

Development Fund (MDF). Barangay Tawantawan and San Pedro will have the same fund sourcing for the sub-projects operation and maintenance once in every quarter. The POMG will be created to perform maintenance activities.

D. Social Assessment

6.1 Project Beneficiaries

The beneficiaries of the subproject are the people of barangay Tawantawan and San Pedro which is composed of 2,325 males and 2,318 females. Majority of them are farmers that cultivated an agricultural land of about 921 hectares with an average annual of income of Php 40,000.00. The proposed project was identified as priority project of the community during the barangay development planning workshops. It was adopted by the Barangay Development Council of two (2) barangays and approved by the Barangay Sangguniang Bayan of Initao, Misamis Oriental.

Barangay Consultation/Assembly was likewise conducted on November 27, 2013 for purposes of informing the barangay residents regarding the proposed project. It was attended by some household representatives, mostly women coming from the barangay of Tawantawan and San Pedro. The proposed project was favorably endorsed during barangay consultation provided that barangay residents of Tawantawan and San Pedro shall be given preference on employment during project implementation.

6.2 Indigenous Cultural Community/Indigenous Peoples (ICC/IP)

The subproject is not located within the ancestral domain of Initao, Misamis Oriental. No indigenous cultural community/indigenous peoples are affected by the proposed project neither beneficiaries of the proposed project due to non-existence of their presence in the road influence area.

6.3 Site and Right-of-Way acquisition

The existing road is owned the municipality of Initao. It traverses the agricultural lands of barangay San Pedro and Tawantawan. Some farm families have occupied the existing RROW of the proposed project. However, they shall be given fair remuneration as compensation. See attached Parcellary Map.

6.4 Damage to standing crops, houses and/or properties

Some 184 pieces of banana, 48 pieces of coconut trees, 96 pieces of various tree species (e.g. mahogany, gmelina, etc.), 45 pieces of assorted fruit trees, 397 sq.m. of perimeter fence (concrete/bamboo), 4 units of purok waiting sheds, and 3 units sari-sari stores would be damaged during project implementation. Thus, the concerned 79 affected persons/families will be given remuneration based on the agreed costs/price by both parties (LGU and Affected Persons). See attached entitlement survey of affected persons.

6.5 Physical displacement of persons

Based on the recent physical survey conducted by both barangay representatives and municipal representatives, it was found out that there are no persons that would be physically displaced or relocated during project implementation. See attached summary of entitlement survey of affected persons.

6.6 Economic displacement of persons

Based on the entitlement survey, there are 3 affected families economically displaced during project implementation thus it will result to the loss of livelihood or reduction of access of families' traditional livelihood sources.

E. Environmental Assessment

7.1 Natural habitat

The proposed subproject is not within the declared or proposed protected area of natural habitat. It traverses the large tract of agricultural land area of the two (2) barangays in Tawantawan and San Pedro.

7.2 Physical Cultural Resources

The proposed subproject is an existing road that have been traversed the two (2) barangays of Tawantawan and San Pedro, hence, no on-site structure, monuments or physical cultural resources have been affected.

7.3 Terrain, Soil Types and Rainfall

Generally, the road terrain of the two (2) barangays where the subproject traverses is nearly level to very gently sloping which slope ranges 0-8%. The soil types that exist within the subproject area are San Manuel loam and Bolinao clay. Based on the Corona Climate Classification (Geohazard Report of Collantes, M.G.B., Lucero E.S., and Asis, J.C.V.), the Municipality of Initao falls under Type III which means that seasons are not very pronounced, dry from November to April and wet during the rest of the year. Heavy rains usually occur in the months of January, February, June, September and December. The Municipality of Initao receives 1000-2000 millimeters of rain per annual average and 124.4 – 168.8 millimeters annual monthly average.

7.4 Drainage Situations and Flooding Potential

Some areas are potential to flooding, thus installation of RCPC is essential. Likewise, construction of slope protection is also recommended wherein two types of slope protection (riprap/grouted riprap) will be constructed. Table shown below presents the road structures to be constructed in the proposed subproject at various locations.

Type of Road Structure	Station		Length (m)
	From	To	
90 mm Ø RCPC	0+426	0+426	9.0
	0+549	0+549	9.0
	0+698	0+698	9.0
	1+219	1+219	9.0
	1+690	1+690	9.0
	2+798	2+798	9.0
	3+281	3+281	9.0
Riprap & Grouted Riprap	1+030	1+120	180.0

7.5 Impacts during Construction

The implementation of the proposed project may pose adverse effects on the environment but on the other hand may bring positive effects too. To further assure that impacts during construction will be determined, Initial Environmental Examination (IEE) has been submitted to Environmental Management Bureau of Region 10 for the issuance of the Environmental Compliance Certificate for this particular proposed project, hence, an ECC has been issued on October 2010 bearing ECC-R10-1103-0070.

