

## ANNEX E-1

### Department of Agriculture Philippine Rural Development Project

*[Note: This template is designed to rapidly identify and assess the environmental issues and associated mitigation/management measures in Rural and Farm-to-Market Roads funded under PRDP. This template consolidates all safeguards aspect of Farm to Market Roads Subproject as found in various project documents.]*

*ADDITIONAL NOTES: Items in red are mandatory items recently required based on the comments of the World Bank. The ESMP table should form part of the write up and the signed copy of the ESMP must be included in the SES attachments.*

Name of Road:	<b>Rehabilitation/Improvement of Pistola – Tablon Road with 3 units Bridges</b>
Location:	<b>Pistola, Camagong, Banao, Del Rosario, Tobgon, Badbad, Ramay, San Miguel, Talisay, Tablon</b>
Implementing LGU:	<b>Provincial Government of Albay</b>
Estimated number of beneficiaries:	
New or Rehab:	<b>Rehabilitation of road and Construction of 3 units bridges</b>
Estimated Total Cost:	<b>Php197,441,675.88</b>

#### A. Site and Design Consideration

*[Do not proceed with the Subproject preparation including this ESMP unless all items below are confirmed true.]*

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.

**B. Environmental Issues and Mitigation Measures** *[The following are issues frequently associated with Farm to Market Roads. Issues include alleged/perceived impacts, potential impacts, health and safety and environmental risks. Entries in the “Assessment” column should describe or provide qualifications regarding the significance of the issues. Issues that are deemed critical or significant should have a corresponding entry in the “Mitigation” column. Entries in the “Instrument” column should indicate how and where in the measures will be implemented in the Subproject. Please feel free to add, delete or modify any of the items in the template. In preparing the ESMP below refer to the Environmental and Social Assessment Section of the FS for specific safeguards issues and assessments]*

Issue (Potential Impact)	Assessment	Mitigation Measure	Mitigation schedule	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible person
1. Temporary increase in sedimentation during construction	<input type="checkbox"/> Topography of the road alignment necessitate massive earthmoving and cutting of clayey or loose topsoil. <input type="checkbox"/> Cut materials will consist mainly of hard rocks and are unlikely to generate significant sediments. <input checked="" type="checkbox"/> Excavated materials will consist mainly of soil and are unlikely to generate significant sediments.	<input type="checkbox"/> Earthmoving/ cutting of slopes to be done during dry months <input checked="" type="checkbox"/> Proper disposal and compaction of spoils <input type="checkbox"/> No measures required	During project implementation	DED/POW; Contract	Contractor. PMC
2. Potential contamination of surface and groundwater with oil/grease	<input checked="" type="checkbox"/> Waste oil and grease from equipment could contaminate surface water <input type="checkbox"/> There will be no or insignificant amount of waste oil/grease	<input checked="" type="checkbox"/> Proper handling and disposal of waste oil and grease	During project implementation	Contract	Contractor, PMC
3. Excess excavation materials	<input checked="" type="checkbox"/> disposal of excess materials	<input checked="" type="checkbox"/> Proper disposal in private property within each barangay	During project implementation	Contract	Contractor
4. Potential contamination with human waste	<input checked="" type="checkbox"/> Construction workers would be temporarily housed in a base camp	<input checked="" type="checkbox"/> Set up adequate latrine/toilet facility at the base camp	During project implementation	Contract	Contractor, PMC

