक कार्यालय
पर्वत

प्रारम्भिक वातावरणीय परीक्षण सम्बन्धि राय सुझावका लागि सार्वजनिक सूचना
(प्रकाशित मिति)

ग्रामीण पुनर्निर्माण तथा पुनर्स्थापना आयोजना (RRRSDP) अन्तर्गत एशियाली विकास बैंक, डिफिड तथा स्वीस सरकार विकास नियोगको अनुदान सहयोग तथा ओफिडको ऋण सहयोग तथा नेपाल सरकार, जिल्ला विकास समिति र लाभग्राही समेतको लगानीमा निर्माण गर्ने प्रस्ताव गरिएको दोविल्ला-फलेवास, कुश्मा-दुर्लङ्ग-सालिजा, चिसापानी-हुवास-बराचौर र कार्कीनेटा-लुखु सडक उपआयोजनाको प्रारम्भिक वातावरणीय परीक्षण प्रतिवेदन (IEE) कार्यान्वयन गर्ने सिलसिलामा वातावरण संरक्षण नियमावली २०५४ (पहिलो संशोधन, २०५४) को नियम ७ (२) अनुसार यो सार्वजनिक सूचना प्रकाशित गरिएको छ।

प्रस्तावको नाम : प्रस्तावको नाम : जिल्ला विकास समितिको कार्यालय/जिल्ला प्राविधिक कार्यालय, पर्वत
प्रस्तावित सडक उपआयोजनाहरूको विवरण :-

क्र.सं.	सडकको नाम	प्रभाव पार्ने गा.वि.स.हरु	प्रस्तावको विवरण	लम्बाई
१	दोविल्ला-फलेवास सडक उप आयोजना	चुवा, पकुवा, पिपलटारी, कटुवाचौपारी, मडिकुवा र देविस्थान	यो उपआयोजना चुवा गा.वि.स अन्तर्गत पोखरा बागलुङ्ग राजमार्गको सुन्दरे खोला बाट शुरु भई देविस्थान गा.वि.स को फलेवास क्याम्पस चौकमा गई दुङ्गिन्छ। यो सडकमा दोविल्ला, सिल्मी, माभगाड, लामाचौर, बडहरे, देउतिबजार, साईकलचौक, सिरुवा, एकघरे, सातवीसे,डाडां, सेराचौर, राहाले, बन्वन्तार फलेवास आदि बस्ति हरु पर्दछन्।	१५ की.मी.
२	कुश्मा-दुर्लङ्ग-सालिजा सडक उप आयोजना	शिवालय, दुर्लङ्ग र क्याङ्ग	यो उपआयोजना शिवालय गा.वि.स को दुर्लङ्ग चौक (पोखरा-वागलुङ्ग राजमार्ग) बाट शुरु भई क्याङ्ग गा.वि.स को लेस्पा चौतारामा गई दुङ्गिन्छ। यो सडकमा दुर्लङ्ग चौक, कामि डाडा, परिटोल, गोदाम रोहोटे, भाटचौर, खोरटोल, देउराली, गौडामनी, काफलबोट, साईकलचौक, कोटथर, भुजेलथान, तल्लो हलहले, भगेरीचौर, माथिल्लो हलहले, मेक्सार र लेस्पा आदि बस्ति हरु पर्दछन्।	२० की.मी.
३	चिसापानी हुवास बराचौर सडक उप आयोजना	हुवास, त्रिवेणी, बेउलिवास, उरामपोखरा, सालिग्राम र बहाकि।	यो उप आयोजना हुवास, गा.वि.स को चिसापानी बाट शुरु भई बहाकी गा.वि.स को बहाकी भन्ज्याङ्गमा गई दुङ्गिन्छ। यो सडकमा चिन्तनचौक, हातेमालोचौक, अर्थुन बजार, डाडा कचहरे, विसुनडाडा, र बहाकी भन्ज्याङ्ग आदि बस्ति हरु पर्दछन्।	१५ की.मी.
४	कार्कीनेटा लुखु सडक उप आयोजना	कार्कीनेटा, थापाथाना र भंगारा।	यो उप आयोजना कार्कीनेटा, गा.वि.स को हिलेखोला बाट शुरु भई भंगारा गा.वि.स र स्याङ्गजा जिल्लाको सिमाना बगालेनेटामा गई दुङ्गिन्छ। यो सडकमा दुङ्गे खाटी टोल, रातोमाटा, घोप्टे चौर, कार्कीनेटा बजार, बगालेनेटा, आदि बस्ति हरु पर्दछन्।	१० की.मी.

उक्त प्रस्तावको कार्यान्वयन बाट वातावरणमा पर्नसक्ने प्रभावको बारेमा सम्बन्धित गा.वि.स., विद्यालय, स्वास्थ्य चौकी, वन उपभोक्ता समिति तथा अन्य सरोकारवाला व्यक्ति वा संस्थाले यो सूचना गोरखापत्रमा प्रकाशित भएको मितिले १५ (पन्ध्र) दिन भित्र आफ्नो राय सुझाव पठाई सहयोग गरिदिनुहुन अनुरोध गरिन्छ। साथै यसै क्रमोन्निमको राय सुझाव स्थानीय पूर्वाधार विकास तथा कृषि सडक विभाग, जावलाखेल तथा स्थानीय विकास मन्त्रालय पुल्चोक, काठमाण्डौ मा पनि पठाउन सकिनेछ।
राय सुझाव पठाउने ठेगाना:

जिल्ला विकास समितिको कार्यालय, पर्वत फोन नं ०६७-४२०२५६ फ्याक्स नं ०६७-४२०१४४	जिल्ला प्राविधिक कार्यालय, पर्वत फोन नं ०६७-४२०१४१, ०६७-४२११९६ फ्याक्स नं
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सूचना टाँसेको प्रमाणित गर्ने कर्मचारीको नाम:
पद:

हस्ताक्षर:
कार्यालयको नाम:

ग्रामीण पुनर्निर्माण तथा पुनर्स्थापना आयोजना
श्री **उत्तराखण्ड राज्य** ले निम्नानुसारको सूचना यस
कार्यालयको सूचना पाटीमा टाँसेको ब्योहोरा प्रमाणित गरिन्छ।

नेपाल सरकार
स्थानीय विकास मन्त्रालय
जिल्ला विकास समितिको कार्यालय/
जिल्ला प्राविधिक कार्यालय
पर्वत

प्रारम्भिक वातावरणीय परीक्षण सम्बन्धि राय सुझावका लागि सार्वजनिक सूचना
(प्रकाशित मिति :)

ग्रामीण पुनर्निर्माण तथा पुनर्स्थापना आयोजना (RRRSDP) अन्तर्गत एशियाली विकास बैंक, डिफिड तथा स्वीस सरकार विकास नियोगको अनुदान सहयोग तथा ओफिडको ऋण सहयोग तथा नेपाल सरकार, जिल्ला विकास समिति र लाभग्राही समेतको लगानीमा निर्माण गर्न प्रस्ताव गरिएको दोबिल्ला-फलेवास, कुश्मा-दुर्लङ्ग-सालिजा, चिसापानी-हुवास-बराचौर र कार्कीनेटा-लुखु सडक उपआयोजनाको प्रारम्भिक वातावरणीय परीक्षण प्रतिवेदन (IEE) कार्यान्वयन गर्ने सिलसिलामा वातावरण संरक्षण नियमावली २०५४ (पहिलो संसोधन, २०५५) को नियम ७ (२) अनुसार यो सार्वजनिक सूचना प्रकाशित गरिएको छ।

प्रस्तावकको नाम : प्रस्तावकको नाम : जिल्ला विकास समितिको कार्यालय/जिल्ला प्राविधिक कार्यालय, पर्वत

