Initial Environmental Examination

June 2018

Philippines: KALAHI-CIDSS National Community-Driven Development Project

Subproject: Establishing a Danger Free and Convenient Access through Community-Managed Concreting of Road with Slope Protection and Line Ditch

Prepared by Department of Social Welfare and Development's Kalahi-CIDSS NCDDP National Program Management Office for Asian Development Bank

ABBREVIATIONS

ADB	Asian Development Bank
ACT	Area Coordinating Team
BLGU	Barangay Local Government Unit
BSPMC	Barangay Sub-project Management Committee
CEAC	Community Empowerment Activity Cycle
CEF	Community Empowerment Facilitator
CDD	Community Driven Development
DENR	Department of Environment and Natural Resources
DSWD	Department of Social Welfare and Development
EA	Executing Agency
EIA	Environmental Impact Assessment
EMB	Environmental Management Bureau
EMP	Forests and Forestlands
ESMP	Environmental Management Plan
FFL	Environmental and Social Management Plan
GRS	Grievance Redress System
IEE	Initial Environmental Examination
IP	Indigenous Peoples
IR	Involuntary Resettlement
KALAHI-CIDSS	*Kapit Bisig Laban sa Kahirapan* (Linking Arms Against Poverty) – Comprehensive and Integrated Delivery of Social Services
KC-NCDPP	KALAHI-CIDSS National Community-Driven Development Project
LCC	Local Counterpart Contribution
LGU	Local Government Unit
MCT-TF	Municipal Coordinating Team – Technical Facilitator
MCT	Municipal Coordinating Team
NPMO	National Project Management Office
O&M	Operation and Maintenance
PIT	Project Implementation Team
PMT	Project Monitoring Team
POW	Program of Works
PPE	Personal Protective Equipment
PPT	Project Preparation Team
PT	Procurement Team
RPMO	Regional Project Management Office
SERD	Southeast Asia Regional Department
SP	Subproject
SPS	ADB Safeguards Policy Statement (2009)
TF	Technical Facilitator

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I. EXECUTIVE SUMMARY

1. This Initial Environmental Examination (IEE) has been prepared for the KALAHI-CIDSS subproject of upgrading the 2.5km road in Barangay Tigunhao, municipality of Laua-an in the province of Antique (Region VI). The executing agency (EA) of the Project is the Department of Social Welfare and Development (DSWD). The program management structure is generally divided between the National Program Management Office (NPMO) (responsible for national policy and technical assistance) and the Regional Program Management Office (RPMO) (responsible for field operations). The objective of the project is to empower community by improving the farm-to-market road to transport both agricultural and non-agricultural goods and services and to improve the mobility of the people in going to the town proper for basic services (i.e. health and education).

2. The project has been categorized by ADB as category B and this IEE was prepared consistent with the environmental assessment requirements of ADB's safeguard Policy Statement of 2009 (ADB SPS). The IEE was carried out through screening and analysis of various environmental parameters, field investigations, stakeholder consultations, and field group discussions. The IEE covers the general environmental profile of the subproject and includes an assessment of the potential environmental impacts during different project phases and formulation of corresponding mitigation measures. The IEE was prepared with the active cooperation and participation of the community volunteers, stakeholders, Area Coordinating Team (ACTs), Regional Program Management Office (RPMO) and the Department of Environment and Natural Resources-Environmental Management Bureau (DENR-EMB) Region VI.

3. Major land use along the subproject road is either residential or agricultural. The project area is not located near or within ecologically sensitive areas.

4. A grievance redress mechanism will be established by DSWD prior to commencement of site works to ensure that complaints of stakeholders regarding the project's environmental performance are promptly addressed.

5. The IEE includes an Environmental and Social Management Plan (ESMP) which details the mitigation and monitoring to avoid and minimize negative environmental and social impacts during construction and operation phases of the project. During the construction, the Area Coordinating Team (ACT) will assist the Project Monitoring Team (PMT) in closely monitoring the community volunteers' and the contractor's environmental performance and over-all ESMP implementations.

6. The project will directly benefit over 876 Indigenous People located within the project area by (i) increased and reliable travel services leading to better mobility and comfort of the commuting public; and (ii) potential increase in income for the farmers resulting from a shorter travel time of their produce from farm to market. The project would also benefit the environment in terms of reduced soil erosion and landslide through provision of slope protection system. Dust generation from the earth and damaged roads will be reduced by the improving the road pavement. Health risk to the roadside communities and damage to the biological environment will be reduced due to pavement improvement and soil erosion control measures. Extent of flooding in road side villages will be reduced by the improvement of drains. Road safety will be improved by stabilizing unstable portions, installing road safety barriers, including signs and display boards.

7. The project will have an overall beneficial impact and will have minor negative impacts that will be carefully monitored and adequately mitigated with the implementation of the ESMP.

II. POLICY AND LEGAL FRAMEWORK

A. Environmental Clearance Requirements

1. Government Environmental Laws, Regulation and Guidelines

8. According to the DENR guidelines (Department Administrative Order 2003-30; Proclamation Nos. 2146 and 803 of 1981 and 1996; and AO42), the environmental category of a project is decided based on the type of the project (whether it falls into Environmental Critical Project, ECP), location of the project (whether it falls into Environmental Critical Areas, ECA), and size of the project. A summary list of ECPs and ECA categories are revised and specified in DENR-EMB Memorandum Circular 2014-005 or the Revised Guidelines for Coverage Screening and Standardized Requirements under the Philippine EIS System.

9. Based on DENR screening, the project is category B or a project not considered as ECP and is not located in ECA, but the construction and operation poses significant impact to the environment. Using the project thresholds for coverage screening and categorization (Table 1), the project is classified as road, widening rehabilitation and improvement with > 50% increase in capacity in terms of width and > 2 km but < 10km length with no critical slope that requires the submission of IEE Checklist (Annex A) to EMB-DENR in order to secure and ECC. The project was granted and ECC on March 16, 2018 (Annex B).

Table 1: EIS and IEE Requirements for Roads and Bridges Projects

Project/ Description	Covered (Required to Secure ECC)			Not Covered
	Category A: ECP	Category B: Non-ECP		Category D
	EIS	EIS	IEE Checklist	PD (Part I only)
3.4 ROADS AND BRIDGES				
3.4.1 Roads, New construction	**National Road**: ≥ 20.0km, (length with no critical slope) Or ≥10.0km (length with critical slope)	**Provincial Road and Other Types of Roads**: ≥ 20.0km, (length with no critical slope) Or ≥10.0km (length with critical slope)	All Types of Roads: > 2km but < 20.0km, (length with no critical slope) Or > 2km but < 10.0km (length with critical slope)	≤ 2.0km
3.4.2 Roads, widening, rehabilitation and/or improvement	None	> 50% increase in capacity (or in terms of length/width) and ≥ 20.0 km, (length with no critical slope) or ≥ 10.0 km	> 50% increase in capacity (or in terms of length/width) and > 2 km but < 20km (length with no critical slope) or > 2km but < 10 km	> 50% increase in capacity (or in terms of length/width) but ≤ 2 km increase in length

		(length with critical slope)	(length with critical slope)	

2. ADB Environmental Assessment Requirements

10. According to ADB guidelines, the process of determining a project's environment category is to prepare a rapid environmental assessment (REA) screening checklist, taking into account the type, size, and location of the proposed project. Based on ADB's Safeguard Policy Statement 2009 (SPS 2009), a project is classified as one of the four environmental categories (A, B, C, or FI) as follows:

- Category A: Projects with potential for significant adverse environmental impacts that is irreversible, diverse or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An environmental impact assessment is required.

- Category B: Projects judged to have some adverse environmental impacts, but of lesser degree and/or significance than those for category A projects. Impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for Category A projects. An initial environmental examination (IEE) is required.

- Category C: Projects likely to have minimal or no adverse environmental impacts. No environmental assessment is required, although environmental implications are still reviewed.

- Category FI: Projects are classified as category FI if they involve investment of funds to or through a financial intermediary. Where the FI's investment has minimal or no adverse environmental risks. The FI project will be treated as category C. All other FI's must establish and maintain an environmental and social management system and must comply with the environmental safeguards requirements specified in SPS 2009 if the FI's subprojects have the potential for significant adverse environmental impacts.

11. Based on the environmental and social screening checklist (Annex C), the project is categorized as B. Hence, this IEE has been prepared to meet the requirements of both the ADB SPS 2009 and the government. Upon ADB's receipt of the final IEE from DSWD, this will be publicly disclosed through posting on ADB's website.

III. DESCRIPTION OF THE PROJECT

A. Overview

12. The objective of this proposed road improvement is to grant the community wish/priority intervention to strengthen their resiliency through improved access infrastructure, and will also help approximately 176 household's beneficiaries including 876 IPs to easily exchange their goods/products to nearby areas. The improvement of their basic services will lighten up the difficulties of the whole community in their daily transportation.

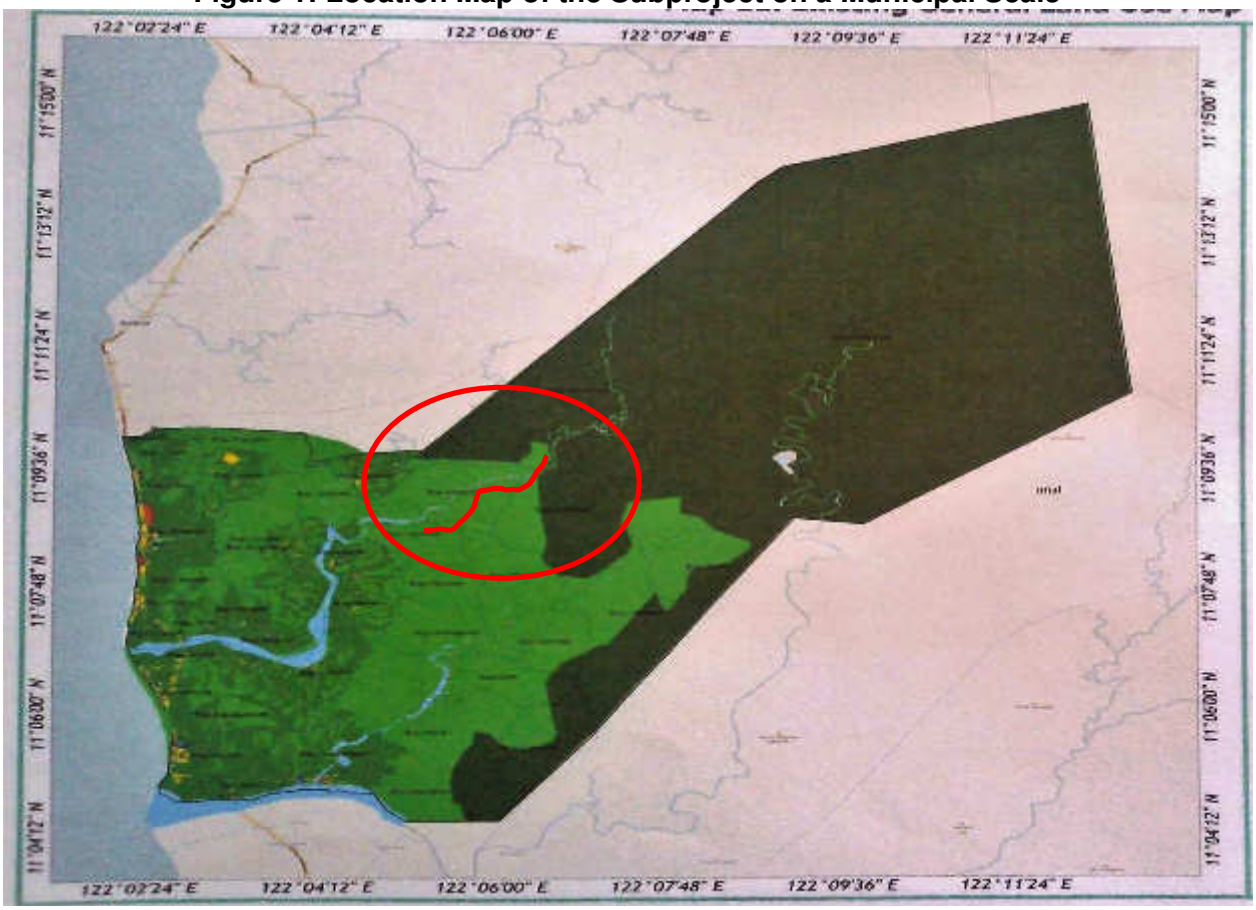
B. Type of Project

13. The scope of subproject associated with slope protection/stabilization measures particular on the determined as landslide-prone areas, line ditch and portion of storm drain. Construction of the subproject components will involve a number of associated activities. These include excavation and operation of borrow pits, clearing and grubbing, sub-grade preparation, aggregate sub-base course, shouldering on PCCP, measures to protect critical side-slopes, concrete, cement delivery from the supplier to the subproject site, and the temporary establishment for storage of construction materials.

