

Name of Sub-project	:	<b>Rehabilitation of San Agustin – Canmaya Diot FMR</b>
Location	:	Sagbayan, Bohol
Implementing LGU	:	Provincial Government of Bohol
Estimated No. of beneficiaries	:	3,715 Population (Male:1,887;Female:1,828) 1,183 Households
Total Project Cost	:	P43,809,000.00
Rehabilitation or New	:	Rehabilitation of existing road

**a. Social Assessment**

**i. Project Beneficiaries**

The 3,715 residents of barangays San Agustin, Canmaya Centro, Kagawasan, and Canmaya Diot are the main beneficiaries of the subproject including the residents of the adjacent barangays from the neighboring towns of Inabanga and Clarin. Majority of them are farmers, and laborers. Their main economic activity is farming, livestock and backyard poultry raising. Others are engaged in basket weaving and sawali weaving.

The FMR was conceptualized when the provincial and municipal government officials visited the above-mentioned barangays last June 29, 2014 for a barangay consultation on the construction of San Agustin-Canmaya Diot FMR, where 942 barangay residents/officials attended and expressed their long standing desire to improve the road conditions. There were 503 women who attended the consultations whose main concerns were accessibility of livelihood opportunities and agricultural assistance of the government. The aspiration of the residents to improve the proposed road further intensified with the occurrence of 7.2 magnitude earthquake last October 15, 2013, in which the local government conducted relief operation, wherein the road condition of the area hampers the quick response effort of the local government due to its inaccessibility. This prompted the local government to prioritize the improvement of said road so as to provide easy access of the residents for the services of the government, and shall likewise provide easy access for their agricultural product marketing. The minutes of the meeting including the attendance and pictures is attached as Annex A.

In support of the proposed subproject, the barangay officials of San Agustin, Canmaya Centro, Kagawasan and Canmaya Diot headed by their respective barangay captains have expressed their commitments to include in their Barangay budgets the funding allocation for and their full cooperation in road maintenance.

The project is essential in influencing economic and social development of the target barangays. With the construction of farm-to-market road, the residents can effectively drive the socio-economic development of their locality and feel more included in the national level interventions. The project will bring many benefits for the local residents and these include access to education and health facilities and improved socio-economic activities.

The participation of women's group is encouraged during the construction of the project as they have the opportunity for employment and to establish livelihood.

**i. Indigenous Cultural Community/Indigenous Peoples (ICC/IP)**

The proposed Farm-to-Market road project does not encroach upon any Ancestral Domains, Indigenous Cultural Community/Indigenous Peoples (ICC/IP), considering the recognized Indigenous People in Bohol particularly the ESKAYA TRIBE is situated in the neighboring towns of Sierra Bullones, Pilar, Duero and Candijay, which is about 50 kilometers away from the project site, thus, there is no problem with the proposed construction and rehabilitation of the said Farm-to-Market Road. A Certificate of Non Overlap issued by the National Commission of Indigenous People is attached (Annex B).

**ii. Site and Right-of-Way Acquisition**

There is no difficulty in Right-of-way acquisition as the proposed Farm-To-Market Road to be improved is already existing and has been surveyed by the DENR under Sagbayan Cadastre No. 959-D, having a road width of 10 meters as per attached cadastral map and certification from the Municipal Mayor (Annex C & D), except for the less than one kilometer portions from Marker 22 to Marker 30 not covered by said cadaster. A total of 5,590 square meters of land out of 84,598 square meters will be acquired from the 10 PAPs. As such, the owners were consulted for the acquisition of right-of-way in the aforementioned section. Fortunately, the PAPs who owned the land to be traversed by the road have willingly donated portions to be affected while the other PAPs waived their rights over the properties, trees and crops that will have to be cleared within the delineated right-of-way. The waiver of right and deed of donation of the respective owners of the road portion not covered in the Cadastral 959-D Survey for Sagbayan are hereto attached (Annex E).