प्रस्तावित सडक उपआयोजनाहरूको विवरण :-

क्र.सं.	सडकको नाम	प्रभाव पार्ने गा.वि.स.हरु	प्रस्तावकको विवरण	लम्बाई
१	दोबिल्ला-फलेवास सडक उप आयोजना	चुवा, पकुवा, पिपलटारी, कटुवाचौपारी, मडिकुवा र देविस्थान	यो उपआयोजना चुवा गा.वि.स अन्तर्गत पोखरा बागलुङ्ग राजमार्गको सुन्दरे खोला बाट शुरु भई देविस्थान गा.वि.स को फलेवास क्याम्पस चौकमा गई दुईन्छ। यो सडकमा दोबिल्ला, सिल्ली, माभगाउ, लामाचौर, बडहरे, देउतिबजार, साईकलचौक, सिरुवा, एकधरे, सातवीसे,डाडा, सेराचौर, राहाले, चन्दनटार फलेवास आदि बस्ति हरु पर्दछन्।	१५ की.मी.
२	कुश्मा-दुर्लङ्ग-सालिजा सडक उप आयोजना	शिवालय, दुर्लङ्ग र क्याङ्ग	यो उपआयोजना शिवालय गा.वि.स को दुर्लङ्ग चौक (पोखरा-बागलुङ्ग राजमार्ग) बाट शुरु भई क्याङ्ग गा.वि.स को लेस्पा चौतारामा गई दुईन्छ। यो सडकमा दुर्लङ्ग चौक, कामि डाडा, परिटोल, गोदामे रोहोटे, भाटचौर, खोरटोल, देउराली, गौडामनी, काफलवाट, साकिटोल, कोटथर, भुजेलथान, तल्लो हलहले, भंगेरीचौर, माथिल्लो हलहले, मेवसार र लेस्पा आदि बस्ति हरु पर्दछन्।	२० की.मी.
३	चिसापानी हुवास बराचौर सडक उप आयोजना	हुवास, चिवेणी, बेउलिवास, उरामपोखरा, सालिग्राम र बहाकि।	यो उप आयोजना हुवास, गा.वि.स को चिसापानी बाट शुरु भई बहाकी गा.वि.स को बहाकी भन्ज्याङ्गमा गई दुईन्छ। यो सडकमा चिन्तनचौक हातेमालोचौक, अर्थुन बजार, डाडा, कचहरे, बिसुनडाडा, र बहाकी भन्ज्याङ्ग आदि बस्ति हरु पर्दछन्।	१५ की.मी.
४	कार्कीनेटा लुखु सडक उप आयोजना	कार्कीनेटा, थापाथाना र भंगारा।	यो उप आयोजना कार्कीनेटा, गा.वि.स को हिलेखोला बाट शुरु भई भंगारा गा.वि.स र स्याङ्गजा जिल्लाको सिमाना बगालेनेटामा गई दुईन्छ। यो सडकमा दुई खाटी टोल, रातोमाटा घोप्टे चौर, कार्कीनेटा बजार, बगालेनेटा, आदि बस्ति हरु पर्दछन्।	१० की.मी.

उक्त प्रस्तावकको कार्यान्वयन बाट वातावरणमा पर्नेसबने प्रभावको बारेमा सम्बन्धित गा.वि.स, विद्यालय, स्वास्थ्य चौकी, वन उपभोक्ता समिति तथा अन्य सरोकारवाला व्यक्ति वा संस्थाले यो सूचना गोरखापत्रमा प्रकाशित भएको मितिले १५ (पन्ध्र) दिन भित्र आफ्नो राय सुझाव पठाई सहयोग गरिदिनुहुन अनुरोध गरिन्छ। साथै यसै बमोजिमको राय सुझाव स्थानीय पूर्वाधार विकास तथा कृषि सडक विभाग, जावलाखेल तथा स्थानीय विकास मन्त्रालय पुल्चोक, काठमाण्डौ मा पनि पठाउन सकिनेछ।
राय सुझाव पठाउने ठेगाना:

जिल्ला विकास समितिको कार्यालय, पर्वत फोन नं ०६७-४२०२५६ फ्याक्स नं ०६७-४२०१४४	जिल्ला प्राविधिक कार्यालय, पर्वत फोन नं ०६७-४२०१५१, ०६७-४२११६५ फ्याक्स नं
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सूचना टाँसेको प्रमाणित गर्ने कर्मचारीको नाम:
पद:
कार्यालयको छाप:

हस्ताक्षर:
कार्यालयको नाम:
मिति:

(Handwritten signature and date)
०६/०८/२१

श्री शालिग्राम पुनर्निर्माण तथा पुनर्स्थापना आयोजना
शालिग्राम पुनर्निर्माण तथा पुनर्स्थापना आयोजना
 कार्यालयको सूचना पाटीमा टाँसेको ब्योहोरा प्रमाणित गरिन्छ ।
 नेपाल सरकार
 स्थानीय विकास मन्त्रालय
 जिल्ला विकास समितिको कार्यालय/
 जिल्ला प्राविधिक कार्यालय
 पर्वत

प्रारम्भिक वातावरणीय परीक्षण सम्बन्धि राय सुझावका लागि सार्वजनिक सूचना
 (प्रकाशित मिति :)

ग्रामीण पुनर्निर्माण तथा पुनर्स्थापना आयोजना (RRRSDP) अन्तरगत एशियाली विकास बैंक, डिफिड तथा स्थीस सरकार विकास नियोगको अनुदान सहयोग तथा ओफिडको ऋण सहयोग तथा नेपाल सरकार, जिल्ला विकास समिति र लाभग्राही समेतको लगानीमा निर्माण गर्न प्रस्ताव गरिएको दोविल्ला-फलेवास, कुश्मा-दुर्लङ्ग-सालिना, चिसापानी-हुवास-बराचौर र कार्कीनेटा-लुखु सडक उपआयोजनाको प्रारम्भिक वातावरणीय परीक्षण प्रतिवेदन (IEE) कार्यान्वयन गर्ने सिलसिलामा वातावरण संरक्षण नियमावली २०५४ (पहिलो संसोधन, २०५४) को नियम ७ (२) अनुसार यो सार्वजनिक सूचना प्रकाशित गरिएको छ ।

प्रस्तावकको नाम : प्रस्तावकको नाम : जिल्ला विकास समितिको कार्यालय/जिल्ला प्राविधिक कार्यालय, पर्वत

प्रस्तावित सडक उपआयोजनाहरुको विवरण :-

क्र.सं.	सडकको नाम	प्रभाव पार्ने गा.वि.स.हरु	प्रस्तावकको विवरण	लम्बाई
१	दोविल्ला-फलेवास सडक उप आयोजना	चुवा, पकुवा, पिपलटारी, कटुवाचौपारी, मडिकुवा र देविस्थान	यो उपआयोजना चुवा गा.वि.स अन्तर्गत पोखरा बागलुङ्ग राजमार्गको सुन्दरे खोला बाट शुरु भई देविस्थान गा.वि.स को फलेवास क्याम्पस चौकमा गई टुङ्गिन्छ। यो सडकमा दोविल्ला, सिल्ली, माभगाउँ, लामाचौर, बडहरे, देउतिबजार, साईकलचौक, सिरुवा, एकधरे, सातवीसे,डाँडा, सेराचौर, राहाले, चन्दनटार फलेवास आदि बस्ति हरू पर्दछन्।	१५ की मी
२	कुश्मा -दुर्लङ्ग -सालिना सडक उप आयोजना	शिवालय, दुर्लङ्ग र क्याङ्ग	यो उपआयोजना शिवालय गा.वि.स को दुर्लङ्ग चौक (पोखरा-वाग्लुङ्ग राजमार्ग) बाट शुरु भई क्याङ्ग गा.वि.स को लेस्पा चौतारामा गई टुङ्गिन्छ। यो सडकमा दुर्लङ्ग चौक, कामि डाडा, परिटोल, गोदाम रोहोटे, भाटचौर, खोरटोल, देउराली, गौडामनी, काफलबोट, सार्किटोल, कोटधर, भुजेलथान, तल्लो हलहले, भरोरीचौर, माथिल्लो हलहले, मेक्सार र लेस्पा आदि बस्ति हरू पर्दछन्।	२० की मी
३	चिसापानी हुवास बराचौर सडक उप आयोजना	हुवास, विवेणी, वेउलिवास, उरामपोखरा, सालिग्राम र बहाकि ।	यो उप आयोजना हुवास, गा.वि.स को चिसापानी बाट शुरु भई बहाकी गा.वि.स को बहाकी भन्ज्याङ्गमा गई टुङ्गिन्छ। यो सडकमा चिन्तनचौक हातेमालोचौक अर्धुन बजार, डाँडा कचहरे, बिसुनडाँडा, र बहाकी भन्ज्याङ्ग आदि बस्ति हरू पर्दछन्।	१५ की मी
४	कार्कीनेटा लुखु सडक उप आयोजना	कार्कीनेटा, थापाथाना र भंगारा ।	यो उप आयोजना कार्कीनेटा, गा.वि.स को हिलेखोला बाट शुरु भई भंगारा गा.वि.स र स्याङ्गरा जिल्लाको सिमाना बगालेनेटामा गई टुङ्गिन्छ। यो सडकमा दुङ्गे खाटी टोल, रातोमाटा, घोप्टे चौर, कार्कीनेटा बजार, बगालेनेटा, आदि बस्ति हरू पर्दछन्।	१० की मी