C. Location

14. Periodic maintenance will be carried out on about 2.5 km of proposed road located in barangay Tigunhao and Latazon. It is geographically located at $11^0$06'00", $11^0$07'48", $11^0$09"36, North Latitude and $122^0$04'12", $122^0$06'00", $122^0$07'48", East Longitude. All civil works will be located within existing right of way (ROW) and will not involve road widening. Locations of subprojects are shown in Figure 1 in a Municipality scale.

Figure 1: Location Map of the Subproject on a Municipal Scale



D. Size or Magnitude of Operation

15. The civil works under the project include upgrading of existing earth road pavements to Portland Cement Concrete Pavement (PCCP) for a length of about 2.5 km length and 5m width

as shown in the design and layout in figure 2 and 3. The existing earth road from Tigunhao, Latazon, Guiamon to Brgy. San Ramon, Laua-an, Antique had been opened and serviceable since 2008. The work will consist of placing a new concrete pavement. The civil works included are: clearing and grubbing, sub-grade preparation, aggregate sub-base coarse, base course, gravel bedding, shouldering on PCCP, disposing the debris or removing the unsuitable materials; and using necessary equipment such as, truck hauler, concrete mixer, plate compactor, etc. The subproject also includes Drainage Facilities such as 2.955 l.m. canal, 30 l.m. Reinforced Concrete Pipe Culverts (RCPC) and 81 l.m. (190.74 cu.m) Slope Protection (Grouted Riprap). The subproject implementation started on May 2018 and stopped on June 15 due to Landslide caused by the typhoon Domeng. Physical accomplishment of the SP only reach 30% and reported damaged due to force majeure.

Figure 2: Detailed Design and Section

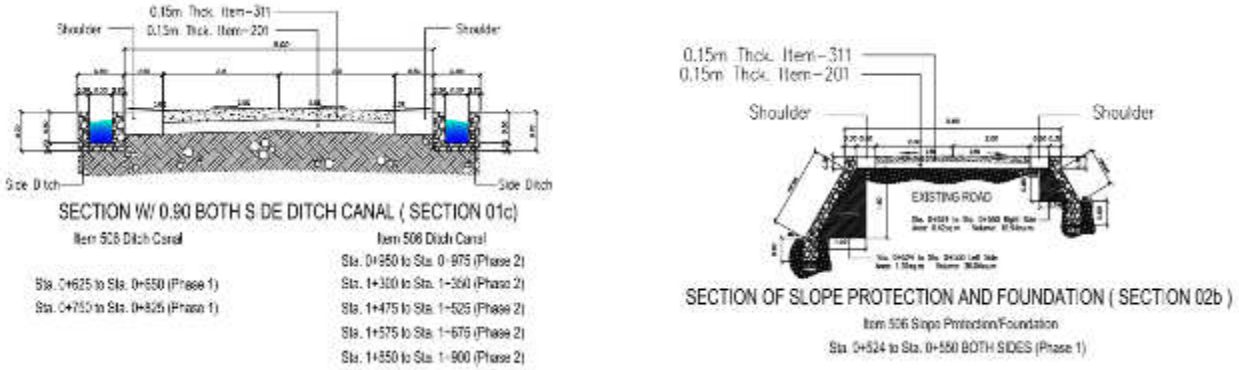
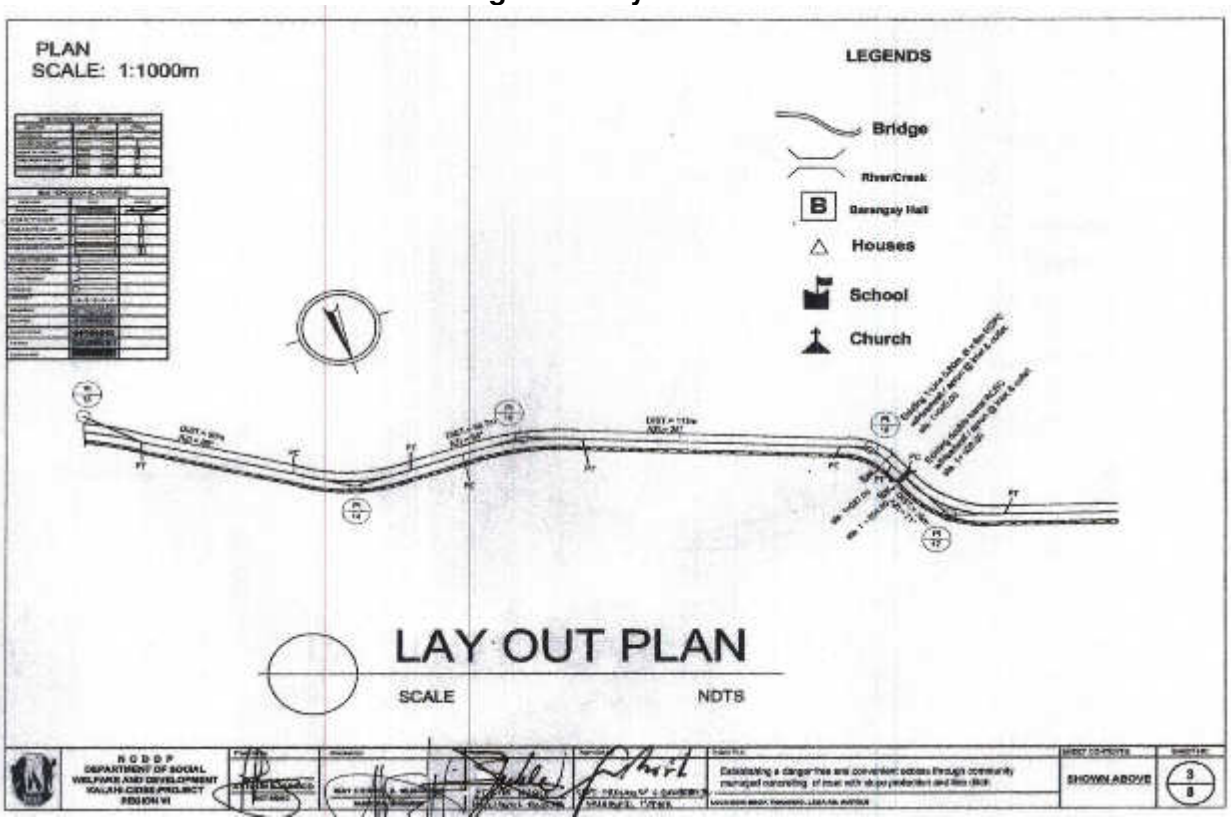


Figure 3: Layout Plan



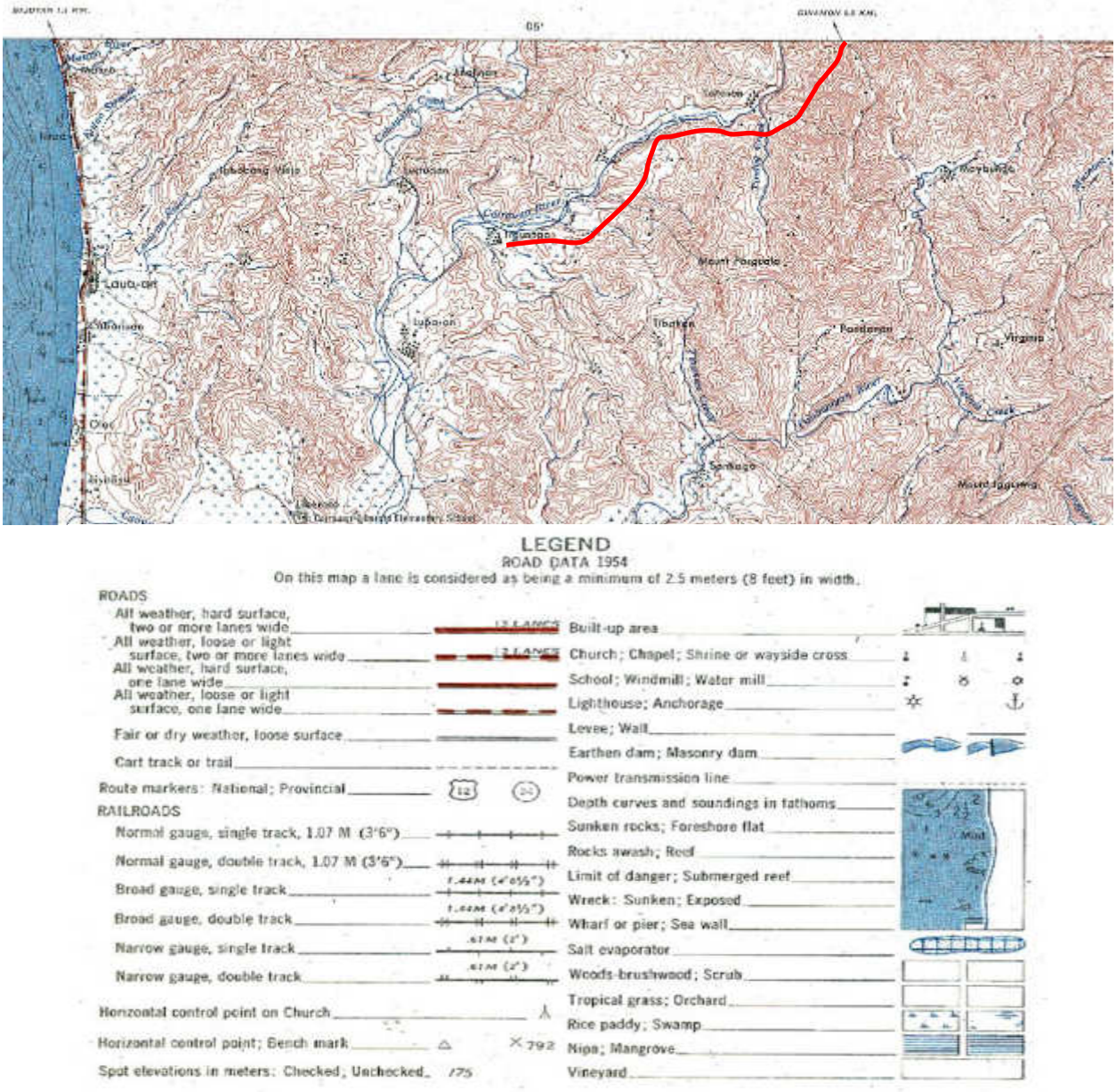
IV. DESCRIPTION OF THE ENVIRONMENT

A. Physical Resources in Project Area

1. Topography

16. The Municipality of Laua-an is considered steep and mountainous, more than half of the municipal, territorial jurisdiction has a slope of more than 50% with the highest mountain peak of 2,000 meters above sea level. The subproject area is classified into hilly, rolling and, flat terrain according to the topographic Map presented in Figure 4. The elevation ranges from 300-600 meters above sea level (masl).