Issue (Potential Impact)	Assessment	Mitigation Measure	Mitigation schedule	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible person
	[x] Workers would be mostly locals and are expected to go home to their respective houses after works				
5. Potential disruption of traffic flow	[x] The access road and/or segments to be rehabilitated need is vital to daily activities of the residents and farmers and need to be kept open to traffic during construction [x] The construction will not affect daily movement of residents and farmers	[x] Keep the road open to traffic flow and minimize disruptions along the access road and/or construction area; Provide adequate warning signs and traffic personnel when necessary; [x] Undertake regular maintenance measures on the passable portions of the roads [ ] No measures needed	During project implementation	Contract	Contractor, PMC
6. Potential dust/mud nuisance during construction	Roads could become powdery during dry days and muddy during rainy days of the construction period [ ] Access road and/or the construction/rehabilitation works passes through a populated area [x] Access road and/or construction/rehabilitation does not pass through any populated area	[ x] Undertake sprinkling of road (including access roads) during dry days, and filling up of potholes during rainy days, especially in residential areas [x]Set up speed limits for vehicles, especially within residential areas [ ] No measures needed	During project implementation	Contract	Contractor, PMC

Issue (Potential Impact)	Assessment	Mitigation Measure	Mitigation schedule	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible person																																																
7. Landslide/ erosion of exposed road sides resulting in sedimentation of waterways	<input checked="" type="checkbox"/> The road will traverse a mountainous area necessitating deep cuts on mountainsides, particularly between stations: <input type="checkbox"/> The exposed slopes will likely consist of highly erodible loose materials <input type="checkbox"/> The cut slopes will be hard materials that would resist erosion <input type="checkbox"/> The road passes through a relatively benign terrain, cuts will be minimal <input type="checkbox"/> The rehabilitation work does not involve additional road cuts	<input checked="" type="checkbox"/> Include slope protection works <input checked="" type="checkbox"/> Bioengineering with geonets and cover crop <input type="checkbox"/> Fast growing shrub species <input type="checkbox"/> Riprap <input type="checkbox"/> Gabions <input type="checkbox"/> Terracing <input type="checkbox"/> Concrete protection wall <input type="checkbox"/> Others _____)  Slope protection/geonets  <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: center;"><b>Station ( from )</b></th> <th style="text-align: center;"><b>( to )</b></th> </tr> </thead> <tbody> <tr><td>Sta.</td><td>1+268</td><td>1+307</td></tr> <tr><td>Sta.</td><td>2+643</td><td>2+719</td></tr> <tr><td>Sta.</td><td>3+060</td><td>3+087</td></tr> <tr><td>Sta.</td><td>3+313</td><td>3+360</td></tr> <tr><td>Sta.</td><td>3+705</td><td>3+721</td></tr> <tr><td>Sta.</td><td>3+666</td><td>3+728</td></tr> <tr><td>Sta.</td><td>3+867</td><td>3+877</td></tr> <tr><td>Sta.</td><td>3+970</td><td>3+995</td></tr> <tr><td>Sta.</td><td>4+174</td><td>4+219</td></tr> <tr><td>Sta.</td><td>4+588</td><td>4+669</td></tr> <tr><td>Sta.</td><td>4+870</td><td>4+895</td></tr> <tr><td>Sta.</td><td>4+885</td><td>4+892</td></tr> <tr><td>Sta.</td><td>6+083</td><td>6,181.00</td></tr> <tr><td>Sta.</td><td>6+586</td><td>6+597</td></tr> <tr><td>Sta.</td><td>6+641</td><td>6+650</td></tr> </tbody> </table>		<b>Station ( from )</b>	<b>( to )</b>	Sta.	1+268	1+307	Sta.	2+643	2+719	Sta.	3+060	3+087	Sta.	3+313	3+360	Sta.	3+705	3+721	Sta.	3+666	3+728	Sta.	3+867	3+877	Sta.	3+970	3+995	Sta.	4+174	4+219	Sta.	4+588	4+669	Sta.	4+870	4+895	Sta.	4+885	4+892	Sta.	6+083	6,181.00	Sta.	6+586	6+597	Sta.	6+641	6+650	During project implementation	DED/POW	Contractor, PMC
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Issue (Potential Impact)	Assessment	Mitigation Measure	Mitigation schedule	Instrument of Implement ation (POW, Contract, IDP, or O&M Plan)*	Respons ible person
		St a. 7+125 7+331			
		St a. 8+434 8+480			
		St a. 8+500 8+564			
		St a. 8+540 8+570			
		St a. 8+583 8+628			
		St a. 8+827 8+870			
		St a. 9+194 9+230			
		St a. 9+271 9+290			
		St a. 9+564 9+724			
		St a. 9+736 9+779			
		St a. 9+800 9+855			
		St a. 9+908 9+943			
		St a. 10+14 10+170			
		St a. 10+18 10+265			
		St a. 10+50 10+560			
		St a. 10+78 10+810			
		St a. 11+14 11+182			
		St a. 11+33 11+526			
		St a. 11+57 11+671			
		St a. 12+82 12+856			
		St a. 12+90 12+976			
		St a. 13+37 14+425			
		St a. 13+49 13+505			
		St a. 13+63 13+667			
		St a. 13+83 13+850			