उक्त प्रस्तावकको कार्यान्वयन बाट वातावरणमा पर्नेसक्ने प्रभावको बारेमा सम्बन्धित गा.वि.स., विद्यालय, स्वास्थ्य चौकी, वन उपभोक्ता समिति तथा अन्य सरोकारवाला व्यक्ति वा संस्थाले यो सूचना गौरवापत्रमा प्रकाशित भएको मितिले १५ (पन्ध्र) दिन भित्र आफ्नो राय सुझाव पठाई सहयोग गरिदिनुहुन अनुरोध गरिन्छ । साथै यसै बमोजिमको राय सुझाव स्थानीय पूर्वाधार विकास तथा कृषि सडक विभाग, जावलाखेल तथा स्थानीय विकास मन्त्रालय पुल्चोक, काठमाण्डौ मा पनि पठाउन सकिन्छ ।

राय सुझाव पठाउने ठेगाना:

जिल्ला विकास समितिको कार्यालय, पर्वत फोन नं ०६७-४२०२५६ फ्याक्स नं ०६७-४२०१४४	जिल्ला प्राविधिक कार्यालय, पर्वत फोन नं ०६७-४२०१४१, ०६७-४२११६५ फ्याक्स नं
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सूचना टाँसेको प्रमाणित गर्ने कर्मचारीको नाम
पद:

हस्ताक्षर:
कार्यालयको नाम:

ग्रामीण पुनर्निर्माण तथा पुनर्स्थापना आयोग
श्रीले विमानानुसारको सूचना यस
वडाको छान्दी कार्यालयको सूचना पाटीमा टाँसेको ब्योहोरा प्रमाणित गरिन्छ।
नेपाल सरकार

स्थानीय विकास मन्त्रालय
जिल्ला विकास समितिको कार्यालय/
जिल्ला प्राविधिक कार्यालय
पर्वत

प्रारम्भिक वातावरणीय परीक्षण सम्बन्धि राय सुझावका लागि सार्वजनिक सूचना
(प्रकाशित मिति :)

ग्रामीण पुनर्निर्माण तथा पुनर्स्थापना आयोग (RRRSDP) अन्तरगत एशियाली विकास बैंक, डिफिड तथा स्पीस सरकार विकास नियोगको अनुदान सहयोग तथा ओफिडको ऋण सहयोग तथा नेपाल सरकार, जिल्ला विकास समिति र लाभग्राही समेतको लगानीमा निर्माण गर्न प्रस्ताव गरिएको दोविल्सा-फलेबास, कुश्मा-दुर्लङ्ग-सालिजा, चिसापानी-हुवास-बराचौर र कार्कीनेटा-लुखु सडक उपआयोजनाको प्रारम्भिक वातावरणीय परिक्षण प्रतिवेदन (IEE) कार्यान्वयन गर्ने सिलसिलामा वातावरण संरक्षण नियमावली २०५४ (पहिलो संसोधन, २०५४) को नियम ७ (२) अनुसार यो सार्वजनिक सूचना प्रकाशित गरिएको छ।

प्रस्तावकको नाम : प्रस्तावकको नाम : जिल्ला विकास समितिको कार्यालय/जिल्ला प्राविधिक कार्यालय, पर्वत
प्रस्तावित सडक उपआयोजनाहरूको विवरण :-

क्र.सं.	सडकको नाम	प्रभाव पर्ने गा.वि.स.हरु	प्रस्तावकको विवरण	लम्बाई
१	दोविल्सा-फलेबास सडक उप आयोजना	चुवा, पकुवा, पिपलटारी, कटुवाचौपारी, मडिकुवा र देविस्थान	यो उपआयोजना चुवा गा.वि.स अन्तर्गत पोखरा वाग्लुङ्ग राजमार्गको सुन्दरे खोला बाट शुरु भई देविस्थान गा.वि.स को फलेबास क्याम्पस चौकमा गई टुङ्गिन्छ। यो सडकमा दोविल्सा, सिल्मी, माझगाउँ, लामाचौर, बडहरे, देउतिबजार, साईकलचौक, सिरुवा, एकधरे, सातवीसे,डाडा, सेराचौर, राहाले, चन्दनटार फलेबास आदि बस्ति हरू पर्दछन्।	१५ की मी.
२	कुश्मा-दुर्लङ्ग-सालिजा सडक उप आयोजना	शिवालय, दुर्लङ्ग र क्याङ्ग	यो उपआयोजना शिवालय गा.वि.स को दुर्लङ्ग चौक (पोखरा-वाग्लुङ्ग राजमार्ग) बाट शुरु भई क्याङ्ग गा.वि.स को लेस्पा चौतारामा गई टुङ्गिन्छ। यो सडकमा दुर्लङ्ग चौक, कामि डाडा, परिटोल, गोदामे रोहोटे, भाटचौर, खोरटोल, देउराली, गौडामनी, काफलबोट, साकिटोल, कोटधर, भुजेलथान, तल्लो हलहले, भंगेरीचौर, माथिल्लो हलहले, मेक्सार र लेस्पा आदि बस्ति हरू पर्दछन्।	२० की मी.
३	चिसापानी हुवास बराचौर सडक उप आयोजना	हुवास, त्रिवेणी, बेउलिवास, उरामपोखरा, सालिग्राम र बहाकि।	यो उप आयोजना हुवास, गा.वि.स को चिसापानी बाट शुरु भई बहाकी गा.वि.स को बहाकी भन्ज्याङ्गमा गई टुङ्गिन्छ। यो सडकमा चिन्तनचौक, हातेमालोचौक, अर्थुन बजार, डाडा, कचहरे, बिसुनडाडा, र बहाकी भन्ज्याङ्ग आदि बस्ति हरू पर्दछन्।	१५ की मी.
४	कार्कीनेटा लुखु सडक उप आयोजना	कार्कीनेटा, धापाथाना र भंगारा।	यो उप आयोजना कार्कीनेटा, गा.वि.स को हिलेखोला बाट शुरु भई भंगारा गा.वि.स र स्याङ्गजा जिल्लाको सिमाना बगालेनेटामा गई टुङ्गिन्छ। यो सडकमा दुङ्गे खाटी टोल, रानोमाटा, घोप्ते चौर, कार्कीनेटा बजार, बगालेनेटा, आदि बस्ति हरू पर्दछन्।	१० की मी.

उक्त प्रस्तावकको कार्यान्वयन बाट वातावरणमा पर्नसक्ने प्रभावको बारेमा सम्बन्धित गा.वि.स., विद्यालय, स्वास्थ्य चौकी, वन उपभोक्ता समिति तथा अन्य सरोकारवाला व्यक्ति वा संस्थाले यो सूचना गोरखापत्रमा प्रकाशित भएको मितिले १५ (पन्ध्र) दिन भित्र आफ्नो राय सुझाव पठाई सहयोग गरिदिनुहुन अनुरोध गरिन्छ। साथै यसै बमोजिमको राय सुझाव स्थानीय पूर्वाधार विकास तथा कृषि सडक विभाग, जाबलाखेल तथा स्थानीय विकास मन्त्रालय पुल्चोक, काठमाण्डौ मा पनि पठाउन सकिन्छ।
राय सुझाव पठाउने ठेगाना:

जिल्ला विकास समितिको कार्यालय, पर्वत फोन नं ०६७-४२०२५६ फ्याक्स नं ०६७-४२०१४४	जिल्ला प्राविधिक कार्यालय, पर्वत फोन नं ०६७-४२०१५१, ०६७-४२११६५ फ्याक्स नं.
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सूचना टाँसेको प्रमाणित गर्ने कर्मचारीको नाम:
पद:
कार्यालयको छाप:

हस्ताक्षर:
कार्यालयको नाम:
मिति:

Annex VII: Name of the Organizations

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

SN	Name or Organization	Address	Remarks
1	Office of Village Development Committee,	Huwas, Parbat	
2	Office of Village Development Committee,	Triveni, Parbat	
3	Office of Village Development Committee,	Beulibas, Parbat	
4	Office of Village Development Committee,	Uram Pokhara, Parbat	
5	Office of Village Development Committee,	Shaligram, Parbat	
6	Office of Village Development Committee,	Wahaki, Parbat	

Source: Field Survey, 2009

Annex VIII: List of persons consulted

List of persons consulted

Name	Designation	Address
Raju Sapkota	DWSCC	Soil Conservation Officer
Kamal Pokharel	DADO	Officer
Harischandra Sapkota	DFO	Forest Officer

Source: Field Survey, May/June, 2009

Annex IX: Summary of meeting minutes with local people

वेडलीवास गा. विकास

समिति 2066 सान मंसिर 6 गते काठमाडौं
वास उडेलीक पुर्वाधार निर्माण समितिको
का अध्यक्ष श्री पुष्प प्रसाद शर्माको अध्यक्षता
अध्यक्षको अध्यक्षता उपस्थित चर प्रकाश डी

उपस्थित

१) श्री पुष्प प्रसाद शर्मा मुख्य अतिथि

२) श्री गोबिन्दा " मांडार/डा. मांडार

३) श्री कुमा (रा. व. ल.) कुशमाखर

४) श्री राजेन्द्र प्र. शर्मा

५) श्री लाला शर्मा

६) श्री अमलाल शर्मा

७) श्री डोलराज शर्मा

८) श्री लाला शर्मा

९) श्री इन्द्रप्रसाद शर्मा

१०) श्री शिवा शर्मा

११) श्री लाला शर्मा

१२) श्री लाला शर्मा

१३) श्री लाला शर्मा

१४) श्री लाला शर्मा

प्रस्ताव संख्या

- (1) प्रारम्भिक वातावरणीय प्रभाव सम्बन्धमा
- (2) किताकट सभै सम्बन्धमा

दलाल तथा निर्णयद्वय,

निर्णय नं १. प्रस्ताव नं १ मा गरी दलाल जहाँ चिसापानी हुवास, वर्यचौर सडक उप आयोजनाको वातावरणीय प्रभाव बारे दलाल जहाँ यस सडक आयोजनाले वेडलीवास गा० वि० स मा कुनै प्रकार को वातावरणीय प्रभावमा प्रतिकुल असर पर्ने भएकोले सो सडक उप आयोजना कोपान्त्वम गर्नेको लागि ग्रामिण पुन निर्माण तथा पुनस्थापना बिबला आयोजना पर्वत लाई अनुरोध गर्ने निर्णय गरिन्छ ।

निर्णय नं २.

प्रस्ताव नं २ मा गरी दलाल जहाँ चिसापानी हुवास वर्यचौर सडक उप आयोजना सञ्चालन गर्ने क्रममा वारोको रेखाङ्कनमा परेका जग्गाहरूको किताकट गर्ने निर्णय गरियो ।

सिना

पुष्प ल

मोडरास बाण्डे
कुमार २०२२

प्रस्तावः :-

- (१) प्रारम्भिक वातावरणीय सर्वेक्षण,
- (२) स्वर्वास सर्वेक्षण फर्म स्थापना
- (३) क्लिफ लाई सर्वेक्षण

द्वलफल तथा निर्णय :-

निर्णय नं. १ प्रस्ताव १ मायी द्वलफल गर्दा
ग्रेसपावनी-हुवायु-बर्वाचौर सडक उपभायोजनाको वातावरणीय
प्रभाव बारेमा जानकारी तथा द्वलफल गरियो । सो सडक को बा-
बतल गर्दा यस गा.वि.स.को वातावरणीय प्रभावमा कुनै
प्रतिकूल असर पर्ने भएकोले सो सडक उपभायोजना कार्यस-
थल गर्नको लागि प्राथमिक अनुमतिपत्र तथा स्वीकृतिपत्र प्राप्त
गरेको जिल्ला भायोजना कार्यालय पूर्वतर्फ झुनरोध गर्ने निर्णय
गरिन्छ ।

निर्णय नं. २

प्रस्ताव नं. २ मायी द्वलफल गर्दा यस सडक
कोरीकोरमा जग्गा पर्ने जग्गा धाचेको लाग्न थालेको देखी सोही
क्लिफ अनुसार स्वर्वास सर्वेक्षण फर्म कोनै काम सम्पन्न
भएको जानकारी गराई निर्णय गरिन्छ ।

निर्णय नं. ३

प्रस्ताव नं. ३ मायी द्वलफल गर्दा यस हुवायु
गा.वि.स.मा पर्ने सडक बाटो क्लिफ लाई गर्ने काम
सम्पन्न भएको निर्णय गरिन्छ ।



शालीग्राम गा. वि. स. सी

आज मिति २०६८/८/१३ गते यस शालीग्राम गा. वि. स. का
सचिव श्री केशव प्रसाद पौडेलको अध्यक्षतामा गाउँ हस्तक्षेप पुनः
कार्य निर्माण समिति शालीग्राम २०६८ गठन गर्ने बैठक बस्यो।

गा. वि. स. समिति

- १) गा. वि. स. सचिव श्री केशव प्रसाद पौडेल
- २) उपहोचर्य पोखरी प्रमुख श्री विमल पराजुली
- ३) सैन्य केंद्र प्रमुख श्री बन्धु प्रकाश गुला
- ४) पुर्वोद्योग सहायक श्री सुर कुमारी महाराई

राजनैतिक दल

- १) ने. का. श्री तारा प्रसाद महाराई
- २) ए. ने. का. माओवादी श्री हेम बहादुर थापा
- ३) ने. का. पा. एमाले श्री शेर्पा खर्क गुरुङ
- ४) ने. का. पा. माओवादी इलाका इन्चार्ज श्री सुजय विमली

अन्य उपस्थिति

- १) श्री मन बहादुर बस्नाल
- २) श्री मोहन सिंह बुढा
- ३) दुर्गा लाल विक
- ४) कृष्ण च. पाण्डे
- ५) राम प्रसाद विमली

कल्याण शर्मा
प्रतिपक्ष

प्रस्तावहरू

- १ प्रारम्भिक वालावरणीय प्रभाव सम्बन्धमा।
- २ पुर्नवाह सर्वेक्षण सम्बन्धमा।
- ३ कित्ता चापी सम्बन्धमा।

छलफल तथा निर्णयहरू

निर्णय नं. १. प्रस्ताव नं. १ माथी छलफल गर्दा चिसापानी-हुवास् वरीचौर सडक उपआयोजनाको वालावरणीय प्रभाव बारेमा - जनाकारो तथा छलफल गरियो। यस सडक कार्यान्वयन गर्दा यस वाहको गा० वि० स० को वालावरणीय प्रभावमा कुनै असर पर्ने भएकोले यो सडक उपआयोजना कार्यान्वयन गर्नको लागि प्रारम्भ पुर्नसिर्माण तथा पुर्नस्थापना आयोजना जित्ना आयोजना कार्यलय पक्ले लाई अनुरोध गर्ने निर्णय गरियो।

निर्णय नं. २ प्रस्ताव नं. २ माथी छलफल गर्दा यस सडक कोरीडोरमा जग्गा पर्ने जग्गा छुने प्रमाणपुर्ज होई सोही कित्ता अनुसार पुर्नवाह सर्वेक्षण फर्म भर्ने काम सम्पन्न भएको जनाकारो गरियो - निर्णय गरियो।

निर्णय नं. ३ प्रस्ताव नं. ३ माथी छलफल गर्दा यस सडक कोरीडोरमा यस गा० वि० स० मा पर्ने सडकको काँचा- वागो गरे दशमिर काम भुने गरी कित्ताकार गर्ने काम सम्पन्न भएको निर्णय गरियो।



श्रीवेणी गा.वि.स

आज मिति २०६०।८।५ गते यस त्रिवेणी गा.स.को गाउँ स्तरीय स्वाधार समन्वय समिति (VACC) को बैठक गा.वि.स. सचिव ~~सक~~ मुक्ति प्रसाद बस्नेलको अध्यक्षतामा बसीयो। यस बैठकको उपस्थिति यसप्रः

