# **Philippine Rural Development Project**

A.	PROJECT TITLE	:	Concreting and Improvement of Hipona-Canapian- Quinabonglan FMR with Bridge
B.	PROJECT LOCATION	:	Pontevedra & Maayon, Capiz
C.	PROJECT CATEGORY	:	Concreting/Road Rehabilitation/ Improvement
D.	PROJECT SCALE/DIMENSION	:	19.594 kms with 7 culverts and a Bridge
E.	PROJECT PROPONENT	:	Provincial Government of Capiz
F.	IMPLEMENTING AGENCY	:	Capiz Provincial Government
G.	PRESENT POPULATION	:	10, 574 population with 2, 011 households in Road Influence Area. 37, 898 population with 7, 336 Households in the Municipality of Maayon
H.	TOTAL NO. OF BARANGAYS		
	OF THE MUNICIPALITY	:	32 Barangays in Maayon

- I. MODE OF IMPLEMENTATION
- J. DIRECT ROAD INFLUENCE AREA:

BARANGAY CROPS AREA (Has.) Hipona Sugarcane 15 15 Rice Yatingan 20 Corn 23 Rice 25 Sugarcane Tuburan 330 Corn 155 Rice Sugarcane 10 340 Aglimocon Corn 180 Rice 10 Coconut 5 Sugarcane Manayupit 350 Corn 115 Rice 7 Banana 9 Coconut 13 Sugarcane Canapian 350 Corn 145 Rice 8 Banana Quinabonglan 275 Corn

:

26 Barangays in Pontevedra

Contract



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	159	Rice
	10	Banana
	15	Coconut
Crop	Total Area (Ha)	
Corn	1,665	
Rice	792	
Sugarcane	68	
Coconut	34	
Banana	25	
Total Area	2,584	

#### K. Project Beneficiaries within the RIA

	Direct	Indirect	Total
<b>Total Population</b>	10,574	24,358.10	34,932
Male	4,758	9,743	14,501
Female	5,816	14,615	20,431
Number of households	2,011	4,755	6,766

L. Total Project Cost and Cost Sharing Php 196,997,504.14

WB Loan Proceeds	: Php 157,598,003.51
GoP	: Php 19,699,750.49
LGU Equity	: Php 19,699,750.49
ENPV ('000)	: Php 99,056.88
EIRR	: 22.1%
BCR	: 1.55

N. Conclusion and Recommendations

M. Economic Viability Indicators

The project is feasible from the marketing, technical, economic and operational point of view. The project is recommended to be implemented.



#### a. Social Analysis

# i. Project Beneficiaries

The project beneficiaries are all the households in Barangays Hipona to Quinabonglan. Majority of the household heads are farmers who need a good road to trade their products. The main crop of the farmers in the RIA is corn, rice, coconut, banana and sugarcane. These crops are bulky and needs to have good transportation. These crops are also vulnerable to transport losses. The road network will provide them easy access to government services such as health, education and others.

A series of consultative meeting was held last July, 2014. It was conducted with the beneficiaries who were attended mostly by the women of different generations. The average attendance of women during the consultation is 70% of the total attendees. The project area is composed mostly of women which is about 55% (5, 816) of the population. The consultative meeting was held to disseminate the information about the project and solicit acceptance and participation by the residents to implement it. In general, there are no major concerns against the implementation of the project. The project is highly solicited by the residents. They believe that it is beneficial to them socially and economically.(Refer to photos; attendance sheet and minutes of the consultation)

# ii. Indigenous Cultural Community/Indigenous Peoples (ICC/IP)

The most common indigenous people in Capiz are the "Aetas". However, the RIA has never been habituated by indigenous people, hence no indigenous people will be displaced. A letter was sent to the NCIP requesting a Certificate of Non Overlap. (See annex for the application letter). In addition, the RIA is not a part of any ancestral domain. The road is already an existing provincial road and will not pass an ancestral domain or heritage site.