Figure 4: Topographic Map

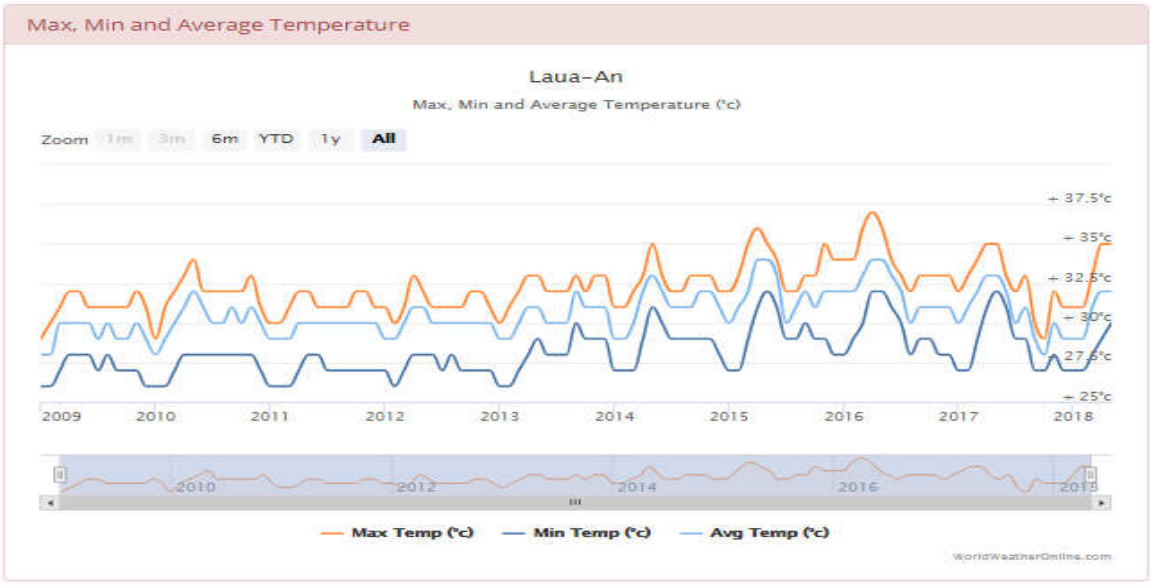


Source: NAMRIA MAP

2. Climate

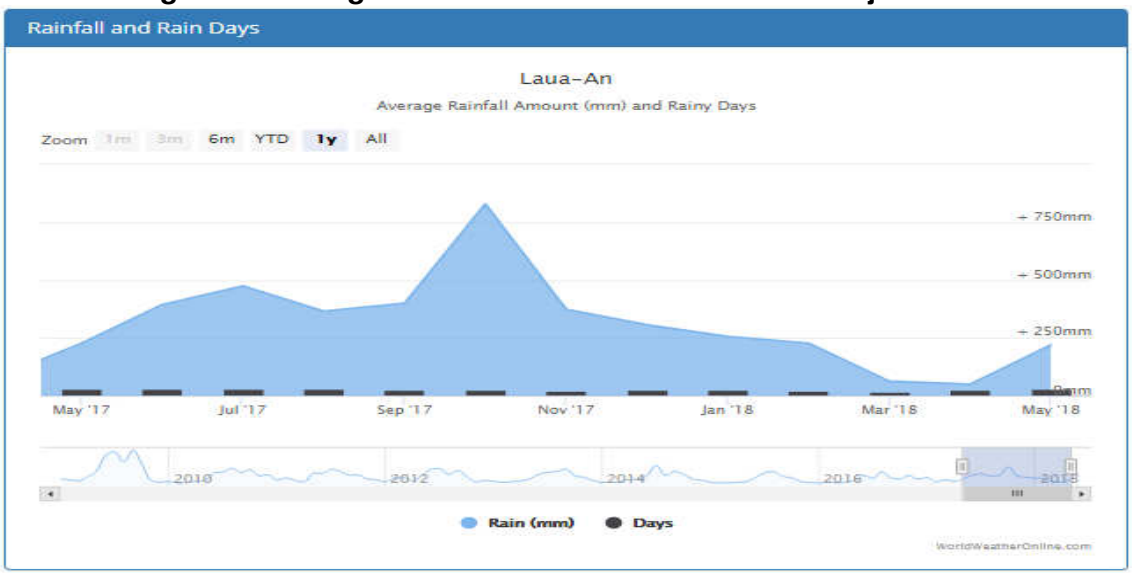
17. There are two distinct type of climate occur in the municipality, the dry season and the wet seasons. The dry season usually starts in December and ends in May. Climate change has made weather unpredictable; rainy and dry months extend beyond the usual period of time and sometimes occur early. Climate Average Temperature and Rainfall are presented in Figure 5 and 6. Average temperature in project areas generally ranges from 24 °C to 36 °C and temperature distribution generally depends on elevation and distance from the sea coast.

Figure 5: Climate (Maximum, Minimum and Average Temperature)



18. Subproject located along the Region receives an average annual rainfall of 500 to 1000 mm based on the PAG-ASA rainfall data.

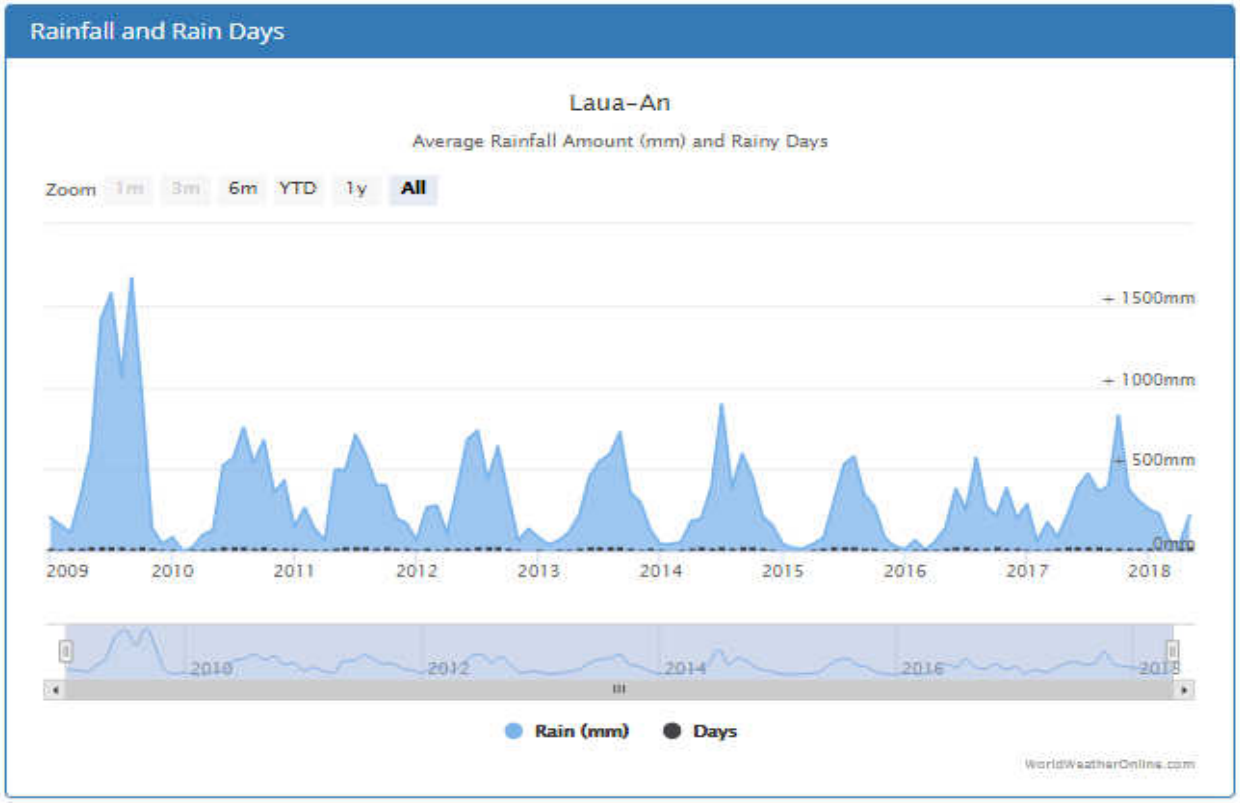
Figure 6: Average Annual Rainfall Distribution in Project Areas



Source: world weather online

19. Normal rainfall data derived from 8 years average data (from 2009 to 2018). Maximum rainfall occurs in June to October, and lowest rainfall occurs in April and May. Mean wind velocity in project areas ranges between 2 – 8 m/sec, while humidity varies from 69 to 87%.