**iii. Damage to standing crops, houses and/or properties**

**Table 1. Inventories of affected trees, crops, structures, houses and/or properties**

NAME OF OWNER	TREES, CROPS, STRUCTURES, HOUSES AND/OR PROPERTIES	LOCATION
Braulio Gambe	1 molave	Kagawasan
Eufrazio Cabuga	2 mahogany 1 gemelina	Kagawasan
Maria Auxillo	8 mahogany 1 gemelina	Kagawasan
Winston Cempron	1 mahogany	Kagawasan
Valentine Tirol	1 dita	Canmaya Centro
Armando Tambacan	1 gemelina	Canmaya Diot
Sesenando Niepes	5 gemelina	San Agustin
Aikecanono	10 gemelina	San Agustin
Beunaventura Canque	2 gemelina 1 Langka	San Agustin

	1 coconut	
ErlindaTatoy	5 sq.m. sari sari store	San Agustin
Fidel Polinar	20 sq.m.malunggay 1 molave	Canmaya Centro
EulogioAparri	25 plants 50 sq.m. banana 20 plants 40 sq.m. malunggay	Canmaya Centro
LaurencioGenerale	4 sq.m. sari sari store	Canmaya Centro
EleuterioDegamo	6 plants 12 sq.m. banana 4 sq.m. kitchen	Canmaya Centro
MacarioDegamo	1 coconut 2 banana 4 sq.m.	Canmaya Centro
Elzear Bolivar	100 sq.m. corn plants	CanmayaDiot

There will be a total of 37 trees to be cut composed of 11 mahogany trees, 20 gemelina trees, 2 molave trees, 2 coconut trees, 1 langka and 1 Dita tree as shown in Table 1. In barangay Canmaya Centro there were 33 bananas planted in about 66 square meters and 40 malunggay trees occupying about 80 square meters within the 10-meter road right-of-way, while in barangay Canmaya Diot, approximately 100 square meters was planted with corn that was within the road right-of-way. The structures that will be affected are the 2 unit sari-sari stores, and kitchen portion of Mr. & Mrs. Eleuterio & Wilfreda Degamo as well as the 2 streetlight post. The barangay officials concerned and the owners of the structures have been consulted. The streetlight posts were already transferred outside of the identified right-of-way. Of the two stores that will be damaged, it was found out during the recent field assessment that only the store in Brgy Canmaya Centro will be affected. The owner Mr. Laurencio Generale was consulted and agreed that he be compensated with equivalent construction materials that will be damaged during construction. The house owner of kitchen portion, Mr. Degamo was also compensated as they are the recipient of the housing project assistance of the local government equivalent to 87,000.00. For the affected crops and plants, the Municipal Agriculture Office provided seeds and organic fertilizer assistance, while for the affected trees, the owner will utilize the lumber products and agreed to plant a replacement with the provision of seedlings from the municipal nursery. Waiver of Rights/Quit Claim of affected trees, crops and structures are attached as Annex F.

Those affected coconut and other trees shall be applied for a cutting permit with the PCA & DENR respectively, and only those chainsaw machine approved for operation by the said office shall be allowed to cut.

#### **iv. Physical displacement of persons**

There will be no displacement of persons/properties or relocation of houses of farmers/residents for the proposed subproject is a rehabilitation of the existing barangay road which was already segregated by the land owners themselves. There are no areas also covered by agrarian reform.

#### **v. Economic displacement of persons**

There is no economic displacement of the proposed sub-project, on the contrary, it will bring more livelihood opportunities of the residents as well as the whole community of the four barangays and the development of agri-tourism industry of the municipality.

**vi. Grievance Redress Mechanism (GRM)**

In order to protect the affected individual's interest, if anyone feels dissatisfied about the allocation work, he or she may make complaint and appeal to the Grievance and Redress Committee created for the implementation of the sub-project.

The Municipal Mayor issued Executive Order No. 2015-15, Series of 2015, Creating the Municipal Grievance and Redress Committee (Annex G) for the implementation of the sub-project with the following composition.

Chairman	:	Mayor Ricardo L. Suarez
Focal Person	:	Maximo G. Lomosbog –MPDC
MEMBERS	:	Ana Victoria Requireme Barangay Captain – San Agustin
		Eulogio L. Aparri Barangay Captain – Canmaya Centro
		Erwin Capa Barangay Captain - Kagawasan
		Glenn Sidney C. Samputon Barangay Captain – CanmayaDiot

The individual's complaints/appeal shall be filed to the Barangay Captain representing the point person in the barangays, which shall then forward to the municipal level for settlement. The Point Person in the Municipality is Maximo Lomosbog, the Municipal Planning and Development Coordinator. The complaints/appeals shall have a duration or settlement period of five (5) days only and if not settled shall be forwarded to the provincial level for resolution.