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		St 15+54 a. 3 15+568 St 15+90 a. 3 15+916 St 15+95 a. 0 15+980 St 16+09 a. 2 16+127 St 16+80 a. 0 16+846 St 16+87 a. 0 16+910 St 16+94 a. 6 16+960 St 19+48 a. 3 19+493			
8. Inadequate drainage resulting in flooding or ponding	<input checked="" type="checkbox"/> The road will block runoff, resulting in flooding on one side of the road during rainy days. <input type="checkbox"/> Drainage issues unlikely	<input checked="" type="checkbox"/> Installation of cross drain, line canals, slope protections at stations: Sta 3+350 Sta 3+970 Sta 7+517 Sta 7+646 Sta 8+839 Sta 9+277 Sta 9+524 Sta 9+564 Sta 11+104 Sta 11+590 Sta 12+025 Sta 12+450 Sta 13+146 Sta 13+770 Sta 13+849 Sta 14+180 Sta 14+ 278 Sta 14+967 Sta 15+078 Sta 15+779 Sta 15+846 Sta 16+725 Sta 16+954 Sta 17+061 Sta 17+555 Sta 17+880	During project implementation	DED	Contractor, PMC

Issue (Potential Impact)	Assessment	Mitigation Measure	Mitigation schedule	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible person
		Sta 18+006 Sta 18+271 Sta 18+580 Sta 18+625 Sta 18+922 Sta 19+206 Sta 19+637 Sta 19+988 Sta 20+020  (1-line 910mmΦx7.0m)  Line canals  1+935            2+154 2+001           2+152 3+200            3+318 6+500            6+627 8+220            8+481 8+500            8+572 8+583            8+753 9+525            10+355 11+300           11+674 12+145           12+450 13+849           13+933 19+850           20+133			
9. Potential increased use of pesticides due to intensification of cash crop production in the area	[x] There is an ongoing IPM program of DA/PAS in the service area (for verification) [ ] Farmers in the service area have not been trained on IPM	[x] DA/PAS to continue to support IPM program [ ] LGU to Coordinate with DA on IPM training	During project implementation	Capacity Building Plan O & M Plan; Capacity Building Plan	PAS, DA
10. Potential acceleration of denudation of the upland/hilly areas due to intensification	[ ] The proposed road will connect to the market an upland/hilly area where farmers are currently practicing erosive farming	[ ] DA to coordinate with LGU for the introduction of sustainable upland farming systems in the area  [x] No measure required			