उपस्थिति

~~सक~~ अध्यक्ष श्री मुक्ति प्रसाद बस्नेल (गा.वि.स. सचिव)
~~सक~~ सदस्य श्री तेज बहादुर शाना (स.ने.क.पा. प्राञ्जोका)
~~सक~~ " श्री भिमसेन गुरुङ्ग (ने.का.)
~~सक~~ " श्री नगेन्द्र श्रेष्ठ (स.क.पा. यमार्ने)
~~सक~~ " श्री शिवलाल कार्फे (रा.ज.मो.)
~~सक~~ " श्री शिवलाल बस्नेल (मो.स.स.)
~~सक~~ " श्री मिना कुमारी न्यौपाने (कहिला)
~~सक~~ " श्री दुर्गा व. दर्जी (दलित)
~~सक~~ " श्री हर्क व. शाना (जनजाती)
~~सक~~ " श्री दुर्गा देवी कार्चाम (समाजिक का. ३)
~~सक~~ " श्री मीना कुमारी बस्नेल (" "
~~सक~~ " श्री यु. शान बहादुर थापा (समाजसेवा)
~~सक~~ " श्री हादिस मिर्जा
~~सक~~ " श्री हुम कुमारी शाना
~~सक~~ " श्री मविश्वर बस्नेल
~~सक~~ " श्री जे. बहादुर थापा
~~सक~~ " श्री युव सताव सेन
~~सक~~ " श्री रिता कुमारी कार्छाला
~~सक~~ " श्री आकाश बस्नेल
~~सक~~ " श्री लाल तसाक श्रेष्ठ
~~सक~~ " श्री कर्ण बहादुर शाना
~~सक~~ " श्री लक्ष्मी श्रेष्ठ
~~सक~~ " श्री सन्तम वपान
~~सक~~ " श्री यम बहादुर वपान विशेष उपस्थिति

१) प्रस्ताव है
 २) प्रारंभिक वातावरणीय प्रभाव सर्व-धारा,
 ३) किराहा की कार्य साप-7 मण्डो सर्व-धारा,
 ४) प्रस्ताव सर्व-धारा पर सर्व-धारा,
 ५) हिलफल वातावरणीय है,

(1) प्रारंभिक वातावरणीय प्रभाव सम्बन्धना,
(2) किराहाजी लाम साहू-१ मण्डो सम्बन्धना,
(3) प्रखवास सर्वेक्षण पाठ सम्बन्धना,
हलफाल गहोर्णय हल,

लेखांक १ प्रस्तावित १ माचो धूलफल गर्दी चिशापली
हुवाय - खरीदार् सडक रुप कार्यालयको वातावरणीय प्रभाव बारेमा
जाबकारी तथा धूलफल गरियो । सो सडक कार्यालयका गर्दी
यस क्रममा ११ बि स को वातावरणीय प्रभावमा कुनै प्रतिकूल
असर तपने भएनो सो सडक रुप कार्यालयको कार्यालय गर्दीको
तार्गी प्रारम्भ हुन निर्माण तथा सुरुवातमा कार्यालयको
कार्यालय कार्यालय पर्वतलाई अनुसंधान गर्ने लेखांक
गरिन्छ ।

प्रस्ताव नं. २ माची हलपल गर्दी असू शकते कोणीही
ना यस जावेसु मा पर्व सडकको लंबा बाया जरी दूना मिटर
बायाम जरी किरा बाजी जरी काय सडक जाले मिर्जा जरी

प्रस्ताव नं. प्रस्ताव नं. ३ माथी हलफल गर्दा यस सिपेची आदि
सकलकोबिहीर मा अजग पले अजग धामेको लालपुजा हेरी
मोही किला जवुसार पुनर्वास सर्वेक्षण पार्ने मोही काम
रामपन्थ भएको (जालकाय) गारुड सौद निर्वाह गरिन्छ १

शिला

THE

~~ENCL~~

चित्रित ०६६१/१० गते यस उरामपोखराको

नेपाली युवाहरूको निर्माण समन्वय समितिबाट
अध्यक्ष श्री पुष्प खड्का काण्डेलको अध्यक्षतामा
बसेको बैठकको उपस्थिति एवं निर्णयहरू प्रकाशित

उपस्थिति

श्री पुष्प खड्का काण्डेल - अध्यक्ष

श्री केके खड्का तिवारी

ने.रा.प्र.स.मिलेन खड्का भुसाल लोकप्रसाद
ने.रा.प्र.स. श्री लख्खा तिवारी
परे.प्र.पा.प्र.मो. श्री हरि तिवारी
स.यी.व. - श्री जिवन कुमार तिवारी
को. श्री कल्पना बस्नेत
दलित श्री लक्ष्मी नेपाली

पु.वि.जी.व. श्री पुष्प खड्का तिवारी
संस्कृतिकोण श्री पुर्ण चन्द काण्डेल

श्री केके खड्का भुसाल
श्री कर्ण बहादुर थापा
मानमाती - श्री ध्याधन बहादुर थापा
श्री दिगु खड्का थापा
श्री ध्याधन बहादुर थापा

संस्थापक/लख्खा काण्डेल

सामाजिक कार्यकर्ता श्री पुष्प खड्का काण्डेल
सदस्य श्री दिगु बस्नेत
श्री धनप्रसाद बस्नेत
श्री रामनाथ - पोखरा

प्रस्ताव है,

- (1) प्राथमिक वातावरणीय प्रभाव सम्बन्धिता
- (2) पुनर्वास सर्वेक्षण सम्बन्धिता ।

द्वितीय तब, निर्णय है,

निर्णय नं 1 प्रस्ताव नं 1 वाली दिल्ली जहाँ चिसापानी, - दुबारा, वरीयों, सड़क रखण को वातावरणीय प्रभाव कोरेमा दिल्ली जहाँ से सड़क ले उराम पोखरा गा० वि० स मा वातावरणीय प्रभावमा कुनै प्रतिकुल असर नपने भएकोले से सड़क उप आयोजना कार्यान्वयन गरेको लागी ग्रामिण पुनर्निर्माण तथा पुनर्स्थापना आयोजना जिल्ला आयोजना कार्यलय पर्वत कोई अनुरोध गर्ने निर्णय गरिन्छ ।

निर्णय नं 2 प्रस्ताव नं 2 वाली दिल्ली जहाँ सड़क उप आयोजना सड़क रेखाङ्कन मा सड़कको केन्द्र बिन्दु वाट दायि बायाँ ५, ५ मी को दुरीमा पुनै अगगा धनिहको पुनर्वास सर्वेक्षण गर्नका को निर्णय गरियो ।

वहाकीकारी गा० वि० स



आज मिति २०६६ साल साखिर १३ गते यस
गा० वि० स० को बैठक गा० वि० स० सचिव श्री केशव
प्रसाद पौडेलको अध्यक्षतामा तपलिन यमोजिमको
उपस्थितिमा वस्यो ।

उपस्थिति

गा० वि० स०को तपपाट

- सचिव - श्री केशव प्रसाद पौडेल
उप-स्वास्थ्य चौडी प्रमुख - श्री हरी प्रसाद भुसाल
कृषि सेवा केन्द्र प्रमुख - श्री चन्द्र प्रसाद गुप्ता
गा० वि० स० आवेधीक - श्री इस्मारी न्यौपाने

राजनितिक संयन्त्र

- मोदनी १) स० ने० क० पा० माओवादी - श्री मोहनीलाल न्यौपाने
२) ने० क० पा० स० माले - श्री कुमल प्रसाद भुसाल
३) नेपाली कांग्रेस - श्री हेमलाल भुसाल
४) रा० ज० प्र० नेपाल - श्री लिल वहादुर गुड्डा

प्रस्तावक

- १ प्रारम्भिक वातावरणीय प्रभाव सम्बन्धमा।
- २ पुर्नवास सर्वेक्षण सम्बन्धमा।
- ३ कित्ता नापी सम्बन्धमा।

फलफल तथा निर्णयक

निर्णय नं. १- प्रस्ताव नं. १ माथी फलफल गर्दा चियापारी-हुवास वरीचौर सडक उपआयोजना को वातावरणीय प्रभाव बारेमा - जानाकारो तथा फलफल गरियो। यस सडक कार्यान्वयन गर्दा यस वाहको गा० वि० स० को वातावरणीय प्रभावमा कुनै असर पर्ने भएकोले सो सडक उपआयोजना कार्यान्वयन गर्नको लागी प्राप्ति पुर्नसिर्जना तथा पुर्नस्थापना आयोजना जित्ता आयोजना कार्यान्वयनको लागि अनुरोध गर्ने निर्णय गरियो।