# iii. Site and Right-of-Way acquisition

The sub-project is an existing provincial road. The rights of way have been settled already during the clearing and construction of earthen/gravel road network. The roads are within the DAR settlement area under Presidential Proclamation no.463 dated September 19, 1965. Certification from the Department of Agrarian Reform was requested to attest that the road is already a provincial



road. (See annexes) A parcellary map has been request and is being complied for this matter. This will be provided by the DAR. While the road is an existing road, there will persons affected by the project. The PAPs said to have encroached the road through farming, and building structures. Consultative meetings have been done to address the issue.

#### iv. Damage to standing crops, houses and/or properties

. An entitlement survey was conducted last September 1, 2014 among the barangays in the RIA. The entitlement inventory survey revealed that there are a total of 42 persons that will be affected by the project. There are 5 in Tuburan; 7 in Quinabonglan and 10 each for Aglimocon; Canapian and Manayupit. While the project will affect some agriculture, commercial and residential area, in general it will not be very significant. A total of 2815 sq m. agricultural land will be affected; 149 sq m of commercial land and 60 sq m of residential land. The total land area that will be affected based upon the survey is 3024 sq. m. Most of the crops that will be affected are corn, rice, sugarcane and coconut.

The barangay officials called for a special meeting with the persons affected by the project. During the meeting, the affected persons were inform of their right to just compensation. The LGU emphasized the need of their voluntary cooperation and participation for the implementation of the project for the benefit of all. As a form of their participation and cooperation to the project, the affected persons waived their rights by signing the waiver of right forms. There are respondents who are tenants only and thus they do not have land title holdings.(See minutes of the consultations and confirmation of the barangay captains; see also the entitlement survey)

# v. Physical displacement of persons

The road project will not significantly displace any person or household. The area has already been set apart for the road project during the construction of the road. The concreting of the road will not impose any serious threat to any ones abode. While there are residential houses that will be affected, the subproject will not involve significant physical displacement. It was agreed during the



consultation that the repair and reconstruction of the parts of the house of the affected persons shall be done by the community through "bayanihan". Members of the community will contribute their help for the construction and repair of parts of the house that will be affected. The structures affected are mostly light materials and can easily be reconstructed and repaired. The affected persons cooperated by waiving their rights. (Refer to attachment)

# vi. Economic displacement of persons

There shall be no economic displacement of persons. The road project will not significantly affect any livelihood activity in the RIA. The project will be beneficial to them. It will facilitate the transportation of their agricultural products. The road project will also attract other forms of livelihood such as selling along the road for travelers. The consultative meeting with the barangays also revealed that there is no livelihood or economic activities that will be affected by the project instead it will help them boost their economic well being.

#### vii. Grievance Redress Mechanism

Grievances shall be address through the formation of the grievance redress committee (GRC). The committee shall be composed of the chairman of each barangay in the RIA to represent the community, chair of the mediation committee of the community, the project manager, and a representative from the provincial office. The GRC is charged to address the grievances and dissatisfactions about actual or perceived impacts of the projects. Grievances and dissatisfaction might occur when there will be persons who were not included in the entitlement survey or those who refused to attend in consultation meetings. The project affected persons (PAPs) can voice out their problems to the GRC during the implementation of the project.

# b. Environmental Analysis

# i. Natural habitat

The project site is not within a declared or potential protected area. There is no known endangered species within the direct road influence area. The RIA is mostly planted with corn, rice, sugarcane and coconut. The RIA is mostly agricultural land and the road project will not pass any forest land. There is a river in Barangay



Tuburan where existing bridge was used by commuters. The river is not also a part of protected water ecosystem. Alongside of the road grows exotic trees like Germilina and Mahogany. Banana and coconut are thriving both sides in some parts of the area.

Having been converted to agricultural use, the area is not a wildlife habitat. With this, the project will have insignificant impact on the forest and its inhabitants. The proposed project will be utilizing the existing rugged road accessible only to four wheel vehicles that needs widening to accommodate current demand and projected demand.

# ii. Physical Cultural Resources

There are no known cultural structures, monuments and other physical cultural resources in the area. The project will not affect any existing landscape or structure in the area. Since there is no known habituation of IPs in the RIA there shall be no IP resources that will be affected by the road project. There are no archaeological/paleontological sites in the area. In the event that the implementation of the project shall excavate or discover potential archaeological/paleontological artifacts or site the project shall temporarily be suspended and this shall be referred to the concern agencies such as the National Museum.