Issue (Potential Impact)	Assessment	Mitigation Measure	Mitigation schedule	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible person
ion of crop production	<p>techniques. The road could help accelerate the denudation of the upland/hillsides rendering them unproductive in a few years. <input type="checkbox"/> The road connects only lowland farms to the market</p>				
11. Potential increased in encroachments of human activities into the nearby public forest	<p><input type="checkbox"/> The proposed road will improve human access to the nearby public forest, resulting in increased slash and burn cultivation, illegal logging and poaching. <input type="checkbox"/> The proposed road does not improve access to a public forest</p>	<p><input type="checkbox"/> Coordinate with DENR for the enactment of ordinance deputizing the local community to enforce forestry laws <input checked="" type="checkbox"/> No measure required</p>		O&M Plan; Capacity Building Plan	
12. Local employment	<p><input checked="" type="checkbox"/> Construction will provide local employment opportunities  <input type="checkbox"/> Construction does not provide any local employment opportunities</p>	<p><input checked="" type="checkbox"/> Hiring priority shall be given to qualified local residents; Implement I-BUILD Manual on local hiring <input type="checkbox"/> No measures required</p>	During project implementation	Contract	Contractor
13. Conversion of Land-use/natural habitat	<p><input type="checkbox"/> the proposed quarry site is within a private land and need</p>	<p><input checked="" type="checkbox"/> Quarry materials will be procured to existing quarry sites: River Quarry at Brgy. San Juan around 12.5 kms away from the</p>	During project implementation	Certification	Contractor, ENRO, DPWH, PEO




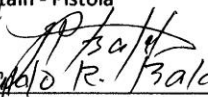
Issue (Potential Impact)	Assessment	Mitigation Measure	Mitigation schedule	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible person
due to quarry	to convert existing land-use [x] Quarry site is existing and proven as a good source of quarry materials	SP site (accredited qualified source by DPWH) [x] Regular monitoring done by DPWH not to over quarry.			
14. Potential damage to existing road due to hauling of quarry materials	[ x ]Sources of Quarry materials is 12.5 kms (Item201,Sand, Gravel and Boulders) Transportation of quarry materials from source to FMR will cause damage to existing FMR	[x] Regular maintenance and repair of existing road by the contractor	During project implementation	Contract	Contractor, PMC
11. Possible discovery of artifacts, bones and other objects of interest during construction of the processing plant	[x] Discovery of artifacts, bones and other objects of interest within the 10 meter radius  [ ] Discovery of artifacts, bones and other objects of interest outside the 10 meter radius	[ x ] Suspension of the activities and immediately report to the PLGU and RPCO SES Focal Person	During construction period	Contract	Contractor
12. Conflict between project implementers and other stakeholders/ Grievance during implementation	There is an acceptable Grievance Redress Mechanism in place	The project implementers to ensure that all grievances are properly addressed	Before and during project implementation	Grievance Redress Mechanism Framework Contract	PPMIU/ Contractor

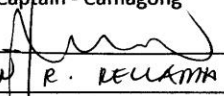
Adopted by PPMIU:

  
**ENGR. MACARIO M. PAVIA**  
PPMIU Head

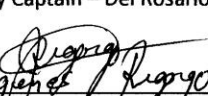
Noted by the local community:

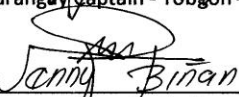
  
**CARMELETA R. BALDE**  
Barangay Captain - Pistola

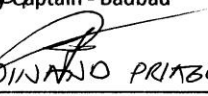
  
**REYNALDO R. BALDE**  
Barangay Captain - Camagong

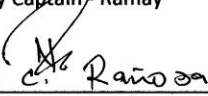
  
**WILSON R. RELAM**  
Barangay Captain - Banao

  
**CELESTINO R. RAMOS**  
Barangay Captain - Del Rosario

  
**ANTINOQUENA R. REGYO**  
Barangay Captain - Tobgon


  
**JONNY BINAN**  
Barangay Captain - Badbad

  
**FERMINANO PRIABOLA**  
Barangay Captain - Ramay

  
**Nestor C. Razon**  
Barangay Captain - San Miguel

  
NESTOR RANOSA  
Barangay Captain – San Miguel

  
JUAN RESPLANDO Jr.  
Barangay Captain - Talisay

  
DOMINGO BOBIS  
Barangay Captain - Tablon

Endorsed by :

  
**JOEY SARTE SALCEDA**  
Governor