At the provincial level, Governor Edgar M. Chatto issued Executive Order No. 7 Series of 2015 creating the Grievance Redress Mechanism for the Philippine Rural Development Project. The Grievance Redress Unit (GRU) is composed of the following:

Chairperson:	Governor or Authorized Representative
Co-Chairperson:	Provincial Human Resource Management and Dev't. Officer
Secretariat:	PHRMDO
Members:	SP Chair, Committee on Good Governance, Justice and Human Rights Provincial Planning and Development Coordinator Provincial Legal Officer Provincial Assessor Provincial Internal Audit Officer President of an NGO (related to infrastructure)

The GRU will handle all feedback from beneficiaries and resolve all complaints on project activities and performance. It will ensure that: (1) the public within the influence area are aware of their rights to access and shall have access to the mechanism free of administrative and legal charges; (2) these rights and interest are protected from poor project performance; (3) concerns arising from project performance in all phases are addressed effectively.

The PHRMDO will nominate and train one of its officers to be a Grievance Point Person (GPP) for project related issues. The GPP will be responsible for the initial screening of feedbacks and complaints, as well as, the organization of preliminary meetings with concerned parties to establish the critical path to resolution. A registry of feedback or grievances received will be maintained by the GPP for reporting to the National Project Coordination Office (NPCO) and the World Bank, specifically for associated follow-up, resolution or non-resolution of issues.

The Grievance Redress Mechanism Framework of PRDP will be followed in the grievance investigation and resolution process.

## **b. Environmental Analysis/Assessment**

### **i. Natural Habitat**

The proposed sub-project is located in Barangays of San Agustin, Canmaya Centro, Kagawasan & CanmayaDiot, Municipality of Sagbayan. The land use is mainly agricultural with the presence of secondary forest cover in some portions of the road stretch. The forest cover is observed along both sides of the road that has a common tree species of planted Gemelina, Mahogany and natural grown trees and coconut as well. The area is not a wildlife habitat having been clearly converted to agricultural use, thus indicating that the project will have no significant impact on the forest and its inhabitants. The proposed project will be utilizing an existing road, which has poor road condition. It is also noted that the proposed project site is not located within or adjacent to any ancestral domain.

The four barangays are members of the Protected Area Management Board (PAMB) that was created to protect the chocolate hills, environment and its biodiversity as it is located within the identified National Integrated and Protected Areas System (NIPAS). The Barangay government through the Councilor under the Committee on Agriculture and natural resources shall monitor the enforcement of various environmental laws and conservation measures. Each barangay has their respective ordinances on Illegal cutting of trees, solid waste management, massive tree planting and organic farming system.

### **ii. Physical Cultural Resources**

The proposed subproject is not located within a declared or proposed site of physical resources of cultural significance nor will it affect any structure or monuments of cultural/historical significance or physical cultural resources.

Nevertheless, the project site is considered part of an important natural landscape known to many as the chocolate hills. The four barangays are members of the Protected Area Management Board (PAMB) of the Chocolate Hills Natural Monument, the Board has an

established policy on environmental conservation and protection, wherein every barangay shall ensure its enforcement.

To ensure that proper procedures and care will be accord to any archeological and paleontological items that will be found in or recovered from the site, the procedure on chance archeological/paleontological finds will be followed in accordance with Annex H-2 of the Integrated Environmental and Social Safeguards Framework of PRDP (Annex H). A copy of which is attached to the ESMP. Furthermore, to make the contractor and all concerned aware of this procedure, this will be discussed with them in an appropriate venue and a copy of which will be provided to all concerned.

### iii. Terrain, Soil Types and Rainfall

The area is characterized by a flat & rolling topography with a maximum gradient of 0 to 18%. The soil type is Batuan-Faraon Complex and Inabanga Clay. Scoops of chocolate hills were sprouting everywhere making the place interesting and more fascinating, so that visitors to the place could not left without admiring the place. Long line of coconut trees can be seen lined intermittently at its base. Portions of the place are forested and abound with different species of trees and other forest products and two (2) undeveloped springs, the Oslob and the Cantuyok spring.

Rainy season starts from May to December with heavy rainfall occurring during the months of September-December.

