

ESMP Balebec Basca Road April 17
Updated Version based on Comments from April 07,2015

4.28. ESMP

Name of Road:	Rehabilitation of Balebec-Basca Farm to Market Road and Balebec Bridge
Location:	Municipality of Naguilian & Aringay, La Union
Implementing LGU:	Provincial Government of La Union
Estimated number of beneficiaries:	4,512
New or Rehab:	Rehabilitation
Estimated Total Cost:	P122,564,715.60

A. Site and Design Consideration

1. The Road does not encroach into or traverse any declared protected area of natural habitat (c.f. Loan Agreement: PRDP will not fund subprojects located inside a declared Protected Area);
2. The subproject will not displace, disfigure or render inoperable/inaccessible any monument or physical structure of known cultural and historical significance.

A. Environmental Issues and Mitigation Measures

Issue (Potential Impact)	Assessment	Mitigation Measure	Schedule/Duration of the Mitigation Measures	Instrument of Implementation (POW, Contract, DP, or O&MPlan)	Responsible unit
1. Temporary increase in sedimentation during construction	Topography of the road alignment necessitate massive earthmoving and cutting of clayey or loose topsoil	Earthmoving/ cutting of slopes to be done during dry months Proper disposal and compaction of soil	(Segmented) As needed	DED/POW; Contract	Contractor
2. Potential contamination of surface and ground-water with oil/grease	There will be no or insignificant amount of waste oil/grease	Proper handling and disposal of waste oil and grease	As needed	Contract	Contractor
3. Potential contamination with human waste	Construction workers would be temporarily housed in a base camp Workers would be mostly locals and are expected to go home to their respective houses after works	Set up adequate latrine/ toilet facility at the base camp	From the start of fill up to the turnover of the project	Contract	Contractor
4. Potential disruption of traffic flow	The access road and/or segments to be rehabilitated need is vital to daily activities of the	Keep the road open to traffic flow and minimize disruptions along the access road and/or	Whole duration of contract	Contract	Contractor

	residents and farmers and need to be kept open to traffic during construction	<p>construction area; Provide adequate warning signs and traffic personnel when necessary;</p> <p>Undertake regular maintenance measures on the passable portions of the roads</p>			
5. Potential dust/mud nuisance during construction	<p>Roads could become powdery during dry days and muddy during rainy days of the construction period</p> <p>Access road and /or the construction/rehabilitation works passes through a populated area</p>	<p>Undertake sprinkling of road (including access roads) during dry days, and filling up of potholes during rainy days, especially in residential areas</p> <p>Set up speed limits for vehicles, especially within residential areas</p>	During dry season	Contract	Contractor
6. Landslide/erosion of exposed road sides resulting in sedimentation of waterways	<p>The road will traverse a mountainous area necessitating deep cuts on mountainsides. Refer to detailed engineering design on exact locations.</p> <p>The exposed slopes will likely consist of highly erodible loose materials</p>	<p>Include slope protection works at the following stations: See attached table 10 on pages 38-39 showing stations for cross drainages.</p> <p>Slope protections are of stone masonry</p> <p>Bioengineering with geomat and cover crop Fast growing shrub species</p> <p>Reforestation with appropriate combination of fast growing shrub species and native trees</p>	<p>As required</p> <p>After road improvement (June-August)</p>	DED/POW	<p>Contractor</p> <p>PGLU-OPAG with Brgy. LGU</p>
7. Inadequate drainage resulting in flooding or ponding	The road will block runoff, resulting in flooding on one side of the road during rainy days.	Installation of cross drainages are illustrated at table 10 on pages 38-39.	As required	DED	Contractor
8. Potential increase use of pesticides due to intensification of cash crop product-	There is an on-going IPM program of DA in the service area	<p>DA to continue to support IPM program</p> <p>LGU to Coordinate with DA on IPM</p>		<p>Capacity Building Plan</p> <p>O & M Plan;</p>	PGLU-MAO


ion in the area		training			
9. Potential acceleration of denudation of the upland/ hilly areas due to intensification of crop production	<p>The proposed road will connect to the market an upland/ hilly area where farmers are currently practicing erosive far-ming techniques.</p> <p>The road could help accelerate the denudation of the upland/hillsides rendering them un-productive in a few years.</p>	<p>DA to coordinate with LGU for the introduction of sustainable upland farming systems in the area such as Agroforestry</p> <p>Establishment of Bantay Gubat Task Force ;</p>	After road completion	<p>Capacity Building Program on Agro-forestry</p> <p>Capacity Building; Paralegal Training on Forest Law</p>	<p>PGLU; MAO</p> <p>PGLU; DENR</p>
10.Potential increased in encroachments of human activities into the nearby public forest	The proposed road will improve hu-man access to the nearby public fo-rest, resulting in increased slash and burn cultivation, illegal logging and poaching.	Coordinate with DENR for the enactment of ordinance deputizing the local Community to enforce forestry laws IEC on Forest laws; Establishment of Bantay Gubat Task Force	After road Completion (June)	IEC Plan; Training on Bantay Gubat	OPag-Enro
11. Local employment	Construction will provide local employment opportunities	<p>Hiring priority shall be given to qualified local residents; Implement I-BUILD Manual on local hiring</p> <p>Standard Compensation for local skilled workers shall be strictly enforced based on approved rates by the the Regional and or Provincial Wage Productivity Board.</p>	From start to completion of project	Employment Contracts; Payrolls	Contractor; PPMIU
12. Damage to Standing Crops, trees and property	<p>Cutting of various fruit and forest trees (64)</p> <p>Demolition of existing School Fence of Basca Elementary School</p>	<p>Follow the Procedures of Tree Cutting based on guidelines set by the DENR and in the cutting permit</p> <p>Replacement/ Planting of 100 trees for every tree cut (6,400)</p> <p>Replacement with</p>	<p>Before and During Site Preparation/ Tree Cutting</p> <p>After road construction</p> <p>During</p>	<p>PPMIU-SES and DENR; Contractor</p> <p>Roadside Reforestation Plan</p>	<p>Tree Cutting Permit issued by DENR</p> <p>PGLU with BLGU</p>