#### iii. Terrain, Soil Types and Rainfall

The western portion of Maayon is considered flat and hilly while those in the eastern portion are mountainous. Maayon is drained in the western direction through the Maayon river. The Hipona-Quinabonglan road project is in the eastern side of the municipality.

Due to the existence of Maayon river which flows from the boundary of Iloilo in the east toward the Panay river in the west, Maayon has a large quarry of gravel and sand. Per record of the Bureau of Mines, Maayon has untapped mineral resource of copper, limestone, goldrock, manganese and guano.

Majority of the type of soil found in Maayon is Alimodian clay, except for some portion particularly those found in Barangay Quinabonglan and Canapian which is San Rafael loam.



Maayon is characterized by a climate not having a very pronounced seasonal change. This condition is described to the third type of climate. The type of rainfall that belongs to the third type is the presence of no pronounced rainy period nor pronounced dry seasons.

Average temperature of the low land portion of Maayon is 85 – 85 C. Prevailing wind from November to January is from the northwest soon and for the rest of the year is through south-east monsoon. Maayon is not frequently visited by typhoon. It is not in the typhoon belt area. Likewise, since most of the Barangay of Maayon is situated in higher elevation, most of its barrios are not affected by flood during intensive rain except for the few barangays which are considered low and namely: Salgan, Piña, Ilaya, Ilawod, Tapulang, Tabuc, Alayunan, Batabat, Fernandez, Quinat-uyan, and Carataya.

# *iv.* Hazard/risk assessment (Drainage Situations, Erosion, Flooding Potential)

The RIA is not a flood prone area. Most barangays in this municipality are not affected by flood due to its high elevation. (See Flood prone map)

Mountainous, hilly areas and those that border rivers and stream rivulets are susceptible to erosion but proper tree planting along those areas will effectively control serious erosion. The actual project construction will not involve deep road cuts hence there will be no significant sedimentation. However, slope protection has been included in the design to further minimize potential erosion. (Refer to the ESMP Template and POW).

# v. Status of environmental clearances -CNC/ECC

With the proposed project, the Provincial Government of Capiz has applied for Environemntal Compliance Certificate from the Department of Environment and Natural Resources and is now waiting for the response of the said agency. Disposal of excavated materials and other wastes shall be done by the members of the community. The excavated materials shall be used as a filling in public markets, schools and other site identified by the LGU.



FMR Feasibility Study

The two major sources of materials are Panitan, Tapaz and Aklan. Sand will be taken from the quarries of Panitan which is 10 to 18 km from the project site. Gravel will be taken from Tapaz which is 70 km from the project site and from Aklan which is 180 km from the project site. Base course material will be taken from Tuburan river for course aggregate and Panitan for common borrow. The quarry sources are accredited by the PEO-Mines and Geosciences Unit. (See Annex for certifications and accredited quarry source).

#### vi. Social and Environmental Impacts

The proposed project has been identified to have the following environmental impacts:

**Temporary increase in sedimentation**. The project will involve massive earthmoving and cutting of clay and loose top soil. In order to mitigate this environmental impact, this activity shall be done during the dry season and there shall be proper compaction of soil.

**Contamination of human waste**. The sub-project shall involve temporary housing of construction workers. There will also be workers residing in the RIA and are expected to go home at the end of the day. The project shall involve the setting of adequate latrine/toilet facility at the camp.

**Disruption of traffic flow**. The road is vital to the daily activities in the RIA. Despite the construction, traffic should be open. Road warning and signs should be set. There shall be traffic personnel during the construction of the road.

**Dust mud and nuisance**. The roads become powdery because of silt during the dry season and muddy during the rainy days. The road construction shall pass a populated area and the dust will likely affect the residents. In order, to mitigate this, there shall a sprinkling of road during dry days and the filling of pot holes during rainy days.