Figure 7: 8 Years Average Rainfall Data

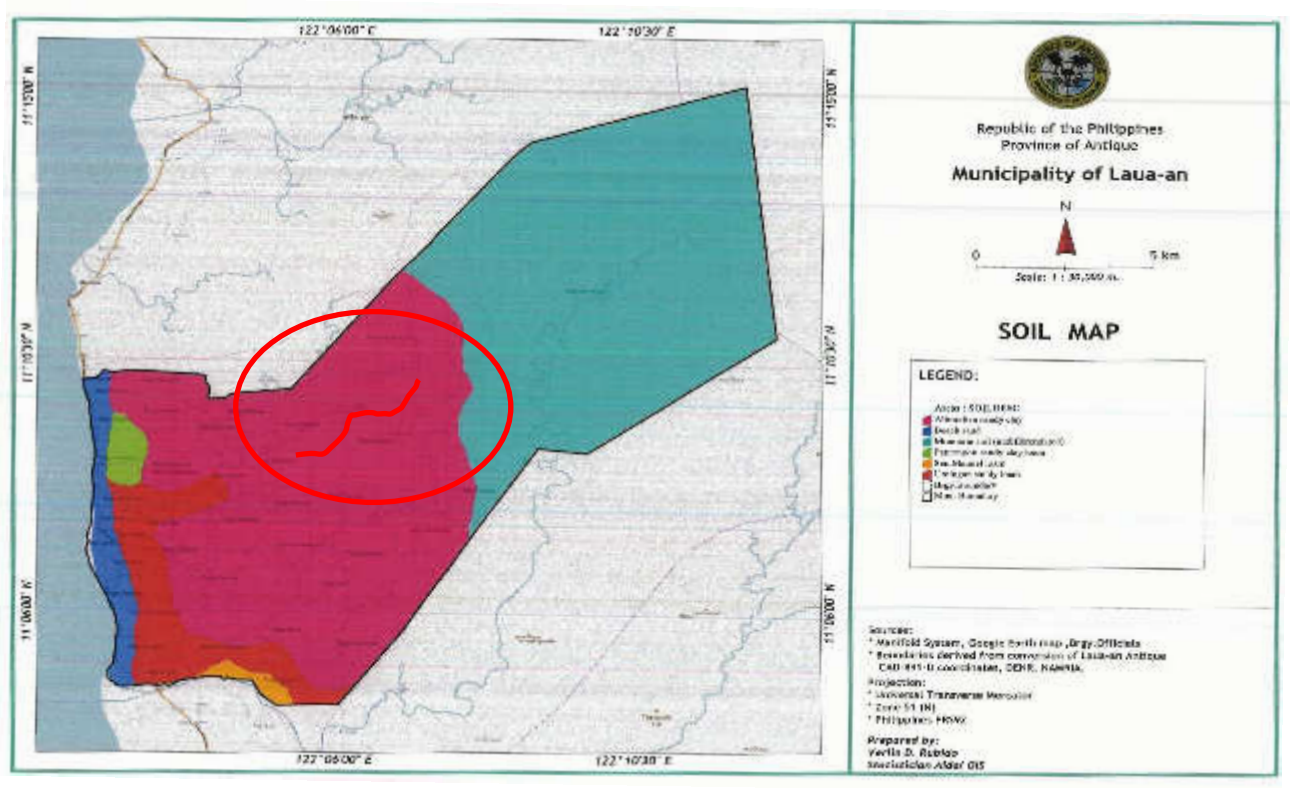


3. Soil Characteristics

20. There are many soil types characterized in Laua-an, Undifferentiated mountain soils cover most of the areas, Patnongon Sandy Clay is found in the Barangays Poblacion, Cabariwan and Oloc, Umingan Sandy Clay is found in Barangays Omlot, Landero, Bagongbayan and Gingbangaan, while Alimodian sandy clay, Can be found in other barangays including Tigunhao.

21. Soil maps of municipality are presented in Figure 8. The major soil types noticed in the project areas are Alamodian Sandy Clay where mostly covered approximately 40% of the total municipality area.

Figure 8: Soil Map



Source: Comprehensive Land Use Plan of Laua-an (2012-2022)

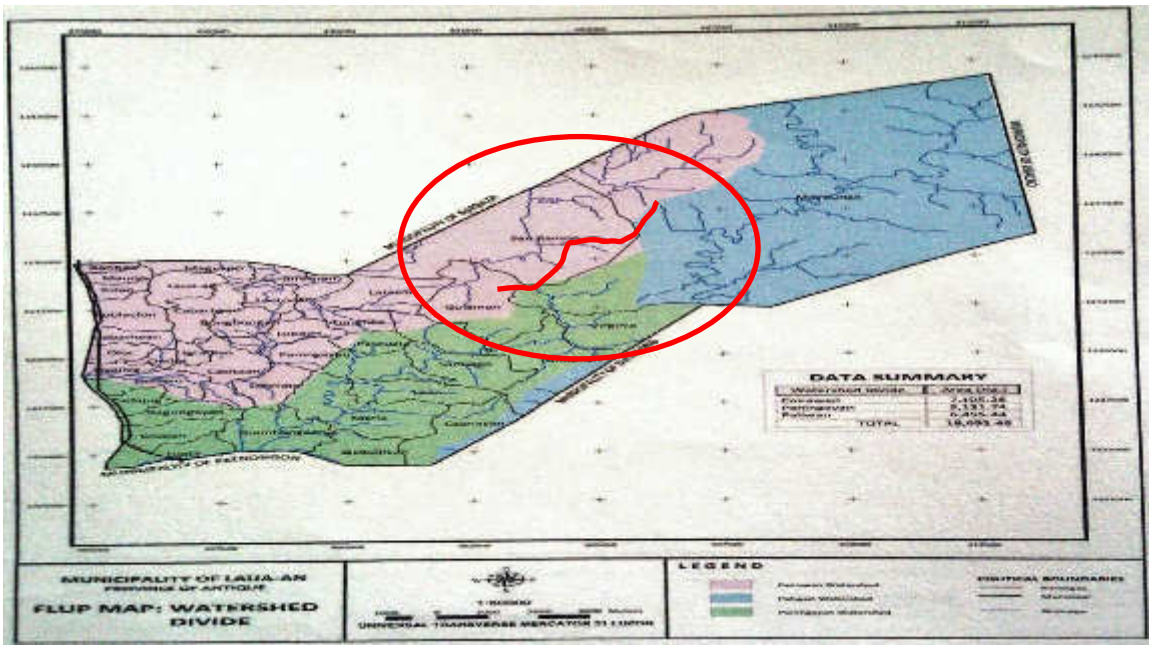
4. Geology, Geomorphology and Hydrogeology

22. Geological formations in the municipality are mostly porous or limestone soil and steep slopes. Some landslide and tension cracks are found in some barangays which may induce the occurrence of landslide. The Subproject is located in areas with sedimentary soil formation. Generally, these formations are unconsolidated horizontal beds with a slightly undulating terrain to steep slopes. Hydrogeologically, aquifers in this terrain are generally limited to shallow depths, except in sand and gravel aquifers. Geomorphologically these formations are sloping or undulating terrain and groundwater supply from these formations are generally from deep fractured aquifers.

5. Water Resources

23. There are two major rivers in laua-an, the Paningayan and Cairawan River. The Paningayan River which is a tributary to Palawan River is located in the eastern part of the municipality, while Cairawan River is one of the seven major rivers of Antique located in Northern part, the Cairawan River has a drainage area of 51 sq.km. with a mean annual run-off depth of 109 million cubic meters and mean annual rainfall of 3,400 mm. (Provincial Socio Economic Profile, 1987). Figure 9 presented the Watershed Map based on the Forest Land Use Plan of Laua-an.

Figure 9: Watershed Map



Source: Comprehensive Land Use Plan (CLUP) of Laua-an

6. Water Quality

Identifiably, Laua-an has vast resources of fresh water due to the existence of the two major rivers known Paningayan and Cairawan River, also, numerous numbers of creeks and springs are already developed. The water quality of the rivers in the municipality is generally turbid because of watershed erosion and high rainfall. However, about 2/3 of the barangays in Laua-an have improved spring as their source of potable water and all passed the water quality standard by Department of Health (DOH).

7. Air and Noise Quality

24. In Laua-an, there has been no existing record emission air quality monitoring since the EMB monitoring priority areas are major cities that has a high probability of pollutions from volume of vehicles and large industries. The location of the subproject is in remote areas that have a minimal air pollution load/emission from residential households.

25. National Noise quality standards of Philippines are given in Table 2. Noise generated from vehicles and residential communities in the project area is not significant considering the limited vehicles passing by in the project site. No noise monitoring data is available for the project areas.

Table 2: National Ambient Noise Standards

Category	Description	Daytime	Morning and Evening	Night time
Class AA	Generally quiet areas such as area within 100 meters from school sites, nursery schools, hospitals and special homes for the aged	50 dB	0 dB	40 dB
Class A	Areas primarily used for residential	55 dB	50 dB	45 dB
Class B	Areas zoned or used as commercial area	65 dB	60 dB	55 dB

Class C	Areas zoned or used as a light industrial area	70 dB	65 dB	60 dB
Class D	Areas zoned or used as a heavy industril area	75 dB	70 dB	65 dB

Source: Section 78, 1978 NPCC Rules and Regulations

8. Quarries and Borrow Pits

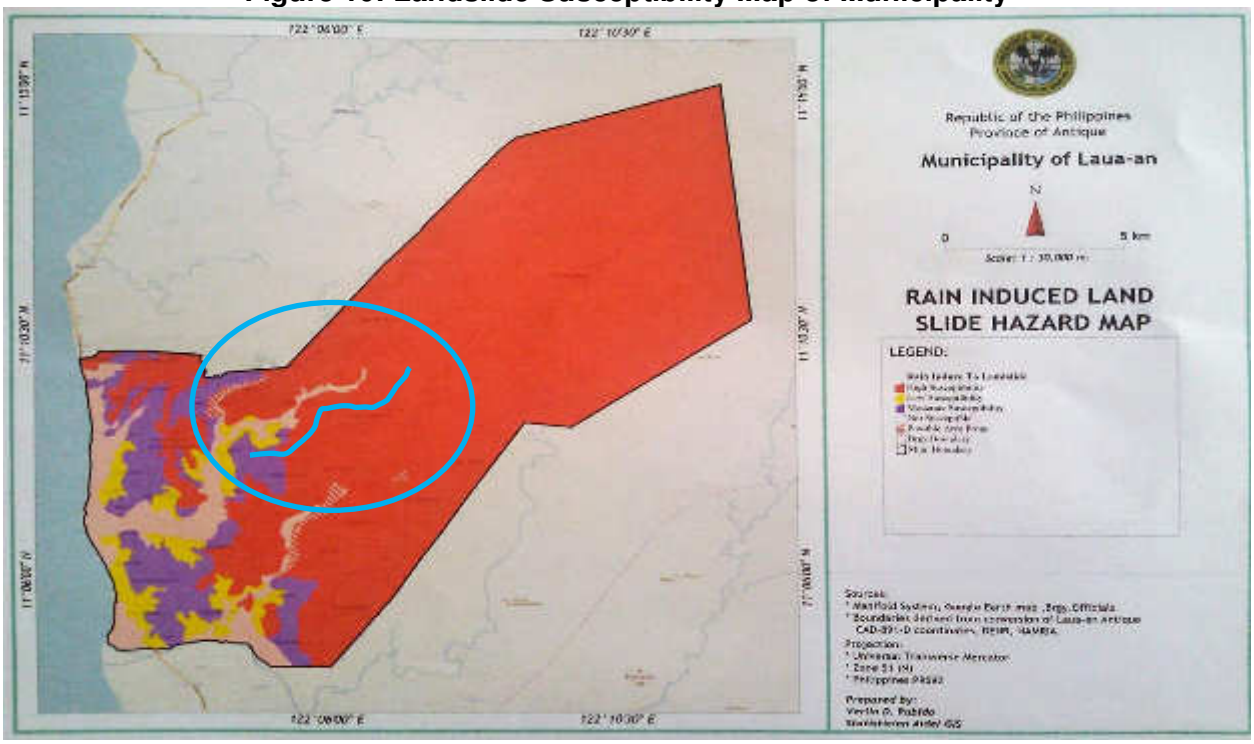
26. The quarries and borrow pits required for construction activities are located in the project area. Construction materials required for the project such as Sand and Gravel are available in nearby rivers specially in the alluvial areas.

9. Natural Hazards

27. According to the Mines and Geoscience Bureau (MGB) Geohazard assessment, about 19 barangays including Tigunhao have very high landslide susceptibility because of various factors, such as, porous or limestone soils and steep slopes. Some landslide and tension cracks are found in some barangays which may induce occurrence of landslides. Most of the areas are not recommended for any infrastructure development as it may only get damaged during soil mass movement.

