



Republic of the Philippines  
Department of Agriculture  
**PHILIPPINE RURAL DEVELOPMENT PROJECT**

## **Feasibility Study**

# **REHABILITATION/CONCRETING OF SUBA-KANANGKAAN- SAN VICENTE-SAN JUAN FARM TO MARKET ROAD**

**Proponent:**

Republic of the Philippines  
**Municipality of Sogod**  
**Province of Southern Leyte**



## **D. Social Analysis**

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### **1. Project Beneficiaries**

The project will directly benefit Barangays Suba, Kanangkaan, San Vicente and San Juan. The four barangays have a combined population of 2,151 of which 1,115 (51.8%) are males and 1,036 (48.2%) are females in 454 households as of the 2010 census.

Majority of the beneficiaries are farmers engaged in the cultivation of coconuts, abaca, rice, fruits and vegetables and other crops that the barangays are known for. The beneficiaries are eagerly awaiting the implementation of the project considering that the road segment has been in a sorry state of disrepair for a long time.

The residents of said barangays were consulted between July 26-28, 2014 about the sub-project. The consultation was attended by barangay officials and residents including women. In the end, all four barangays accepted and endorsed the sub-project. The minutes of the sessions and Barangay Resolutions are found in Annex 2 of this study.

### **2. Indigenous Cultural Community/Indigenous Peoples (ICC/IP)**

The sub-project will not infringe or disturb any indigenous cultural community since there is no cultural minorities living within the area. Likewise, the sub-project will not encroach or traverse in any ancestral domain considering that there is no ancestral domain in the whole of Region 8. This is the reason why the Regional Office of Cultural Minorities based in Tacloban City was closed about ten years ago.

### **3. Site and Right-of-Way Acquisition**

The right-of-way has been addressed during InFRES because the LGU-Sogod was able to secure 10 meters of right-of-way and the owners were properly compensated during the InFRES program so there is no need to secure another right-of-way since the proposed sub-project will only have a maximum of 8 meters width inclusive of 1.5 meters shoulder on each side of the road.

### **4. Damage to Standing Crops, Houses and/or Properties**

There are three (3) coconut trees in the road shoulder in Brgy. Kanangkaan that need to be removed. These trees however are only 3-5 years old and are non-bearing. There is also a 3m. x 5m. waiting shed along the road shoulder in Brgy. Suba the portion which is the start of the road sub-project. But it is made of temporary and light materials that can be easily removed. All the safeguards necessary for the removal of both impediments shall be complied with accordingly by using Form 1 & 2 for SES compliance.

### **5. Physical Displacement of Persons**

There are no houses that will be affected or relocated during the project so there will be no persons who will be displaced during and after project completion.

### **6. Economic Displacement of Persons**

As rehabilitation and concreting project for an existing road section proceeds, no persons will be economically displaced or alienated from their traditional livelihoods. On the contrary, a significant number of local residents will find direct and indirect employment opportunities during project implementation as laborers, workers and vendors among others.

## **E. Environmental Assessment**

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### **1.Natural Habitat**

The proposed project is not within any protected area or wild life sanctuary nor will it entail cutting of trees therefore, the natural environment will not be disturbed or affected in any manner.

### **2.Physical Cultural Resources**

There are no historical, cultural, monuments and other physical structures of national cultural value within the project area that will be affected by the rehabilitation and concreting works.

### **3.Terrain, Soil Types and Rainfall**

The terrain in the project area is basically rolling and hilly with some mountainous areas. Around 65% of the total land area is within the 15% slope limit which ranges from flat to undulating. The remaining 35% are steep slopes and mountain areas.

There are six types of soils within the sub-project area, namely Sandy Loam, Hydrosol, Maasin Clay, Guimbalan Clay, Undifferentiated Soil Group and Umingan Clay Loam.

The area has no pronounced wet and dry season. Rainfall is almost evenly distributed throughout the year with an average rainfall of 167.413 mm with maximum rainfall usually recorded in the months of November to February. Minimum rainfall (100mm/month) usually occurs in the months of April to May and August to September. There is no single dry month in these areas. The temperature cool months are October to December each year.