COMPUTED EXTREME VALUES (in mm) OF PRECIPITATION															
Return Period (yrs)	5 mins	10 mins	15 mins	20 mins	30 mins	45 mins	60 mins	80 mins	100 mins	120 mins	150 mins	3 hrs	6 hrs	12 hrs	24 hrs
2	18.6	25.9	33.2	40.5	53.1	65.7	78.2	84.0	88.6	95.7	97.8	99.8	109.3	118.6	127.8
5	21.7	30.3	39.0	47.6	62.6	76.0	89.4	97.3	104.5	113.2	119.0	124.7	141.7	147.7	154.7
10	23.7	33.2	42.8	52.3	68.9	82.9	96.8	106.1	115.1	124.8	133.0	141.2	163.2	167.1	172.5
15	24.9	34.9	45.0	55.0	72.4	86.7	101.0	111.1	121.1	131.3	141.0	150.6	175.3	178.0	182.6
20	25.6	36.0	46.5	56.9	74.9	89.4	103.9	114.6	125.2	135.9	146.5	157.1	183.7	185.6	189.6
25	26.2	36.9	47.6	58.3	76.8	91.5	106.1	117.2	128.4	139.4	150.8	162.1	190.3	191.5	195.0
50	28.1	39.6	51.2	62.7	82.7	97.9	113.1	125.5	138.3	150.3	164.0	177.6	210.4	209.6	211.7
100	29.9	42.3	54.7	67.1	88.6	104.3	120.0	133.7	148.2	161.1	177.1	193.0	230.3	227.6	228.3
EQUIVALENT AVERAGE INTENSITY (in mm/hr) of COMPUTED EXTREME VALUES															
Return Period (yrs)	5 mins	10 mins	15 mins	20 mins	30 mins	45 mins	60 mins	80 mins	100 mins	120 mins	150 mins	3 hrs	6 hrs	12 hrs	24 hrs
2	223.2	155.6	132.8	121.4	106.1	87.5	78.2	63.0	53.2	47.8	39.1	33.3	18.2	9.9	5.3
5	259.8	182.0	155.8	142.8	125.2	101.3	89.4	73.0	62.7	56.6	47.6	41.6	23.6	12.3	6.4
10	283.8	199.4	171.0	157.0	137.8	110.5	96.8	79.6	69.1	62.4	53.2	47.1	27.2	13.9	7.2
15	298.2	209.3	179.8	165.0	144.9	115.6	101.0	83.3	72.6	65.7	56.4	50.2	29.2	14.8	7.6
20	306.6	216.2	185.8	170.6	149.8	119.2	103.9	85.9	75.1	68.0	58.6	52.4	30.6	15.5	7.9
25	314.4	221.5	190.4	174.9	153.7	121.9	106.1	87.9	77.0	69.7	60.3	54.0	31.7	16.0	8.1
50	336.6	237.8	204.6	188.2	165.5	130.5	113.1	94.1	83.0	75.1	65.6	59.2	35.1	17.5	8.8
100	358.8	254.0	218.8	201.4	177.2	139.1	120.0	100.3	88.9	80.5	70.8	64.3	38.4	19.0	9.5

### iv. Drainage Situations and Flooding Potential

There were no history of flooding in the area because of the presence of creeks and canals, except for the area along the heavy forest cover that experience overflow during rainy days. Appropriate drainage system in this area will be incorporated in the detailed engineering design of the project.

#### **v. Integrated Pest Management (IPM)**

The Municipal Agriculture Office has been conducting training on Integrated Pest Management, Natural Farming System and Organic Farming and they are now implementing in the area. The use of trichograma as substitute to pesticides is adopted and practice by majority of the farmers in the influence area. The local government program on the provision of Organic fertilizers to the farmers is implemented through the Municipal Agriculture Office. The local government also enacted an ordinance prohibiting the burning of rice stalks.

#### **vi. Status of Environmental Clearance**

The Provincial Government of Bohol is now on the process of getting the clearances (cutting tree permit) at the office EMD-DENR, PCA Provincial Office and NCIP for the application of Certificate of Non-Overlap. Attached is the letter request signed by the Hon. Governor Edgardo M. Chatto.

**Environmental Compliance Certificate.** The proposed FMR is an existing barangay road which does not require an ECC, However, a Certificate of Non-Coverage No. CNC-R07-1410-0031 issued by EMB DENR dated October 22, 2014 is attached.

#### **vii. Social and Environmental Impacts During Construction**

The proposed project requires step-by-step activities, which will likely have impact to the locality and its adjoining area.

**Step1. Clearing and Grubbing.** This is all about preparing and clearing the area of obstruction/vegetation specifically both sides of the road. The proposed project site has sparse tree vegetation and the project will be affecting very few planted trees, mostly Gemelina and Mahogany found along the road.

**Step 2. Excavation.** It is done by way of excavating the soil of the proposed farm-to-market road to level the area of the proposed road pavement.

**Step 3. Embankment.** Seventy five (75%) of the excavated material shall be used to fill the lowest level of the area to a desired height, while 25 % shall be used along the proposed box culvert.

**Step 3. Sub grade preparation.** This is grading of the proposed road.

**Step4. Aggregate base course.** This is a sub-surface preparation and requires the placement of sand and gravel requirements. The base course material will have 0.20 m thick on the carriage way and 0.4 m on both shoulders.