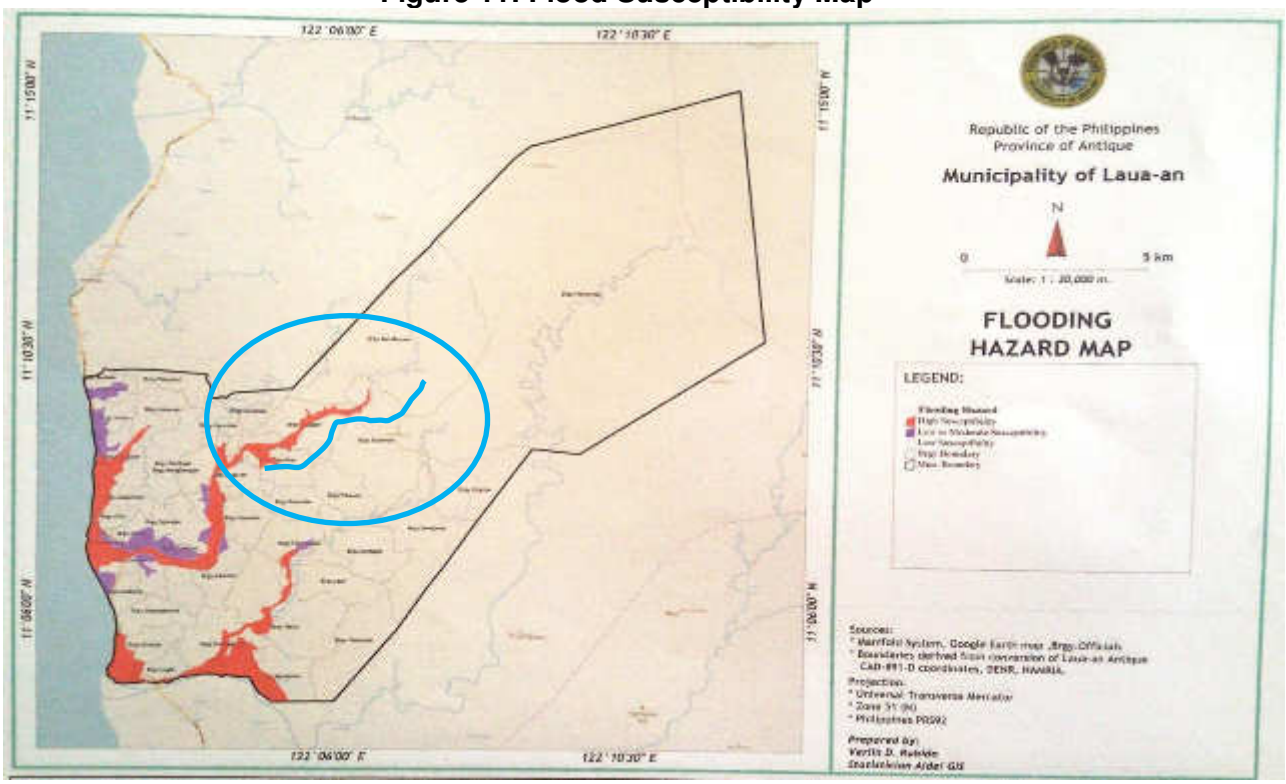
28. Landslide susceptibility map of the municipality is given in Figure 10. The subproject is located exactly in the red portion of the map that means high susceptible to landslide. Also, the Flood Susceptibility map shows in figure 11 that the location of subproject site is far from the rivers which proof that the project location is free from flood.

Figure 10: Landslide Susceptibility Map of Municipality



Source: Comprehensive Land Use Plan (CLUP) of Laua-an

Figure 11: Flood Susceptibility Map



Source: Comprehensive Land Use Plan (CLUP) of Laua-an

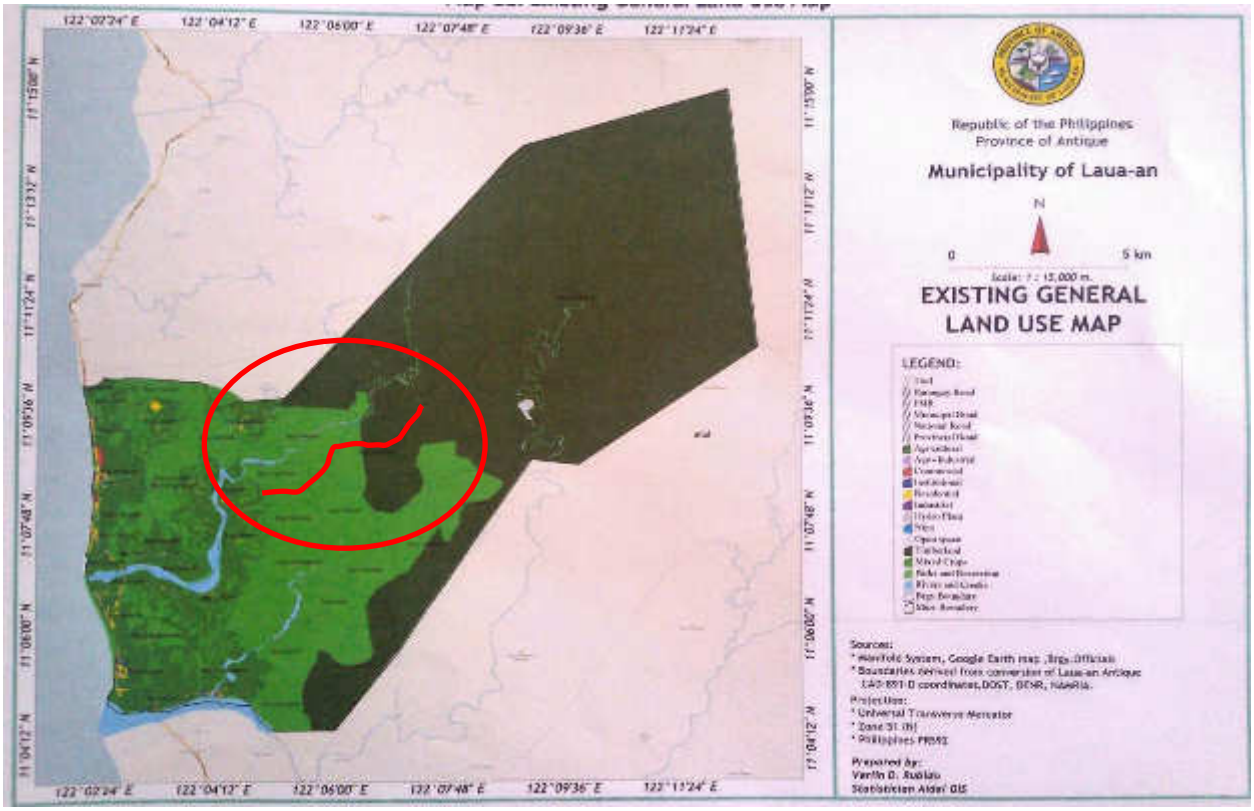
B. Ecological Resources in Project Area

1. Forests and Protected Areas

29. The forestlands of Laua-an are about 58% of its land area as presented in Figure 12. Potential opportunities from the forests and forest lands remain untapped as most economic activities are focused in the Alienable and Disposable lands. Based on Laua-an General Land Use Map, location of subproject is within the Agricultural portion, so that no forestlands possibly disturb by the proposed road subproject. Laua-an forest strategically managed due to the following reasons:

a. Part of it is a mega biodiversity spot of the world. The remaining natural forest of Laua-an is still known to harbor some endemic and endangered species of plants and animals such as spotted deer, wild pigs, avifauna species, and mossy forest.
b. There are huge area of farm lands downstream that are dependent from water resources, and likewise, there is a huge potential of tapping surface water from watersheds from hydropower productions which can benefit not only Laua-an but also the entire Antique for supply of electricity and water for irrigations.
c. Land area of brush lands and grasslands that has not been utilized for productive development. Abaca and agro-forestry are potential livelihood sources that can be established in the forest zones. Given that it is the middle of Antique with good road access, there is high potential to develop the area and contribute to the raw material productions of the province and the entire Panay.

Figure 12: General Land Use Map



Source: Comprehensive Land Use Plan (CLUP) of Laua-an

2. Flora and Fauna

30. The dominant vegetation along the project areas are plantations such as rice, corn, vegetables, banana, and coconut in the residential and agricultural areas. While the natural vegetation includes grasses, herbs vines, shrubs, palms and trees.

31. There are part of the Panay mountain ranges which is a mega biodiversity spot of the world. The remaining natural forest of the municipality is still known to harbor some endemic and endangered species of plants and animals such as spotted deer, wild pigs, wild bird species, and mossy forest.

3. Fish, Fisheries and Aquatic Biology

32. There are 12 coastal barangays identified as key fishery development areas. Based on the Municipal monitoring report, volume of fish catch exceeds the consumption of the populace during peak months. In 2009, the volume of fish catch totaled to 158,300 metric tons. The project site is located in upland area and no marine protected areas, mangroves and coral reefs possibly be affected when the subproject construction commence. Laua-an is a member of Central Antique Municipalities Forest and Coastal Revival and Management of Eco-System (CAMFCRAME) that aims to preserve the Natural Forest and Coastal resources.

4. Land Use

33. Major land use along the project roads is either residential or agricultural as presented in figure 10, and forestlands is located upper portion. The municipality of Laua-an has a total of

76.065 km of barangay roads; 2.160 km of Municipal Roads; 2.450 km of Provincial Roads and 11.125 km of National Roads.

C. Socioeconomic Resources in Project Area

1. Population

34. The project road links are passing three (3) Barangays, namely; Tigunhao, San Ramon, and Guiamon. The project will directly benefit the approximately 176 households or 876 Indigenous people in nearby communities. IPs known as Iraynon Bukidnon reside in upland barangays, specifically in Maybunga, Guiamon and San Ramon. Based on the Ancestral Domain Sustainable Development Plan (2014-2019) the number of IPs totaled to 784 or 172 households. Recently, based on the recounting thru barangay assemblies and IP consultation the count increase from 172 to 176 households or 784 to 876 people. They organized themselves into Tribal Council known as Council of Elders for each barangay and they still practice their cultural beliefs and traditions.

35. Population within three (3) barangay road link are presented in Table 3. Population growth density is also shown in this table. From 2000-2010, the municipality of Laua-an experience an average annual growth rate of 0.8 percent.

Table 3: Population in Project Areas

Barangay	Population		Growth Rate
	Current 2017	Projected 2022	
Tigunhao	406	440	0.8
San Ramon	215	232	0.8
Guiamon	255	276	0.8

Source: Population and Social Profile Data CLUP 2012-2022

2. Industries and Minerals

36. Laua-an is the number one muscovado sugar producing municipality in the province. A muscovado sugar processing plant located in Barangay Casit-an produces sediment-free muscovado that has high demand in local and foreign markets. A hydro power plant is very feasible in Laua-an due to the existing natural rivers and abundance sources of sand and gravel from its bed. Currently the municipality of Laua-an has a hydro power plant estimated to generate 5 megawatts electricity that can serve not only the municipality but the whole Province of Antique.

3. Agriculture

37. Laua-an has an agricultural-based economy. Farming is the major occupation of the people. Out of 18,692.46 hectares total are of the municipality only 2,663.69 hectares are devoted to major agricultural crop production, representing 14.30% of the total area. There are two major types of agricultural products produced: the food crops and industrial/plantation crops. The municipality of Laua-an produce rice, corn, beans, vegetables, peanuts, mango, abaca, singkamas and other cash crops. Laua-an is a muscovado producing municipality of the province.