### **4.Hazard/Risk Assessment**

With rains evenly distributed throughout the year, the road surface areas and road shoulders are always under threat of rain water and flooding. These will be mitigated by introducing road cambers leading the water runoff immediately outside of the roadway into the intercepting canals and drainage outlets and own to the receiving rivers and streams. Likewise, trees shall be planted at the edges of the road shoulders to mitigate the flow of rain water to the road surface and shoulders.

### **5.Status of Environmental Clearances**

The LGU of Sogod has pending applications for the Environmental Clearance Certificate (ECC), Certificate of Non- Compliance (CNC), Quarry Permit (QP) and other government regulatory clearances required for this project.

It is expected that all these clearances will be obtained by the LGU before actual project implementation.

## 6. Social and Environmental Impacts

Name of Project	:	Rehabilitation/Concreting of Suba-Kanangkaan-San Vicente-San Juan Farm to Market Road.
Location	:	Brgys.Suba, Kanangkaan, San Vicente, and San Juan Municipality of Sogod, Province of Southern Leyte
Implementing LGU	:	LGU of Sogod, Southern Leyte
No. of Beneficiaries	:	2,151 Direct Beneficiaries, 454 Households
Type of Work	:	Rehabilitation and Concreting
Estimated Project Cost:		Php 30,573,932.90

### a. Site and Design Consideration

The following are the principal considerations in the formulation and conduct of the Detailed Engineering Designs (DED) for the rehabilitation and concreting project:

- i. The road project does not traverse or encroach into declared protected areas and wild life sanctuaries nor shall it affect any settlements or communities populated with indigenous people;
- ii. The project shall not displace, destroy or render inoperable/inaccessible any monument or physical structure of known historical and cultural values, and;
- iii. The project does not destroy any house, standing crops or displace any person from his home and main sources of livelihood and income.

### b. Impacts During Construction

#### i. Temporary Erosion and Sediment Control

Erosion and sediment control in *construction* areas will prevent sediment discharge to nearby streams and rivers. Areas cleared of vegetation for construction and roadway development should be minimized and slopes should be stabilized. Overland drainage should be controlled to prevent channelling and sediment transport by diverting flows from areas where soils are exposed, and/or by providing filter barriers or settling basins to remove sediment before the runoff is discharged to surface waters.

#### ii. Construction Noise Mitigation

There are houses and establishments along and nearby the construction site especially along the built-up areas. The construction involves the operation of heavy equipment and will undoubtedly generate loud noises. As a mitigating measure, work activities should be avoided during quiet periods of the day.

#### iii. Proper Handling of Construction Wastes

The sub-project will generate surplus common excavation materials and debris. Disposal sites have been identified to haul these surpluses outside the limits of the road right of way. This will minimize the amount of site litters and will prevent the indiscriminate dumping of surpluses along the roadsides. Assurances is made by the LGU that these wastes will be collected and properly disposed of in accordance with government regulations.

**iv. Public and Worker’s Safety**

Safety of workers and the public must be given priority. Standard construction safety protocols must be observed at all times, such as posting of road signs.

**c. Environmental / Social Issues and Mitigating Measures**

**Table 16. Project’s Potential Impact, Assessment and Mitigating Measures**

Issues (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)	Schedule	Responsible
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 topsoil <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 days at Station 4 + 240 to Station 4 + 640 <input type="checkbox"/> No measures required	Contract	During Construction	Contractor
2. Potential contamination of surface and ground water with oil/grease	<input type="checkbox"/> Waste oil and grease from equipment could contaminate surface water <input checked="" type="checkbox"/> There will be no significant amount of waste oil and grease	<input checked="" type="checkbox"/> Proper handling and disposal of waste oil and grease	Contract	During Construction	Contractor
3. Potential contamination with human waste	<input type="checkbox"/> Construction workers would be temporarily housed in a base camp <input checked="" type="checkbox"/> Workers would be mostly locals and are expected to go home to their respective houses after work	<input type="checkbox"/> Set up adequate latrine/toilet facility at the base camp <input checked="" type="checkbox"/> No mitigating measure needed	- N/A	- N/A	- N/A
4. Potential disruption of traffic flow	<input checked="" type="checkbox"/> The access roads and/or segments to be rehabilitated is vital to daily activities of the residents and farmers and need to be kept open to traffic during construction <input type="checkbox"/> The construction will not affect daily movement of residents and farmers	<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; <input type="checkbox"/> No measures needed	Contract	During Construction	Contractor