निर्णय नं. २ प्रस्ताव नं. २ माथी फलफल गर्दा यस सडक कौरीडाँडा गजगा पर्ने गजगा छत्री प्रमाणपुर्ज होरी सोही कित्ता अनुसार पुर्नवास सर्वेक्षण कार्य गर्ने काम सम्पन्न भएको जानाकारो गएको - निर्णय गरियो।

निर्णय नं. ३ प्रस्ताव नं. ३ माथी फलफल गर्दा यस सडक कौरीडाँडा गजगा पर्ने सडकको कौँचा-वाघो ठोरो दशमिर काम हुने गरी कित्ताकाट गर्ने काम सम्पन्न भएको निर्णय गरियो।



Annex X: Recommendation Letters from VDC



गाउँ विकास समितिको कार्यालय

विद्याप

पर्वत

पत्र संख्या :-

चलानी नम्बर :-

०००१/०००

विद्याप

धनगढि अञ्चल

मिति :-

०००१/०००

विषय :- विद्यापीस गरीरको सुकथमा

भी गाउँपालिका पुनर्निर्माण तथा सुकथमा आयोजना -
जना जिल्ला आयोजनाको कार्यालय
जिल्ला

मान्य सुकथमा ००० जिल्ला अन्तर्गत
विद्यापनी - विद्याप - पर्वत गाउँपालिका -
पुनर्निर्माण गर्नको लागि तथा गरीरको वाता -
वातावरण पालना गर्नको लागि जिल्ला अन्तर्गत
अन्तर्गत अर्थको सुकथमा वातावरणको लागि
वेदनामा पुग्नेहरू भएका वातावरणको लागि
सुकथमा आयोजनाको लागि वातावरणको लागि
जिल्ला अन्तर्गत अर्थको सुकथमा वातावरणको लागि
विद्यापनीस गरीरको सुकथमा

०००१/०००

नरेश प्रसाद पौडेल
सहायक प्रमुख अधिकारी



गाउँ विकास समितिको कार्यालय पर्वत

पत्र संख्या :- २०६६/०६७
चलानी नम्बर :- ८९



धनकुटा विटि अञ्चल
मिति :- २०६६/८/५


विषय :- शिफारिस गरिएको ।

श्री ग्रामिण पुनर्निर्माण तथा पुनर्स्थापना कार्योजना

जिल्ला कार्योजना कार्यालय,

पर्वत

उपर्युक्त विषयमा चिसापानी-हुवास्
सडक उप-आयोजनाको प्रारम्भिक वातावरणीय परी-
क्षण प्रतिवेदन सम्बन्धमा यो पत्र लेखिएको छ।
उक्त प्रस्तावको प्रारम्भिक वातावरणीय परीक्षण प्रति-
वेदनमा उल्लेख भएका विषय तथा वातावरणीय
प्रभाव र संरक्षण उपायहरूको बारे यस कार्यालय
लाई जानकारी भएकोले उक्त प्रस्ताव कार्यान्वयन
हुनको लागि शिफारिस गरिन्छ। -


२०६६/८/५
मुक्ति प्रसाद बसेल
(गा.वि.स. सचिव)



गाउँ विकास समितिको कार्यालय

वेडलीवास पर्वत

पत्र संख्या :-

पत्रावली नम्बर :-

०५५/२३०

श्रमसमिति अञ्चल

१३५५/७१९

विषय :- शिफारीस गारेएको बारे ।

भी आश्रित पुनर्निर्माण तथा पुनर्वास योजना
जिल्ला आयोजना कार्यालय
पर्वत

प्रस्तुत विषयको सन्दर्भमा चिसापानी - हुवास - काहाचौर सडक
उप आयोजनाको प्रारम्भिक वातावरणीय परिक्षण प्रतिवेदन
सम्बन्धमा यी पत्र लेखीएको छ । उक्त प्रस्तावको प्रारम्भिक
वातावरणीय परिक्षण प्रतिवेदनमा उल्लेख भएका विषय
तथा वातावरणीय प्रभाव र सुरक्षण उपायहरूको बारे यस
कार्यालयलाई जानकारी भएकैले उक्त प्रस्ताव कायम राख्न
हुनको लागि शिफारीस गरिन्छ ।

यसको लागि
मुर्मुर प्रसाद कोफले
गा.वि.स. सचिव



गाउँ विकास समितिको कार्यालय

उपस्थित पर्वत

पत्र संख्या :- ०३३/०३६

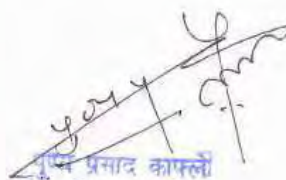
कार्यालयीन प्रतिलिपि

०३३/०६१९

विषय :- सिफारीस गरिएको बारे ।

प्री पुनर्निर्माण तथा पुनर्स्थापना आयोजना
पिप्ला आयोजना कार्यालय
पर्वत

प्रस्तुत विषयका सम्बन्धमा पिप्लानी - हुवास - ब्रह्मचौर सडक
उपस्थापनाको प्रारम्भिक वातावरणीय परिक्षण प्रतिवेदन (सम्बन्धमा
यो पत्र लेखिएको छ) उक्त प्रस्तावको प्रारम्भिक वातावरणीय
परिक्षण प्रतिवेदन मा उल्लेख भएका विषय तथा वातावरणीय
प्रभाव र सुरक्षा उपायहरूको बारे यस कार्यालयलाई जानकारी
भएकोले उक्त प्रस्ताव कार्यान्वयन हुनको लागी सिफारीस
गरिन्छ ।


प्रसाद काफ्ले
गा.वि.स. सचिव



गाउँ विकास समितिको कार्यालय

रंगेलीगाम, पर्वत

पत्र संख्या :- ०३३/०८८
चलानी नम्वर :-

श्रवणमिति अञ्चल
मिति :- ०३०/०८/२०८०

विषय :- सिफारीस गरिएको सम्बन्धमा

शी श्रीमान २२ निर्माता तथा २२ स्थापना आयोजना
जिल्ला आयोजना कार्यलय, पर्सा

प्रस्तुत विषयमा यस जिल्ला अन्तर्गत विस्थापनी-
विकास कार्यको शीर्षक ३५ आयोजनाको प्रारम्भ-
क वातावरणीय पहिचान प्रतिवेदन सम्बन्धमा यो
पत्र लेखिएको छ। उक्त प्रस्तावको प्रारम्भिक वातावरणीय
पहिचान प्रतिवेदनमा उल्लेख भएका विषय तथा वाता-
वरणीय सम्भाव २ संशोधन उपायहरूको बारे यस -
कार्यालयबाट जानकारी भएको छ। उक्त प्रस्तावको -
शर्तब्यति हुनुको लागि सिफारीस गरिएको छ।



सहायक प्रमुख
राष्ट्रिय विकास विभाग



गाउँ विकास समितिको कार्यालय

कक्षा-३ पर्वत

पत्र संख्या :- ००२/८६
चलानी नम्बर :-

धवलागिरी अञ्चल
मिति :- ००२/६/८६

विषय :- सिपावीस सम्बन्धमा

श्री गाउँ विकास समिति तथा पुनः स्थापना भई-
गोरेना, गोरखा आयोगको कार्यालय पर्वत
प्रमुख सम्बन्धमा सिपावीस-विषय-
मा गाउँ विकास समिति पुनर्निर्माण गर्ने क्रममा
उप आयोगको कार्यालय पर्वतमा प्रारम्भिक
वातावरणीय प्रविष्टि प्राप्त भई कार्यालय अन्त-
गत भई यस सम्बन्धमा वातावरणीय समस्या
को समस्या र नैतिकता र सार्वजनिक स्थान
हस्तासत यस सम्बन्धमा कार्यालयमा भई अन्त
गोरेना कार्यालयमा उन सिपावीस गोरखा

००२/६/८६
नरेश प्रसाद शर्मा
गाउँ विकास समिति

[illegible]