4. Road Safety

38. Currently there was no existing policy about the road safety in the barangay or subproject site. However, formation of road safety policies will be integrate in the Operation and Maintenance

program once the road is already fully functional, including the community capacity building and training about basic road safety. For the types of vehicles allowed to pass in the road are also specified in the O&M by formulation of Barangay ordinances, rules and regulations that should be followed to make the subproject beneficial to all. As of writing, there are still no ordinance yet because the project was discontinued due to force majeure.

5. Tourism

39. The Project road has a significant tourism potential due to its rich in natural water resources and agricultural-based economy.

V. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

40. The IEE, based on the screening of baseline environmental conditions and review of the proposed civil works, has not identified any significant environmental concerns due to the proposed upgrading of the subproject roads given that all the proposed civil works on existing road networks and are located within existing right of way (ROW). There will only be localized short-term impacts during construction activities due to implementation of civil works that will be addressed in the detailed design and through implementation of the mitigation and monitoring measures specified in the environmental and social management plan (ESMP). These construction related impacts can be mitigated by (i) the community work practices, especially those related to the storage of construction materials and cleanliness of the work sites; (ii) cooperation by the local authorities and facilitators with the community volunteers in terms of traffic management and use of public space and utilities; (iii) project management's strict enforcement of the correct construction practices and standards; (iv) the incorporation of the mitigation measures identified in the IEE, ECC and ESMP into the bid and contract documents and specifications; and (v) close monitoring of the implementation of the required mitigation measures.

41. The environmental impacts resulting from implementation of civil works are expected to be minor and short-term since the upgrading works will not involve widening and alignment adjustments. Environmental concerns that could be expected from the Project are:

a. As part of periodic road maintenance, clearing of right of way through removal of overgrown vegetation (mainly grasses, no trees will be cut) and disposal of spoils
b. Cutting of some landslide-prone areas to stabilize side slopes.
c. Extraction and transport of construction material from quarry and borrow sites.
d. Temporary use of land immediately adjacent to the road for siting of aggregates, necessary equipment, storage area, and construction camps.
e. Reduced air quality and visibility (air quality impacts and/or noise pollution from construction activities, material storage sites, excavations, vehicle and equipment use and operation of concrete mixers and ready mix concrete mixer trucks.
f. Reduced water quality (water and soil pollution) from improper handling and disposal of wastes and construction materials
g. Drainage from construction camps, material stockpiles, and excavations
h. Community volunteers and workers health and safety issues
i. Social conflicts due to project activities

42. During operation. the project is expected to benefit the environment and socio- economic conditions of the subproject areas through:

a. Improved the farm-to-market road to transport both agricultural and non-agricultural goods and services.
b. Improved mobility of the people and access to basic services such as health and education.
c. Reduced soil erosion and landslides due to slope stabilization measures
d. Reduced dust emission due to road concreting
e. Improved road safety due to installation of safety signs and construction of pedestrian paths

43. Environmental impacts and proposed mitigation measures during project preconstruction, construction and operation phases are described in the following sections Detailed environmental mitigation measures have been prepared for all the identified impacts and presented in the environmental and social management plan (ESMP) under Chapter VII.

A. Pre-construction

1. Design Measures

44. The Technical Facilitators (TFs) will incorporate erosion control and slope stabilization measures in the engineering design. Retaining structures will be designed to stabilize areas prone to erosion and landslides. If appropriate, landscaping along the roads through planting of native species of trees and other vegetation will also be considered in the design. These measures will offer a long term solution to problems on slope stability and land degradation. Maintaining vegetative cover on sloping areas along the roads in mountainous locations would reduce erosion, land/mud slides caused by run-offs.

45. The technical design of the road repair and rehabilitation followed the recommendations and guidelines of the World Bank's "Handbook on Roads and the Environment (Technical Paper No. 376). Also, the design conforms to the following national guidelines: (i) existing rules and regulations of the National Building Code of the Philippines to ensure the structural integrity of the project; (ii) approved by the Provincial Engineer's Office; and (iii) other applicable rules, standards and regulations such as the Plumbing Code.

2. Bid and Contract Documents

46. RPMO through ACTs will ensure that relevant provisions of the ESMP in terms of implementation of environmental mitigation measures, monitoring activities, supervision and reporting are included in the bid and contract documents for civil works and construction supervision especially when the mode of project implementation is through a Contractor.

3. Land Acquisition and Encroachment on ecologically and culturally protected areas

47. The project does not have a significant impact on land acquisition and resettlement. All civil works are on existing road networks. In addition, access to the project sites is through public right of way (ROW) and existing roads hence, land acquisition and encroachment on private property, and on ecologically and culturally protected areas will not occur.

A. Construction

1. Soils and Materials

48. Since the Project will mainly involve concreting (with no road widening and realignments), main impacts on land during construction are from (i) spoils due to clearing of land for site preparation to be used for temporary construction facilities such as storage area and construction camps; (ii) removal of existing pavement, and extraction of borrow materials; (iii) excess cut from landslide-prone areas; and (iv) temporary use of agricultural or residential areas for the stockpiles of materials.

49. Prior to materials extraction and spoils disposal, community will implement the disposal procedure and mitigation shown in the approved and updated ESMP to avoid environmental impact.

50. The community or Contractor will source construction material under their agreed arrangements during their Barangay Assembly and to ensure that the sources of materials are certified by the Municipal Engineer (ME). Uncontrolled sourcing of such materials could lead to environmental impacts such as the loss of topsoil or the disfigurements of the landscape from borrow pits. Earthen embankments and material stockpiles will be susceptible to erosion, particularly during the rains and re-suspension of dust during the dry seasons.

51. Transport of construction materials and other construction activities may cause damage to existing roads, irrigation and drainage canals, crops, plants and trees along the project area. The contractor shall implement the following mitigation measures: (i) no overloading of trucks used for the transport of materials; (ii) repair damaged infrastructure from the transport of materials and other construction activities; and (iii) these infrastructures should be reinstated to their original condition upon completion of construction works. The project shall be responsible to any damages caused by the project. Damages shall be properly determined and timely compensated.

52. In order to reduce impact on all borrow sites, suppliers will water the local roads close to the settlements used by the small borrow trucks. As much as possible, supplier will not make use of productive agricultural land. If unavoidable, the supplier will obtain consent from the land owner and will restore the site to its original condition after completion of civil works. Embankments should be monitored during construction for signs of erosion; long-term material stockpiles will be covered to prevent wind erosion.

2. Soils Erosion and Slope Stability Problems

53. Soil erosion and unstable side slopes susceptible to landslides are noticed along subproject roads in hilly areas. The impact of soil erosion and unstable side slope are (i) increased run off and sedimentation causing a greater flood hazard to the downstream, (ii) loss of topsoil affects the growth of vegetation that causes ecological imbalances, (iii) destruction of vegetation by burying or gullying, and (iv) development of unsightly cuts and fills that have been riddled by uncontrolled erosion and gullying.

54. Erosion control and slope stabilization measures will be incorporated in the engineering design. Retaining structures will be designed to protect landslides protection. For a long term solution to the slope stability problem, it is crucial that land degradation is stopped. Maintaining a vegetative cover in the mountain areas would reduce erosion through run-offs, land and mud slides. Planting of native species of trees and landscaping along the roads, as appropriate, should be considered in the design.

55. Construction activities in hilly areas should be taken up only during dry season. To the extent feasible, the length and steepness of cut and fill slopes will be minimized particularly at borrow and spoil sites. Topsoil of cultivated land used for temporary work areas, in particular the borrow sites, will be stripped off and stockpiled, to be replaced when the construction is completed and the cultivated land rehabilitated.

3. Water Quality

56. Subproject roads cross a number of drainages and ditches that could affect the surface runoff flow pattern. Significant impacts on water quality are not expected since the Project will not involve bridge works. However, there is a potential for contamination by discharge of sewerage from work camps and nearby community to the nearby water resources; or percolation through seepage and contamination of the local water table.

57. To mitigate this, (i) open surface will be covered by grasses and creepers to reduce wash-away material; (ii) construction and work sites will be equipped with sanitary latrines/toilets compliant to standard design that do not pollute surface waters; (iii) Sediment laden construction water will be discharged into temporary settling lagoon to avoid contamination and reuse for water conservation and (iv) ditches will be periodically cleared so as to ensure adequate storm water flow.

4. Air Quality

58. During construction, air quality is likely to be degraded by exhaust emissions from the operation of construction equipment; fugitive emissions from cement and concrete mixer; and dust generated from haul roads, unpaved roads, exposed soils and material stock piles.

59. In order to mitigate these, the following will be implemented: (i) the community prepare air pollution control measures in the ESMP. The ESMP will detail action to be taken to minimize dust generation (e.g., spraying of roads with water, provision of vegetation cover in borrow sites after completion of extraction activities, covering of trucks carrying construction materials and cement), and will identify equipment to be used. (ii) Construction materials will be stored away from the residential areas and will be properly covered. (iiii) The concrete batching area will be located at least 100 m away from the settlements and sensitive sites such as school, health centers, etc. to avoid direct impacts to such receptors.

5. Noise and Vibration

60. Operation of machinery can generate high noise and vibration levels. Health centers, schools and prayer halls are the sensitive receptors. Residential areas, in general, are the major receptors. Strong vibrations by compaction equipment can damage nearby houses and other structures. To prevent noise and vibration, the construction will be restricted between 0600 to 2100 hours within 500m of settlements and 150m from sensitive receptors.

6. Flora

61. Flora degradation is only expected to increase marginally as a result of road upgrading. Rehabilitation work will directly cause minor degradation of the local ecology through the clearance of small areas of vegetation (mainly grasses) at major work sites and ancillary sites. A short-term impact on ecology along the rehabilitated road is likely to occur in material stockpiling

areas and worksites during the construction period due to minor vegetation clearance (mainly grasses, not trees).

7. Fauna

62. The potential impacts to the flora and fauna are poaching of edible animals and birds. The municipal environmental health and safety officer will be responsible for providing adequate knowledge to the volunteers regarding the protection of fauna. Workers will be prohibited from hunting wild animals.

8. Fish, Fisheries, and Aquatic Biology

63. The main potential impacts to aquatic flora and fauna in the watercourses from the proposed project are increased suspended solids from earthworks, sanitary discharge from work camps and community. Mitigation measures to address these issues are the same as those for water quality discussed above.

9. Construction Temporary Facility

64. Contractor's camps/Facility will be established during construction. These facilities will generate wastes and if improperly handled, these could cause health problems and pollution. The potential implications associated with housing a large number of immigrant workforce include adverse water quality impacts arising from discharge of partially treated sewage and refuse, public health impacts through the possible introduction of diseases not prevalent in the surrounding areas and promotion of disease vector habitats within the temporary housing areas, social-cultural conflicts arising from religious, cultural and behavioral discords between suppliers, facilitators and local residents, and promotion of un-aesthetic practices.

65. Such impacts, if they materialize, will generally be short term and tolerable. Local authorities responsible for health, religious and security shall be duly informed by the facilitators on the set up of temporary accommodation facilities so as to maintain effective surveillance over public health, social and security matters. The site on which the construction camps are established shall have provisions for the management of refuse and sewage generated. Detailed mitigation measures to address impacts due to operation are provided in the ESMP (Annex D).