**Step 5. Concreting.** This is about Portland Cement Concreting Pavement. This will entail the mixing of sand, gravel and the Portland cement.

- a. The air pollution that may cause by this activity may directly affect the workers and the houses adjacent to the road, watering is necessary to prevent air pollution.
- b. There is noise pollution as there are houses near the project site. But to prevent noise pollution, activities are to be undertaken during daytime.
- c. Waste Pollution coming from waste motor oil shall be discharge carefully. Maintenance of equipment must be done before the start of the project activities.
- d. Riprapping shall be done in steep areas to prevent landslide/erosion.
- e. Part of the road maintenance is the establishment of road canal linings on both sides especially on steep grades where scouring is evident.

**Step 6. Drainage canal.** To maintain the good condition of the road, drainage canals will be established on both sides. But in area where there is a side cut, one side canal lining shall be constructed.

**I. Preparation of the Environmental and Social Management/Mitigation Plan (ESMP) based on the Assessments.**

**The ESMP is attached as Annex M.**

**a. Environmental Impacts and the recommendations:**

**Wildlife Habitat.** There is no impact on forest habitats as the proposed project will be implemented in area far from wildlife habitats. There will be no wildlife displacements and no cutting of endangered tree species.

Planted trees which will be cut along the road must be replaced by the proponent by planting endemic tree species along the designated area.

**Water Contamination.**

To prevent sedimentation, the proponent must designate an area for excavated waste at least 5 meters from the roadside and far from creeks. This must be in low lying areas so as to prevent its direct flow to water sources. Areas with steep gradient must be rip-rapped or planted with natural vegetation known as natural matting to prevent soil erosion and landslide. Canal linings will also be established to provide an area for water flow or flow diversion. It can also serve as part of the road maintenance and will ensure that sediments will not directly flow to the river systems. Filter barriers or settling basins for sediments removal must also be established in strategic areas of the project undertaking.



Waste discharge mostly in the form of motor oil must be prevented as this can contaminate water sources. Heavy equipment is likely to contribute this kind of waste hence the proponent shall ensure that equipment maintenance must be done away from the area especially when the equipment needs to change oil.

As the project duration last for almost a year, fecal waste is likely to be generated from those people involved in the construction. It must be imperative that water contamination caused by fecal waste must be prevented. Establishment of temporary “comfort room” must be established far from water sources, most especially sources of drinking water.

#### **Air Pollution.**

The effects of air pollution must be considered carefully to protect the residents adjacent to the road and the workers that will be exposed to the project. Naturally, the pollution that will be generated during excavation and during the mixing of concreting materials will directly affect the residents and to the people involved in the construction activities. The activities shall be limited in day time only and those involved must be provided by the proponent with helmets, mask and other protective gear known as Protected Paraphernalia’s Equipment.

#### **Noise Pollution.**

The project will be using heavy equipment that can generate noise. it is still imperative that the proponent must regulate the noise that may be generated by noise emitting equipment. It is recommended that the activities must be conducted during daytime so as not to disturb the sleeping hours of the communities and those involved in the construction.

#### **Disruption of traffic flow.**

A parking area must be designated by the proponent. This will ensure that traffic flow will be smooth during the duration of the project.

#### **Sign boards/Billboards.**

To inform the communities about the on- going project and provide guidance/ safety of those residing within the vicinities of the proposed project, billboards shall be placed in strategic locations.

#### **Solid waste management.**

The project will not only generate air, water and noise pollution, but is also expected to generate solid waste. Among these solid wastes are plastic containers of motor oil, empty sacks of cement and other waste by people involved in construction activities. To prevent litter and secure garbage, trash and solid waste during the construction phase, a Material

Recovery Facility must be established as part of the solid waste management by the proponent.

The training on waste management must be provided by the proponent to the communities and to the project implementers. This will ensure that both the project implementers and the communities understand the possible environmental and health impacts of the project and thus endeavor to minimize if not prevent any negative impact.

**b. Requirements of Permits**

**Environmental Compliance Certificate.** Certificate of Non-Coverage (CNC) issued by DENR dated October 22, 2014 is attached.

**Governor's Permit.** The winning contractor must secure Governor's Permit for sand and gravel as part of the construction materials.

**Tree Cutting Permit.** The Provincial Local Government of Bohol has already applied for cutting permit to DENR and PCA respectively. PLGU is now waiting for the approval of their application.

**Chainsaw Permit.** As there will be trees to be cut, the chainsaw that will be used must have a permit from CENRO, Tagbilaran City in compliance with the Chainsaw Act.