S N	Service/Infrastructure Category	Settlement Code														
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	Others
4	ELECTRICITY SUPPLY															
4.1	from Micro-hydro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4.2	from Mini-hydro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4.3	from National Grid	√	√	√	√	√	√	-	-	-	-	-	-	-	-	
4.4	from Solar System	9	15	7	11	9	6	-	-	-	-	-	-	-	-	
4.5	from Diesel Generator	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	BUSINESS & COMMERCE															
5.1	Hotels & Lodges (no.)	3	3	1	-	-	3	-	-	-	-	-	-	-	-	
5.2	Restaurant & Tea Stall (no)	1	3	1	-		2	-	-	-	-	-	-	-	-	
5.3	Grocery Shops (no.)	9	3	2	-	1	2	-	-	-	-	-	-	-	-	
5.4	Other Shops (no.) (e.g. stationery, medicine, tailoring, etc.)	7	4	1	-	-	3	-	-	-	-	-	-	-	-	
6	DRINKING WATER SUPPLY SCHEMES															
6.1	Gravity-Flow Scheme (capacity)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6.2	Tube-wells (no.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6.3	Spring/Dug-wells (no.)	4	3	2	3	5	3	-	-	-	-	-	-	-	-	
7	IRRIGATION SCHEMES															
7.1	Surface Irrigation(ha)	8	4	3	2	4	3	-	-	-	-	-	-	-	-	
7.2	Groundwater (ha.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	OTHER INFRASTRUCTURES															
8.1	Micro-hydro scheme (no. & capacity.....kw)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8.2	Water Mill (no.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8.3	Suspension Bridges (no.)	5	2	3	2	-	-	-	-	-	-	-	-	-	-	
8.4	Wooden Bridges (no.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8.5	Other Bridges (specify)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	INDUSTRY															
9.1	Weaving Industry (no.)	1	1	-	-	-	1	-	-							
9.2	Rice & flour Mills (no.)	3	1	1	1	1	2	-	-	-	-	-	-	-	-	
9.3	Other Industries (specify)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10	FINANCIAL INSTITUTIONS															
10.1	Bank (no.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10.2	Cooperative	1	1	-	-	-	1	-	-	-	-	-	-	-	-	
11	COMMUNITY USE															
11.1	Ghat (no.)	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
11.2	Hatia/Bazaar (no.)	2	1	-	-	-	1	-	-	-	-	-	-	-	-	
11.3	Playground (no.)	-	1	-	-	-	1	-	-	-	-	-	-	-	-	
11.4	Community Centre (no.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11.5	Others (specify)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Source: field survey, July, 2010

A.Huwas B. Triveni C. Beulibas D. Urampokhara E. Saligram F. Wahaki

Annec XI c: Land holding pattern of settlements within ZoI

Land holding Pattern	Number of HH							Percentage
	A (308)	B (166)	C (162)	D (89)	E (109)	F (104)	Total	
Landless								
less than 1 ropani)	28	17	25	10	18	5	103	11.0
1 to 5 ropani	96	66	52	33	53	54	354	37.8
5 to 10 ropani	85	64	58	26	30	26	289	30.8
10 to 20 ropani	75	15	26	19	6	10	151	16.1
20-50 ropani	22	4	1	1	2	7	37	3.9
> 50 ropani	2	0	0	0	0	2	4	0.4

Source: ZoI survey 2010

A. Huwas B. Triveni C. Beulibas D. Urampokhara E. Shaligram F. Wahaki

XI d: Number of households belonging to different food security category

SN	VDC	Number of HHs having food sufficiency for					Total HHs
		Surplus (Sufficient for > 12 months)	Sufficient for whole years	Sufficient for 6 months	Sufficient for 3 months	Hand to mouth existence	
1	Huwas	0	120	62	66	60	308
2	Triveni	0	37	34	57	38	166
3	Beulibas	0	43	31	34	54	162
4	Urampokhara	0	13	21	28	27	89
5	Shaligram	0	56	7	15	31	109
6	Wahaki	0	17	14	36	37	104
		0.0	30.5	18.1	25.1	26.3	

Source: ZoI survey 2010

Annex XII: List of trees to be removed

Chainage	Size (Girth) m			Species
	(0.3-0.6)m	(0.9-1.8)m	Total	
0+300	4		4	Khanyu (<i>Ficus semicordata</i>)
0+415	2	3	7	Khanyu (<i>Ficus semicordata</i>)
0+430	3		3	Khanyu (<i>Ficus semicordata</i>)
0+480	5	2	7	Uttis (<i>Alnus nepalensis</i>), Chilaune (<i>Schima wallichii</i>)
0+950	1		1	Uttis (<i>Alnus nepalensis</i>)
1+258	4	4	8	Khanyu (<i>Ficus semicordata</i>)
1+931	6		6	Khanyu (<i>Ficus semicordata</i>), Lankuri (<i>Fraxinus floribunda</i>)
2+600	2		2	Chilaune (<i>Schima wallichii</i>)
2+735	5		5	Uttis (<i>Alnus nepalensis</i>)
2+989	1	3	4	Uttis (<i>Alnus nepalensis</i>)
3+780	3		3	Chilaune (<i>Schima wallichii</i>)
4+049	2		2	Uttis (<i>Alnus nepalensis</i>)
5+300	8		8	Uttis (<i>Alnus nepalensis</i>), Chilaune (<i>Schima wallichii</i>)
5+900	3		3	Chilaune (<i>Schima wallichii</i>)
5+936	3	2	5	Chilaune (<i>Schima wallichii</i>), Uttis (<i>Alnus nepalensis</i>)
5+998	2		2	Khanyu (<i>Ficus semicordata</i>)
6+972	7		7	Khanyu (<i>Ficus semicordata</i>), Lankuri (<i>Fraxinus floribunda</i>)
9+560	5	2	7	Khanyu (<i>Ficus semicordata</i>)
9+960	8		8	Khanyu (<i>Ficus semicordata</i>), Gogan (<i>Sauravia nepauensis</i>)
10+199	5		5	Khanyu (<i>Ficus semicordata</i>), Gogan (<i>Sauravia nepauensis</i>)
10+540	7	2	9	Khanyu (<i>Ficus semicordata</i>), Gogan (<i>Sauravia nepauensis</i>)
10+780	8		8	Uttis (<i>Alnus nepalensis</i>), Lankuri (<i>Fraxinus floribunda</i>)
10+945	2	4	6	Gogan (<i>Sauravia nepauensis</i>), Chilaune (<i>Schima wallichii</i>)
10+990	7	3	10	Gogan (<i>Sauravia nepauensis</i>), Khanyu (<i>Ficus semicordata</i>)
11+580	6		6	Gogan (<i>Sauravia nepauensis</i>), Khanyu (<i>Ficus semicordata</i>)
12+690	9	3	12	Chilaune (<i>Schima wallichii</i>), Gogan (<i>Sauravia nepauensis</i>)
14+990	12	3	15	Chilaune (<i>Schima wallichii</i>), Gogan (<i>Sauravia nepauensis</i>), Khanyu (<i>Ficus semicordata</i>)
Total	130	31	161	

Source: field survey, July, 2009

Annex XIII: Photographs

Photographs of project Area



Starting Point at Chisapani of Huwas VDC



Proposed Seti Khola Bridge site at Ch. 6+720



Irrigation Crossing at Ch.1+100



Existing landslide at Ch.0+100



Foot Trail way to Wahaki VDC at Ch. 16+000



Road alignment passing through cultivated land at Huwas VDC



Road alignment passing through Hatemola Chwok at Huwas VDC



Embankment filling required from Ch. 2+900 - 3+800 due to water logging problem



Proposed causeway at Ch. 4+040, Mardi Khola



Protection required for water tap stand during bridge construction



Existing Landslide at Ch. 13+070



End Point at Wahakibhanjyang of Wahaki VDC

Annex XIV: Summary of Cross Drainage Structures

Summary of Drainage works along the road alignment

Hume Pipe

S.N.	Chainage	Length	Dia.	Quantity	Remarks
		m	m	no.	
1	1+280	7.5	0.3	3	
2	1+400	7.5	0.3	3	
3	2+300	7.5	0.3	3	
4	2+410	7.5	0.3	3	
5	2+800	7.5	0.3	3	
6	2+920	7.5	0.3	3	
7	3+960	7.5	0.3	3	
8	5+150	7.5	0.3	3	
9	5+740	7.5	0.3	3	
10	5+820	7.5	0.3	3	
11	6+400	7.5	0.3	3	
12	6+960	7.5	0.3	3	
13	7+080	7.5	0.3	3	
14	7+300	7.5	0.3	3	
15	7+920	7.5	0.3	3	
16	7+980	7.5	0.3	3	
17	10+240	7.5	0.3	3	
Total		127.50		51.00	RM