10. Community Impacts

66. Construction worksites may place minor stresses on resources and infrastructure of nearby communities. This may lead to antagonism between residents and workers. To prevent such problems, the contractor will provide temporary worksite facilities such as health care and eating space. In addition, a mechanism will be established that allows local people to raise grievances arising from the implementation process. The community volunteers will be empowered and benefits the roads once already finished. Indirectly, other sources of income in each subproject area will also increase like leasing of spaces, houses for storage, and spaces for temporary facilities; operation of variety stores, food stalls, shops and others. In monitoring works during implementation, community will be involved during public consultation, information-education communication, monitoring of project impacts, provide assistance in resolving community concerns, coordination works and others. Traffic jams during construction will be relieved through better coordination with the LGU, and the community. Barangay subproject management committee (BSPMC) will communicate to the public through community consultation and announcements or "Bandilyo" (Visayan term for announcement) regarding the scope and

schedule of construction, as well as certain construction activities causing disruptions or access restrictions.

11. Health, Safety and Hygiene

67. Construction sites are likely to have public health impacts. Contractors will ensure that no untreated wastewater is discharged to local water bodies and that no dumpsite will be established at the construction camps. There will be a potential for diseases to be transmitted, exacerbated by inadequate health and safety practices. Mitigation measures include: (i) provision of adequate health care facilities within construction sites; (ii) first aid facilities will be made readily available; (iii) training of all construction workers in basic sanitation and health care issues (e.g. proper hand washing, proper fecal waste disposal, etc.); (iv) personal protection equipment (PPEs) for workers, such as safety boots, helmets, gloves, protective clothing, goggles, and ear protection; (v) clean drinking water for all workers; (vi) adequate protection to the general public, including safety barriers and marking of hazardous areas; (vii) safe access across the construction site to people whose settlements and access are temporarily severed by road construction; (viii) adequate drainage throughout the camps to ensure that disease vectors such as stagnant water bodies and puddles do not form; and (ix) Septic tank and garbage box will be set up in construction site, which will be periodically cleared by the community to prevent outbreak of diseases. The community will arrange the temporary integration of waste collection from work sites into existing waste collection systems and disposal facilities of nearby communities and segregation, recycling, reuse and composting proper disposal solid wastes generated during construction and operation shall be in accordance with the provision Ecological Solid Waste Management (RA 9003).

12. Traffic Management

68. During construction, the community volunteers will plan through Barangay Assembly to ensure that all construction vehicles (haulers) observe speed limits on the construction sites and on public roads and to provide adequate signage, barriers, and assign persons for traffic control monitoring. Sign postings such as ‘men working’, ‘Keep left/right’, ‘construction ahead’, ‘speed limit’, and ‘cones around the working area’ should be used for traffic management and road safety. Safe access for vehicles and pedestrian around construction sites will be provided at all times. All vehicles should be fitted with audible warning devices when reversing.

13. Proper Construction Practices

69. The KC-NCDDP Area Coordinating Team (ACT) through Technical Facilitator (TF) ensure the that the community work will conform to the general construction guidelines as stated in the Community Based Infrastructure Manual (CBIM) particularly on the good engineering practice and good working practices that will be discuss by the technical facilitator during Project Implementation Workshop (PIW). In implementation phase, ACTs will closely supervise and monitor the community and volunteers conformity with the ESMP, contract procedures, design and specifications.

B. Operation

1. Air and Noise Quality

70. Noise and vibration is generated by vehicles when passing damaged roads. With the repaired pavement and shoulder, such impacts will be minimized. Further noise reduction from passing vehicles could be achieved provided the Barangay Local Government Unit (BLGU)

ensure that measures such as no blowing of horns and reducing vehicle speed along schools, health centers and other sensitive locations are strictly enforced. During operation phase, more benefits are expected as a result of the asset preservation/reblocking of subproject roads. There will be less traffic jam caused by damaged roads, hence less emissions.

2. Road Safety

71. Safety risks posed by increased traffic speeds due to improved roads will be minimized by providing and maintaining traffic signs, markings and other devices to regulate traffic at appropriate places such as along schools, residential areas, health centers, etc.

3. Project Benefits

72. Project roads will directly benefit over 876 people located within immediate vicinity of the roads in following ways: (i) Increased and reliable travel services leading to greater mobility of people and goods and comfortable traveling; (ii) Improved access to markets in larger villages and town will help rural farmers to get better prices for their agricultural product that eventually generate larger rural incomes; (iii) Traders and shop keepers have easier and generally cheaper access to wholesalers in the major towns and cities; (iv) If road improvement significantly increases the amount of up-road traffic passing through, and a production of the increased traffic stops in the village to purchases goods, this can increase economic activity; and (v) The delivery to rural people of health, education and agricultural extension services available in major towns can be improved in the region temporary employment during construction. Improved roadside drainage also reduces the extent of local flooding in villages adjacent to road. Labor-intensive construction will generate employment opportunities of unskilled and semi-skilled positions, including laborers, truck drivers, cleaning and catering etc. Tourism industry in the project areas will be improved.

VI. PUBLIC CONSULTATION AND PARTICIPATION and GRIEVANCE REDRESS MECHANISM

73. **Public Consultation and Participation**. The public consultation and participation is part of the community empowerment activity cycle (CEAC) of process. During the social preparation stage, meetings and consultation among community members are conducted. Community members are able to identify and prioritize subjects. Based on the physical scanning and discussion of priorities, they will identify subproject implementation issues including relevant environmental issues and mitigation measures. The views of the affected people and other stakeholders, including women and IPs are part of the decision-making process. The environmental concerns identified during the public consultations are enumerated in Environmental and Social Management Plan (ESMP) as shown in table 5 of Chapter VII.

74. The RPMO shall promptly address complaints of affected persons and other stakeholders regarding the project's environmental performance through a grievance redress committee (GRC) at no cost to the complainant and without retribution. The GRC, which shall be established before commencement of site works, shall be chaired by BSPMC to be assisted by the ACT. For each subproject area, the GRC shall have members comprising representatives from the DSWD Regional Office, LGU at the barangay and municipal/city levels. Grievances can be filed in writing or verbally with any member of the GRC. The committee will have 15 days to respond with a resolution. If unsatisfied with the decision, the existence of the GRC shall not impede the complainant's access to the Government's judicial, administrative remedies or through concerned government agencies (e.g., Municipal Environment and Natural Resources Office, Community

Environment and Natural Resources Office and Provincial Environment and Natural Resources Office of DENR, Regional offices of the Environmental Management Bureau, etc.)

75. RPMO, through the ACTs, shall make public the existence of this grievance redress mechanism through public awareness campaigns. RPMO shall also set-up a hotline number for complaints and the hotline numbers shall be publicized by placing these on Project notice boards and at local government offices (e.g., municipal, barangay levels).

76. The GRC, through the ACT, will receive, follow-up and prepare monthly reports regarding all complaints, disputes or questions received about the Project and corresponding actions taken to resolve the issues. These reports will be included in the semi-annual environmental monitoring reports to be submitted by DSWD-KC-NCDDP to ADB.

VII. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

77. This section presents the mitigation measures, environmental monitoring plan, and institutional arrangements to address the environmental impacts of the project. The purpose of the environmental and social management plan (ESMP) is to ensure that all activities associated in the project will not result to significant adverse environmental and social impacts (Annex D).

78. A copy of the ESMP must be kept on work sites at all times. This ESMP will be included in the bid documents and will be further reviewed and updated during implementation. The ESMP will be made binding on all contractors operating on site and will be included in the contractual clauses. Non-compliance with, or any deviation from, the conditions set-out in the document constitutes a failure in compliance.

A. Implementation Arrangements

79. Institutions responsible for executing and monitoring the implementation of the ESMP are presented in Table 4.

Table 4: Responsibilities for ESMP Implementation

Agency	Responsibilities
Department of Social Welfare and Development (DSWD)	• Executing agency with overall responsibility for the subproject construction and operation • Ensure that sufficient funds are available to properly implement the ESMP • Ensure that project implementation complies with Government Environmental Policies and Regulations • Ensure that the Project, regardless of financing source, complies with the provisions of the EMP and ADB Safeguard Policy Statement 2009 (SPS) • Ensure that the subproject will secure all the necessary permits and clearances from concerned government agencies and LGUs (i.e. ECC from DENR-EMB, Building Permit from LGU) • Ensure that tender and contract documents for design, supervision and civil works include the relevant ESMP requirements • Establish an environmental grievance redress mechanism, as described in the IEE, to receive and facilitate resolution of affected peoples' concerns

	• Submit semi-annual monitoring reports on ESMP implementation to ADB
Area Coordinating Team (ACT) and Municipal Coordinating Team (MCT), (CEF, TF)	• Direct responsibility for the implementation of civil works, engineering designs and project coordination • Ensure that ESMP design measures are incorporated in the detailed design • Ensure that ESMP provisions are strictly implemented and monitored during various project phases (design/pre-construction, construction and operation) to mitigate environmental impacts to acceptable levels • Include relevant provisions of the ESMP in the bid and contract documents for design, civil works and supervision
Barangay Sub-project Management Committee (BSPMC), (PIT PMT, O&M, and CVs)	• Closely monitor contractor's environmental performance and over-all implementations of ESMP • Prepare semi-annual environmental monitoring reports on status of EMP implementation for submission to ADB • Based on the results of ESMP monitoring, identify environmental corrective actions and prepare a corrective action plan, as necessary, for submission to ADB • Responsible for coordinating with EMB, Local Government Units (LGU), and other concerned agencies related to environmental aspects for maintaining project`s compliance with environmental permits.
Contractors	• Recruit qualified environmental and safety officer to ensure compliance with environmental statutory requirements, contractual obligations and ESMP provisions. • Undertake the proposed environmental mitigation before start of site works throughout the construction phase as specified in the ESMP Submit corresponding report to the ACT and RPMO. • Provide sufficient funding and human resources for proper and timely implementation of required mitigation and monitoring measures in the ESMP • Implement additional environmental mitigation measures, as necessary, to avoid, minimize and/or compensate for adverse impacts due to construction works and related activities performed by the contractor.
Environmental Management Bureau (EMB) of the Department of Environment and Natural Resources (DENR)	• Review and approve environmental assessment reports required by the Government • Undertake monitoring of the project's environmental performance based on their mandate
ADB	• Conduct periodic site visits to assess status of ESMP implementation and over-all environmental performance of the Project • Review environmental monitoring reports submitted by the executing agency to ensure that adverse impacts and risks are properly addressed

	• Publicly disclose through posting on ADB's website environmental monitoring reports, corrective action plans, new or updated IEE (if any) prepared by the executing agency during project implementation

B. Environmental Mitigation Measures

80. The anticipated impacts and the corresponding mitigation measures identified in Chapter V are summarized in Table 5. The table also shows the authority responsible for the implementation of mitigation measures, schedule of implementation and mitigation cost. The overall implementation of the mitigation measures will be the responsible of the Project Implementation Team (PIT) and will be supervised by the BSPMC and Technical Facilitators (TF) through Project Monitoring Team (PMT).