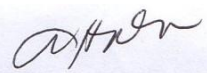
	May result to damage, relocation of properties	stone masonry wall with interlinks The LGUs and contractor shall provide just compensation for ROW whenever applicable; Shall give assistance on the repair of damaged properties and or relocation of affected structures whichever is applicable	construction Throughout project duration	Contract POW/ DED	Contractor PPMIU and contractor
13. Increased pedestrian and vehicular Traffic flow	Possible incidence of vehicular and pedestrian accidents	Passing of ordinance for appropriate road safety such as speed limits Placement of Road Safety signs; Pedestrian lanes in appropriate places	During Construction	DED/ POW	Contractor
14. a. Batching Plant Operation b. Quarry Source and operation	Operation of offsite Batching Plant may cause air, noise, water pollution Extraction of quarry materials may cause uneven river beds and weaken soil cohesion Quarry sites may pose danger to public especially for swimming.	Regular Monitoring and Evaluation of Batching Plants to ensure that it is compliant to the provisions in its ECC Regular Monitoring & Evaluation of quarry operations to insure that it is compliant to the provisions of their individual ECC Posting of signages bearing “ NO SWIMMING” or “DANGER, NO SWIMMING” should be placed in strategic locations near or within quarry areas	Throughout project duration Throughout project duration	Integrated Annual Environmental Work Plan (AEWP) of Batching Plant Operators Integrated Annual Environmental Work Plan (AEWP) of Quarry Operators	MGB; Opag-ENRO OPAG-Enro
15. Impacts on existing road during	Hauling and mobilization of construction	the contractor should (i) locate the parking site	During Construction	DED/POW	Contractor

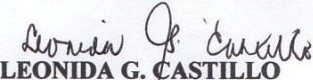
construction	equipment on existing roads may environmental impacts related to gaseous emissions, dust, noise, and oil spill soil compaction	for heavy equipment near an existing road, (ii) avoid establishment of temporary access roads for mobilizing construction equipment, and (iii) select convenient time for moving the construction equipment to the parking area to avoid disturbance to school, primary health center, etc..			
16. Archaeological Chance Find	Discovery of bones, artifacts and other objects of interest	Orientation and protocols on Archaeological Chance Finds shall be made known to the LGU Contract Administrator, Contractor, Site Engineer, Foremen and on-site engineers	Pre-construction	Chance Find Guidelines	PPMIU and Contractor
17. Construction of Overflow Bridge	Construction might cause soil disturbance and sedimentation to the river.	The environmental impacts are expected on soil, water and air environment due to generation of waste, dust, noise, water pollution, social issues, increasing safety risk to local residents and create potential conflict between workers and local people. Work is small scale so it would not significantly affect the environment.	contractor will prepare a plan to minimize and/or manage wastes and other potential impacts on local environment and local residents and give due attention to address the issues related to public safety.		PPMIU and Contractor
18. Grievance Redress Mechanism	Complaints on project activities and performance may arise	A Grievance Redress Mechanism should be established to	Pre-Construction		PPMIU


		<p>ensure that complaints are heard and addressed or solved</p> <p>Inform especially PAP of the presence of this GRM and the corresponding Committee</p>			
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Prepared by:



DIANNE M. ORPILLA
 Senior Environmental Management Specialist I

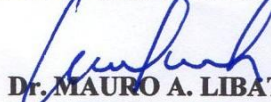

NORMA H. FLORA
 Engineer V

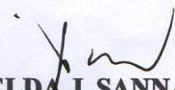

LEONIDA G. CASTILLO
 Community Development Officer I


NESTOR UBALDO
 Engineer I


RECOMMENDING APPROVAL:



ELIZABETH P. SIAS
 Provincial Engineer

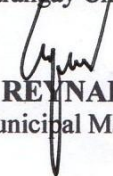

Dr. MAURO A. LIBATIQUE, Jr.
 Prov'l Planning & Dev't Coordinator

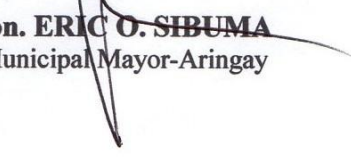

IMELDA J. SANNADAN
 Provincial Agriculturist

CONFORME:



WILLY M. CORPUZ
 Barangay Chairman-Balebec


DOMINADOR SABADO, JR.
 Barangay Chairman-Basca


Hon. REYNALDO J. FLORES
 Municipal Mayor-Naguilian


Hon. ERIC O. SIBUMA
 Municipal Mayor-Aringay

APPROVED:


Hon. MANUEL C. ORTEGA
 Provincial Governor