Issues (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)	Schedule	Responsible
5. Potential dust/mud nuisance during construction	<p><input checked="" type="checkbox"/> Roads could become powdery during dry days and muddy during rainy days of the construction</p> <p><input type="checkbox"/> Access roads and/or the construction/ rehabilitation 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 roads (including access roads) during dry days, and filling up of potholes during rainy days, especially in residential areas</p> <p><input type="checkbox"/> Set up speed limits for vehicles, especially within residential areas</p> <p><input type="checkbox"/> No measures needed</p>	Contract	During Construction	Contractor
6. Landslide erosion of exposed road sides resulting in sedimentation of waterways	<p><input checked="" type="checkbox"/> The road will traverse a mountainous area necessitating deep cuts in mountain-sides particularly between Station 4 + 240 to Station 4 + 640.</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 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 type="checkbox"/> Include slope protection works at the following stations:</p> <p><input type="checkbox"/> Bioengineering with geomat and cover crop</p> <p><input type="checkbox"/> Fast growing shrub</p> <p><input type="checkbox"/> Riprap</p> <p><input type="checkbox"/> Gabions</p> <p><input checked="" type="checkbox"/> Terracing at Station 4 + 240 to Station 4 + 640</p> <p><input type="checkbox"/> Concrete protection wall</p>	Contract	During Construction	Contractor
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 type="checkbox"/> Installation of cross drain between stations</p> <p><input checked="" type="checkbox"/> Lined ditch at Station 4 + 240 to Station 4 + 640</p>	Contract	During Construction	Contractor
8. Potential increase in use of pesticides due to intensification of cash crop production	<p><input checked="" type="checkbox"/> There is an ongoing IPM Program of DA in the service area</p> <p><input type="checkbox"/> Farmers in the service area have not been trained on IPM</p>	<p><input checked="" type="checkbox"/> DA to continue to support IPM Program</p> <p><input type="checkbox"/> LGU to coordinate with DA on IPM Training</p>	-	Continuing	DA/MAO

Issues (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)	Schedule	Responsible
9. Potential acceleration of denudation of 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 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>	DA-LGU Memo of Agreement	Continuing	DA & LGU-Sogod
10. Potential increase in encroachments of human activities into the nearby public forests	<p><input checked="" type="checkbox"/> The proposed road will improve human access to the nearby forest, resulting in increased slash and burn cultivation, illegal logging and poaching.</p> <p><input type="checkbox"/> The proposed road does not improve access to a public forest</p>	<p><input checked="" type="checkbox"/> Coordinate with DENR for the enactment of ordinance deputizing the local community to enforce forestry laws</p> <p><input type="checkbox"/> No measure required</p>	DENR-LGU Memo of Agreement	During Project implementation	DENR & LGU-Sogod
11. Local Employment	<p><input checked="" type="checkbox"/> Construction will provide local employment opportunities</p> <p><input type="checkbox"/> Construction does not provide local employment opportunities</p>	<p><input checked="" type="checkbox"/> Hiring priority shall be given to qualified local residents; Implement RI Manual on local hiring</p> <p><input type="checkbox"/> No measures required</p>	Contract	During Project implementation	Contractor
12. Conversion of Land-use/natural habitat due to quarry	<p><input type="checkbox"/> The proposed quarry site is within a private land and need to convert existing land-use</p> <p><input checked="" type="checkbox"/> Quarry site is existing and proven as a good source of quarry materials</p>	<p><input checked="" type="checkbox"/> Quarry materials will be procured from existing quarry sites</p>	Certification	Before Project implementation	LGU-Sogod
13. Potential damage to existing road due to hauling of quarry materials	<p><input checked="" type="checkbox"/> Source of quarry materials (Items 200 &amp; 201) is 1 km. away. Transportation of quarry materials from source to FMR will cause damage to existing FMR</p>	<p><input checked="" type="checkbox"/> Regular maintenance and repair of existing road</p>	Local Road Maintenance Plan	During & after Construction	LGU-Sogod

## 7. Responsible Unit

The Local Government Unit of Sogod, Southern Leyte, being the implementing organization, is primarily responsible to ensure that all mitigating measures must be properly implemented and monitored during project execution.