Moreover, the constraints and disadvantages of the proposed project would require mitigating measures that would be implemented to address environmental concern as shown below:

Issue (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
1. Temporary increase in sedimentation during construction	<input checked="" type="checkbox"/> Topography of the road alignment necessitate massive earthmoving and cutting of clayey or loose topsoils <input type="checkbox"/> Cut materials will consist mainly of hard rocks and are unlikely to generate significant sediments	<input checked="" 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	DED/POW; Contract
2. Potential contamination of surface and groundwater with oil/grease	<input type="checkbox"/> Waste oil and grease from equipment could contaminate surface water <input checked="" 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	Contract
3. Potential contamination with human waste	<input checked="" type="checkbox"/> Construction workers would be temporarily housed in a base camp <input type="checkbox"/> Workers would be mostly locals and are expected to go home to their respective houses after works	<input checked="" type="checkbox"/> Set up adequate latrine/toilet facility at the base camp	Contract

Issue (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
4. Potential disruption of traffic flow	<p><input type="checkbox"/> 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</p> <p><input checked="" type="checkbox"/> The construction will not affect daily movement of residents and farmers</p>	<p><input checked="" type="checkbox"/> 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;</p> <p><input checked="" type="checkbox"/> Undertake regular maintenance measures on the passable portions of the roads</p> <p><input type="checkbox"/> No measures needed</p>	Contract
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><input checked="" type="checkbox"/> Access road and/or the construction/ rehabilitation works passes through a populated area</p> <p><input type="checkbox"/> Access road and/or construction/ rehabilitation does not pass through any populated area</p>	<p><input checked="" type="checkbox"/> Undertake sprinkling of road (including access roads) during dry days, and filling up of potholes during rainy days, especially in residential areas</p> <p><input checked="" type="checkbox"/> Set up speed limits for vehicles, especially within residential areas</p> <p><input type="checkbox"/> No measures needed</p>	Contract
6. Landslide/ erosion of exposed road sides resulting in sedimentation of waterways	<p><input type="checkbox"/> The road will traverse a mountainous area necessitating deep cuts on mountainsides, particularly between station ____ and ____, etc (check DED for deep cuts)...</p> <p><input type="checkbox"/> The exposed slopes will likely consist of highly erodible loose materials</p> <p><input type="checkbox"/> The cut slopes will be hard materials that would resist erosion</p> <p><input checked="" type="checkbox"/> The road passes through a relatively benign terrain, cuts will be minimal</p> <p><input type="checkbox"/> The rehabilitation work does not involve additional road cuts</p>	<p><input checked="" type="checkbox"/> Slope protection works at stations 1+030 to 1+120. The type of slope protection is riprap and grouted riprap.</p>	DED/POW
7. Inadequate drainage resulting in flooding or ponding	<p><input checked="" type="checkbox"/> The road will block runoff, resulting in flooding on one side of the road during rainy days.</p> <p><input type="checkbox"/> Drainage issues unlikely</p>	<p><input checked="" type="checkbox"/> Installation of cross drain at station 0+426, 0+549, 0+698, 1+219, 1+690, 2+798 and 3+281.</p>	DED
8. Potential	<p><input type="checkbox"/> There is an ongoing IPM</p>	<p><input type="checkbox"/> DA to continue to</p>	Capacity Building Plan

Issue (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
increase use of pesticides due to intensification of cash crop production in the area	program of DA in the service area [●] Farmers in the service area have not been trained on IPM	support IPM program [●] LGU to Coordinate with DA on IPM training	O&M Plan;
9. Potential acceleration of denudation of the upland/hilly areas due to intensification of crop production	[●] The proposed road will connect to the market an upland/hilly area where farmers are currently practicing erosive farming techniques. The road could help accelerate the denudation of the upland/hillsides rendering them unproductive in a few years. [] The road connects only lowland farms to the market	[●] DA to coordinate with LGU for the introduction of sustainable upland farming systems in the area [] No measure required	O&M Plan; Capacity Building Plan
10. Local employment	[●] Construction will provide local employment opportunities [] Construction does not provide any local employment opportunities	[●] Hiring priority shall be given to qualified local residents; Implement RI Manual on local hiring [] No measures required	Contract

F. Financial Aspect

8.1 Total Project Cost by Financing Source and Cost Sharing (WB LP, LGU, Beneficiaries)

The implementation mechanism in the construction of the said project requires counterparting, 80% shall be funded by the Loan Proceeds; 10% funded by the Government of the Philippines (GOP); and the remaining 10% will be funded by the Local Government Unit of Initao. Table shown below presents the project cost sharing.

Particular Costs	Counterpart Amount			Total
	WB-Loan Proceeds	DA Grant	Cash (LGU)	
Direct Cost	16,861,567.43	2,107,695.93	2,107,695.93	21,076,959.29
Indirect Cost	5,233,830.53	654,228.82	654,228.82	6,542,288.16
Total	22,095,397.96	2,761,924.74	2,761,924.74	27,619,247.45

8.2 Total Project Cost Breakdown

8.2.1 Direct