

A. Social Assessment

6.1 Project Beneficiaries

The beneficiaries of the subproject are the people of barangay Kamelon, Calacapan and Sinalac which is composed of 2,015 males and 2,011 females. Majority of them are farmers that cultivated an agricultural land of about 1,233 hectares with an average annual income of Php 37,500.00. 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 Kamelon and Calacapan. The proposed project was favorably endorsed during barangay consultation provided that barangay residents 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 Kamelon and Calacapan. 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 86 pieces of standing crops (banana), 66 pieces of coco trees, 30 pieces of assorted fruit trees, 19 pieces of mango, 132 pieces of various species of planted trees (e.g. mahogany, gmelina, etc.), 560 sq. meters of perimeter fence, and 6 units of sari-sari stores would be damaged during project implementation. Thus, the concerned 68 affected persons 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 6 affected families that would be economically displaced during project implementation due to the result of the loss of livelihood or reduction of access of families' traditional livelihood sources which is sari-sari store retailing. These affected families will be given fair and just compensation by the LGU of Initao.

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 Kamelon and Calacapan.

7.2 Physical Cultural Resources

The proposed subproject is an existing road that have been traversed the two (2) barangays of Kamelon and Calacapan, 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.

Table 8. Road Structures

Type of Road Structure	Station		Length (m)
	From	To	
90 mm Ø RCPC	7+665	7+665	9.0
	9+010	9+010	9.0
1.4 m x 1.4 m RCBC	8+016.60	8+016.60	9.0
Open Canal	0+005	0+150	145
	0+005	0+200	195
	0+360	0+520	160
Riprap and Grouted Riprap	5+600	5+612	500

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:

Table 9. Environmental Concerns and Mitigating Measures

Issue (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
1. Temporary increase in sedimentation during construction	<p>[●] Topography of the road alignment necessitate massive earthmoving and cutting of clayey or loose topsoils</p> <p>[] Cut materials will consist mainly of hard rocks and</p>	<p>[●] Earthmoving/cutting of slopes to be done during dry months</p> <p>[●] Proper disposal and compaction of spoils</p>	DED/POW; Contract

Issue (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
	are unlikely to generate significant sediments	[] No measures required	
2. Potential contamination of surface and groundwater with oil/grease	[] Waste oil and grease from equipment could contaminate surface water [●] There will be no or insignificant amount of waste oil/grease	[●] Proper handling and disposal of waste oil and grease	Contract
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	Contract
4. Potential disruption of traffic flow	[] 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 [●] The construction will not affect daily movement of residents and farmers	[●] 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; [●] Undertake regular maintenance measures on the passable portions of the roads [] No measures needed	Contract
5. 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 [] Access road and/or construction/ rehabilitation does not pass through any populated area	[●] Undertake sprinkling of road (including access roads) during dry days, and filling up of potholes during rainy days, especially in residential areas [●] Set up speed limits for vehicles, especially within residential areas [] No measures needed	Contract

Issue (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
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 5+600 to 5+612. 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 7+665 and 8+016.60.</p>	DED
8. Potential increase use of pesticides due to intensification of cash crop production in the area	<p><input type="checkbox"/> There is an ongoing IPM program of DA in the service area</p> <p><input checked="" type="checkbox"/> Farmers in the service area have not been trained on IPM</p>	<p><input type="checkbox"/> DA to continue to support IPM program</p> <p><input checked="" type="checkbox"/> LGU to Coordinate with DA on IPM training</p>	Capacity Building Plan O&M Plan;
9. Potential acceleration of denudation of the upland/hilly areas due to intensification of crop production	<p><input checked="" type="checkbox"/> 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.</p> <p><input type="checkbox"/> The road connects only lowland farms to the market</p>	<p><input checked="" type="checkbox"/> DA to coordinate with LGU for the introduction of sustainable upland farming systems in the area</p> <p><input type="checkbox"/> No measure required</p>	O&M Plan; Capacity Building Plan

Issue (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
10. Local employment	<input checked="" type="checkbox"/> Construction will provide local employment opportunities <input type="checkbox"/> Construction does not provide any local employment opportunities	<input checked="" type="checkbox"/> Hiring priority shall be given to qualified local residents; Implement RI Manual on local hiring <input type="checkbox"/> No measures required	Contract