S.N.	Chainage	Length	Dia.	Quantity	Remarks
		m	m	no.	
1	0+300	7.5	0.6	3	
2	0+596	7.5	0.6	3	
3	1+680	7.5	0.6	3	
4	2+151	7.5	0.6	3	
5	2+457	7.5	0.6	3	
6	2+750	7.5	0.6	3	
7	2+980	7.5	0.6	3	
8	3+237	7.5	0.6	3	
9	3+780	7.5	0.6	3	
10	4+550	7.5	0.6	3	
11	5+060	7.5	0.6	3	
12	7+200	7.5	0.6	3	
13	7+520	7.5	0.6	3	
14	8+300	7.5	0.6	3	
15	8+500	7.5	0.6	3	
16	9+100	7.5	0.6	3	
17	9+500	7.5	0.6	3	
18	9+940	7.5	0.6	3	
19	10+500	7.5	0.6	3	
20	11+000	7.5	0.6	3	
21	11+500	7.5	0.6	3	
22	11+800	7.5	0.6	3	
23	13+740	7.5	0.6	3	
24	14+120	7.5	0.6	3	
25	14+580	7.5	0.6	3	
26	15+567	7.5	0.6	3	

Total	195.00		78.00	RM
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PCC Causeway

SN	Chainage	Length	Earthwork		Boulder Soling		PCC(1:2:4)	
			Area	Quantity	Area	Quantity	Area	Quantity
		m	sq.m.	cu.m.	sq.m.	Cum	sq.m.	cu.m.
1	1+166	12.0	1.00	12.00	60.00		1	12.0
2	4+040	12.0	1.00	12.00	60.00		1	12.0
3	5+380	12.0	1.00	12.00	60.00		1	12.0
4	6+140	12.0	1.00	12.00	60.00		1	12.0
5	6+560	12.0	1.00	12.00	60.00		1	12.0
6	8+080	12.0	1.00	12.00	60.00		1	12.0

Source: Field survey, May2009

Annex XV: Affected Houses and Structures along the Road Alignment

Details of Affected Private properties

House hold No. 01	Structure No.01	Chainage From 6+600 to 6+610 Distance from Centre Line of the Road 1.60m Address of Structure :- Aurthun Bazar.				
		Story	Total Area (sq.ft)	Area of land to be acquired (Sq.ft)	Rate per Sqft .	Total
		2	544.08			
		First		544.08	275	149622.00
		Second		544.08	275	149622.00
		Third				
		Veranda				
		Basking				
		Shed				
		Wall				
		Other				
		Total				299244.00
Name of owner Yam Bhadur Rana Address: Aurthun- 9 Tribeni Parbat Citizenship Number: Name of father :Man Bhadur Rana Map/Sheet No: Plot No:1615 Owner's certificate No: No		Type of structure Kacchi Material used in wall :- Mud, stone. Material used in roof : Jasta +Khar Material used in story : wood mud Present use : Home Construction year : 2045				

Summary of Cost for RP

Item		Unit	Total loss	Amount (NRs.)	Remarks
1. DIRECT COST					
1.1	Compensation for private land	sqm	45291		8877036
1.2	Private Trees	No.	0	0	
1.3	Public tree	No.	0	0	
1.4	CFUGs Tree	No.	0	0	
1.5	Private structure	No.	1	299244.00	
1.6	Public Structure	No	0	0	
	Sub Total (A)			299244.00	
2.INDIRECT COST					
2.1	Moved allowance	LS		10000.00	
2.2	Rental Stipend		2000*1*3	6000.00	
2.3	Transportation Allowance	LS		100000.00	
2.4	Deed Transfer Assistance	HHN	327	100000.00	
2.5	Official Deed Transfer fees	LS	327	80000.00	
	Sub Total (B)			296000.00	
3	Income generation and Livelihood improvement programme			746588.00	
4	Appreciation Program for APs	LS		50000.00	
	Sub-Total (C)			796588.00	
	Total (A+B+C)			1391832.00	
5	Provisional Sum (5%)			69591.00	
6	Reserve Fund for Absentees HHs			15,00,000.00	
	Grand Total			2961423.00	

Annex XVI: Structure for Slope Stabilization

Recommended structures necessary for slope stabilization at various places

S.NO.	Description	Chainage	Length	Height	Volume	Total Gabion (Nos.)		Remarks
		from	m	m	m3	1x1x1.5	1x1x2	
1	Gabion Walls	1+120	10	2	25.00	10.00	5.00	
2	Gabion Walls	2+060	8	2	20.00	8.00	4.00	
3	Gabion Walls	2+380	12	3	54.00	12.00	18.00	
4	Gabion Walls	2+400	8	3	36.00	8.00	12.00	
5	Gabion Walls	4+540	6	2	15.00	6.00	3.00	
6	Gabion Walls	4+640	9	2	23.50	9.00	5.00	
7	Gabion Walls	5+920	10	2	25.00	10.00	5.00	
8	Gabion Walls	6+100	12	3	54.00	12.00	18.00	GWBRT
9	Gabion Walls	7+720	5	2	13.50	5.00	3.00	
10	Gabion Walls	7+960	12	4	84.00	24.00	24.00	
11	Gabion Walls	8+060	8	2	20.00	8.00	4.00	
12	Gabion Walls	8+300	5	2	13.50	5.00	3.00	
13	Gabion Walls	9+340	12	3	54.00	12.00	18.00	GWBRT
14	Gabion Walls	10+460	6	2	15.00	6.00	3.00	
15	Gabion Walls	10+620	8	4	56.00	16.00	16.00	
16	Gabion Walls	10+960	12	2	30.00	12.00	6.00	
17	Gabion Walls	11+020	10	2	25.00	10.00	5.00	
18	Gabion Walls	11+040	14	3	63.00	14.00	21.00	
19	Gabion Walls	11+280	7	2	18.50	7.00	4.00	
20	Gabion Walls	11+700	9	4	63.00	18.00	18.00	
21	Gabion Walls	11+720	8	4	56.00	16.00	16.00	
22	Gabion Walls	11+740	7	2	18.50	7.00	4.00	
23	Gabion Walls	11+800	9	4	63.00	18.00	18.00	
24	Gabion Walls	11+880	10	4	70.00	20.00	20.00	
25	Gabion Walls	11+900	8	3	36.00	8.00	12.00	
26	Gabion Walls	12+480	7	3	32.50	7.00	11.00	
27	Gabion Walls	12+700	9	3	41.50	9.00	14.00	
28	Gabion Walls	12+860	14	5	140.00	28.00	49.00	
29	Gabion Walls	13+060	22	2	55.00	22.00	11.00	GWBRT
30	Gabion Walls	13+560	11	3	50.50	11.00	17.00	
31	Gabion Walls	13+580	8	3	36.00	8.00	12.00	
32	Gabion Walls	13+600	12	4	84.00	24.00	24.00	
33	Gabion Walls	13+700	10	4	70.00	20.00	20.00	
34	Gabion Walls	13+800	8	3	36.00	8.00	12.00	
35	Gabion Walls	13+920	10	4	70.00	20.00	20.00	
36	Gabion Walls	13+940	8	3	36.00	8.00	12.00	
37	Gabion Walls	14+080	9	2	23.50	9.00	5.00	
38	Gabion Walls	14+100	13	3	59.50	13.00	20.00	
39	Gabion Walls	14+360	9	3	41.50	9.00	14.00	
40	Gabion Walls	14+380	8	3	36.00	8.00	12.00	
41	Gabion Walls	14+400	7	3	32.50	7.00	11.00	
42	Gabion Walls	14+920	12	2	30.00	12.00	6.00	
43	Gabion Walls	14+940	8	3	36.00	8.00	12.00	
44	Gabion Walls	15+140	10	2	25.00	10.00	5.00	
45	Gabion Walls	15+280	8	2	20.00	8.00	4.00	
46	Gabion Walls	15+480	8	2	20.00	8.00	4.00	
47	Gabion Walls	15+540	12	4	84.00	24.00	24.00	GWBRT
48	Gabion Walls	15+920	12	2	30.00	12.00	6.00	
49	Gabion Walls	15+940	14	3	63.00	14.00	21.00	
TOTAL					2104.00	588.00	611.00	