**Flooding or ponding**. The road will block runoff, resulting in flooding on one side of the road during rainy days. A cross drain shall be installed to minimize the flood.

**Increase use of pesticides.** There is an ongoing IPM program of DA in the service area. DA shall continue to support IPM program.

**Intensification of crop use**. 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 DA shall coordinate with LGU for the introduction of sustainable upland farming systems in the area The mitigation measures and responsible unit is explained in the ESMP template. (Refer to Annex for Environmental and Social Management Plan)

#### ANNEX

#### Environmental and Social Management Plan

Issue (Potential Impact)	Assessment (Sample assessments)	Mitigation Measure	Schedul e/ Duratio n of the Mitigat ion Measur es	Instrum ent of Implem entation (POW, Contrac t, IDP, or O&M Plan)*	Respon sible Unit
1. Temporary increase in sedimentation during construction	<ul> <li>Topography of the road alignment necessitate massive earthmoving and cutting of clayey or loose topsoil</li> <li>Cut materials will consist mainly of hard rocks and are unlikely to generate significant sediments</li> </ul>	<ul> <li>Earthmoving/ cutting of slopes to be done during dry months</li> <li>Proper disposal and compaction of spoils</li> </ul>	Refer to the POW	DED/POW ; Contract	PEO
2. Potential contamination of surface and groundwater with oil/grease	• 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	<ul> <li>Construction workers would be temporarily housed in a base camp</li> <li>Workers would be mostly locals and are expected to go home to their respective houses after works</li> </ul>	• Set up adequate latrine/toilet facility at the base camp	356CD	Contract	PEO Contr actor
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	<ul> <li>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;</li> <li>Undertake regular maintenance measures on the passable portions of the roads</li> </ul>	356CD	Contract	COntr actor



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5. Potential dust/mud nuisance during construction	<ul> <li>Roads could become powdery during dry days and muddy during rainy days of the construction period</li> <li>Access road and/or the construction/ rehabilitation works passes through a populated area</li> </ul>	<ul> <li>Undertake sprinkling of road (including access roads) during dry days, and filling up of potholes during rainy days, especially in residential areas</li> <li>Set up speed limits for vehicles, especially within residential areas</li> </ul>	356CD	Contract	PEO Contr actor
6. Landslide/ erosion of exposed road sides resulting in sedimentation of waterways	• The rehabilitation work does not involve additional road cuts			DED/POW Or (if budget does not permit) LGU Commitme nt Letter	COntractor
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 drain between station	356CD	DED	Contr actor PEO
8. Potential increase use of pesticides due to intensification of cash crop production in the area	• There is an ongoing IPM program of DA in the service area	<ul> <li>DA to continue to support IPM program</li> <li>LGU to Coordinate with DA on IPM training</li> </ul>	356CD	Capacity Building Plan O&M Plan; Capacity Building Plan	DA
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.	• DA to coordinate with LGU for the introduction of sustainable upland farming systems in the area		O&M Plan; Capacity Building Plan	DA
10. Potential increased in encroachments of human activities into the nearby public forest	<ul> <li>The proposed road does not improve access to a public forest</li> </ul>				
10. Local employment	Construction will provide local employment opportunities	• Hiring priority shall be given to qualified local residents; Implement RI Manual on local hiring	356CD	Contract	LGU COntr actor
11.Chance archaeological/p	<ul> <li>The current road network has no known paleontological/archaeological</li> </ul>	• Temporary suspension of	As the need	Contract	Contr actor





aleontological artifacts	<ul><li>artifacts or site.</li><li>The implementation of the project should have a mechanism of protecting chance archaeological.</li></ul>	<ul><li>ongoing activity in the area.</li><li>Notify the National Museum for proper</li></ul>	arises		
12. Grievances and dissatisfaction of the some persons in the project.	<ul> <li>Entitlement survey has been conducted.</li> <li>Some persons may not have been included.</li> </ul>	actions to be taken. • Establishment of the grievance redress committee (GRC)	Duratio n of the project	Special memo/exec utive order/MOA	LGU contra ctor Brgy. chair mant
					Chair of the media tion comm ittee