Table 5: Environmental Mitigation Measures

Potential Environment Impact	Mitigation Measures	Schedule	Responsible Entity	Estimated Cost
Pre-Construction Phase				
Culturally sensitive consultation and participation for the IP community in the project area during the planning and implementation of Kalahi-CIDSS process.	To have coordination and consultation with the IPs (Iraynon Bukidnon); Give them an opportunity and importance to participate in every activity	During subproject conceptualization meeting	Chieftain and council of the elders, BLGU, MLGU, NCIP, KC staff and Community Volunteers, PIT, PMT, BSPMC	LCC in kind by the BLGU
Noncompliance of conditions in Environmental Compliance Certificate.	All conditions in ECC will be incorporated to ESMP to ensure the implementation, and will become part of the Contractor responsibilities and deliverables as reflected in Scope of work.	All activities	ACTs, BSPMC, Community volunteers and Contractor, PIT, PMT, MCT, TF	c/o Program of Work (POW) / Grant
Erosion and landslides due to unstable slopes and run-off	Incorporate erosion control and slope stabilization measures in the engineering design. Retaining structures will be designed to stabilize areas prone to erosion and landslides. If appropriate, landscaping along the roads through planting	During subproject conceptualization meeting, also in Operation and Maintenance planning	RPMO, ACTs, Community Volunteers, PIT, PMT, MCT, TF	c/o POW Grant

	of native species of trees and other vegetation will also be considered in the design.			
Adverse environmental impacts arising from works due to non-compliance to ESMP	Ensure that relevant provisions of the ESMP in terms of implementation of environmental mitigation measures, monitoring activities, supervision and reporting are included in the bid and contract documents for civil works and construction supervision.	Design and technical Documents preparation	ACT-TF, Community Voulunteers (PPT), PIT, PMT, MCT, TF	N/A
No mechanism to resolve environmental complaints	Establish a grievance redress mechanism for resolution of complaints.	Barangay PDW	RPMO, ACT-TF, BSPMC, PIT, PMT, MCT, TF	N/A
Civil works contract documents do not include the ESMP	RPMO through ACTs will ensure that relevant provisions of the ESMP in terms of implementation of environmental mitigation measures, monitoring activities, supervision and reporting are included in the bid and contract documents for civil works and construction supervision	Prior to construction activities	RPMO, ACT	N/A
Noncompliance of the technical design to applicable national and international standards and guidelines.	• The technical design of the road repair and rehabilitation followed the recommendations and guidelines of the World Bank's "Handbook on Roads and the Environment (Technical Paper No. 376).	Planning and design stage of the project	RPMO, ACT and Contractor	Included in the project cost

	• The design will conforms to the following national guidelines: (i) existing rules and regulations of the National Building Code of the Philippines to ensure the structural integrity of the project; (ii) approved by the Provincial Engineer's Office of Iloilo; and (iii) other applicable rules, standards and regulations such as the Plumbing Code. • All applicable permits will be secured prior to construction activities.			
Enough knowledge of community in subproject environmental compliance,	MCT conduct Projects Development Workshop on Environmental adverse impact to enhance knowledge and effective implementation	Barangay PDW	MCT CEF & TF, PIT, PMT, MCT, TF	BLGU Local Counterpart Contribution (LCC)
Implementation / Construction Phase				
Water Quality – Possible contamination of nearby Water resources	No nearby Water resources identified, Also, part of the requirement in construction methodology is to ensure the proper disposal of waste and wastewater generated in construction site.	Sub-project Implementation	MCT CEF & TF, Community, BLGU, Laborers, PIT, PMT, MCT, TF	c/o POW Grant
Air Quality - Possible Air pollution produced by Motor/ Vehicle dust comes from	To put warning devices or warning signs regular watering the unpaved road to avoid dust formation,	During Sub-Project Implementation	Community, BLGU, Laborers, MCT CEF,	BLGU

the unpaved roads and vehicles mechanical combustions.	and encourage the worker to use mask during the construction		PIT, PMT, MCT, TF	
Noise and Dust Pollution – Emmision from construction vehicles and equipment and concrete mixing	Siting of asphalt and cement mixing plants will be at least 1 km from sensitive receptors such as settlements, schools, hospital, etc. and other environmentally sensitive areas and preferably located on the leeward side.	During Sub-Project Implementation	Contractor, Laborers, MCT CEF, BSPMC, PIT, TF, PMT	c/o Program Of Work (POW) Grant
Soil erosion- High suspended solid contents of river, sedimentation.	On hill slopes and other potentially erodible places along the roadside, native vegetation that retards erosion will be planted, as appropriate and As much as possible. construction activities in hilly areas to be taken up only during dry season	During Sub-Project Implementation	Community, BLGU, Laborers, MCT CEF, BSPMC, PIT, TF, PMT	c/o Program Of Work (POW) Grant
Solid waste- Reclaimed pavement and spoils	(i) All suitable material obtained from roadway excavation work will be used for construction of embankment/ earthen shoulders; (ii) Prohibit disposal of spoils and wastes along or in rivers and streams or other natural drainage path. (iii) Ensure that spoils disposal will not cause sedimentation and obstruction of flow of watercourses, damage to agricultural land and densely vegetated areas.	During Sub-Project Implementation	Contractor, Laborers, MCT CEF, BSPMC, PIT, TF, PMT	c/o Program Of Work (POW) Grant
Contamination from solid waste - Solid waste from contractor's yard,	(i) All construction materials will be reused, recycled or properly disposed of.	During Sub-Project Implementation	Contractor, Laborers, MCT CEF,	c/o Program Of Work

construction camps, and construction sites	All worn out parts, equipment and empty receptacles used to contain hazardous materials must be removed from the site to a proper storage location designated by DENR; (ii) Solid waste and garbage will be collected in bins and disposed of daily; (iii) There will be no dumpsite established by the contractors. All solid waste will be collected and removed from the work camps and disposed in local waste disposal sites.		BSPMC, PIT, TF, PMT	(POW) Grant
Contamination from sewerage - Sewerage in contractor's temporary facilities	(i) Septic tank/sanitary latrines must be provided at each construction campsite and construction field; (ii) The formation of standing water on construction sites often leads to the spread of insect-borne diseases such as malaria. Therefore there must be a vigorous program by the contractor to avoid such standing waters; including removal of old materials such as used tires and storage drums, provision of adequate drainage, etc.	During Sub-Project Implementation	Contractor, Laborers, MCT CEF, BSPMC, PIT, TF, PMT	c/o Program Of Work (POW) Grant
Forest and Plants life (Flora)	No identified affected forestland and plants because the road already exists. Tree planting activity will be provided by the community volunteers along the subproject site by way of	During Sub-project Implementation	Community, BLGU, Laborers, MCT CEF, PIT, PMT, MCT, TF	BLGU

	bayanihan as one of their proposed activity to prevent erosion as well as preserving the nature.			
Impacts on indigenous peoples (IP), including participation in paid labor and implementation/ management of the sub-project, participatory and monitoring	No affected IPs (Panay bukidnon) identified in the area but they are one of the nearby communities that will directly benefit the sub-project. In fact, they are very participative and willing to work hard for the sub-project and some of them are identified as non-skilled and skilled labors primarily engaged in the implementation.	During Sub-project Implementation	MCT-CEF, BSPMC Chair and PT, PIT, PMT, MCT, TF	Salary c/o POW Grant
Worker's and community health, safety, and hygiene - Possible injury in the construction site upon implementation	To avoid the possible risk in a construction site as well as road traffic problems, the Monitoring team will strictly implement the requirements wearing of PPEs and Barangay Tanod to augment and act as enforcers.	During Sub-project Implementation	MCT-TF, CEF and Contractors, PIT, PMT, MCT, TF	c/o POW Grant
Resettlement Impacts during construction, including access restriction, temporary impacts on livelihood	No identified resettlement impact since the proposed subproject is just upgrading of the existing functional road		PIT, PMT, MCT, TF	
Operation and Maintenance Phase				
Land – possible damages of Road due to uncontrolled heavy vehicles entering the barangay road	Create barangay resolutions about the types of vehicle that allowed entering in the vicinity of constructed road to avoid damages, and if there are uncontrolled damages/ natural damages, the	After SPs turn-over	O & M Group / BLGU / community, PIT, PMT, MCT, TF	c/o BLGU and O&M fund

	operation and maintenance group is responsible to mobilized for the immediate repair of the damaged portion of road.			
Water Quality – Possible pollution on nearby water resources	No nearby water resources identified	N/A	N/A	N/A
Air Quality – Dust and Air pollution from Vehicles	Maintain and Clean roads properly. Enforced servicing of ill maintained vehicles	After SP turn-over	O & M Group / BLGU / community, Vehicle owners, PIT, PMT, MCT, TF	Individual
Noise - Noise pollution	Preventing blowing of horns and reducing vehicle speeds near schools , hospitals and other sensitive areas traffic intersections should be implemented by local authorities PMO	After SP turn-over	O & M Group / BLGU / community, Vehicle owners	Individual
Road Safety – Road accidents	Properly maintain road signs and markings, information display board and streetlights.	After SP turn-over	O & M Group / BLGU / community, Vehicle owners	Individual
Improved access – unplanned urbanization	The project is part of the LGU development plan, adherence to land use and zoning regulations.		LGU, BLGU, PIT, PMT, MCT, TF	
Increased business potential and Increased delivery of agricultural products	Encourage business in the designated area	After SP turn-over	LGU, BLGU, Community, PIT, PMT, MCT, TF	BLGU
Tourism	Promote tourism in the area through advertisement from the local venue. Improve the tourist centers in the area.		LGU, BLGU PIT, PMT, MCT, TF	LGU

C. Environmental Monitoring Plan

81. The actual implementation of the project will be managed by BSPMC through PIT. The Project Monitoring Team (PMT) and Project Implementation Team (PIT) in coordination with the assigned Facilitators-community and technical will be responsible for the monitoring on the implementation of ESMP. The ACT Facilitators will be working closely with the community volunteers during the construction phase of the project. Table 6 shows the proposed environmental monitoring plan, duration and schedule and responsible entities to be involved in the monitoring and evaluation.

82. **Reporting**. Regular reporting on the implementation of the mitigation and monitoring activities during the construction phase of the project are required by ADB. The assigned Facilitators on the construction activities will submit monthly monitoring reports to the ACT and to be submitted to RPMO, which will be consolidated and submitted semi-annually to ADB during the construction phase of the project. The environmental and social monitoring report is the same with ESMP format with just additional column "Remarks/status of compliance".

Table 6: Environmental Monitoring Plan

Parameters to be Monitored	Location and method of monitoring	Schedule/ Frequency	Responsibility
Pre-construction			
Inclusion of EMP detailed design phase requirements in the bid and contract documents	Review of bid and contract documents	Prior to issuance of bid and contract documents	MCT-CEF / ACT-TF, RPMO, PPT
Completion of detailed design in accordance with EMP requirements	Review of detailed design documentation	Prior to approval of detailed design	ACT and MCT TF, RPMO, BSPMC
Establishment of grievance redresses mechanism (GRM) by RPMO through ACT	Confirm GRM is established and disclosed to the community	Prior to start of site works	ACT and MCT TF, RPMO, BSPMC
Construction			
Implementation of construction phase environmental mitigation measures specified in ESMP	Site visit, interviews with community, coordination with concerned agencies (e.g., LGUs, EMB, ACT, etc.)	Monthly and as part of regular project supervision	MCT CEF & TF, Contractor
Ambient air quality produced at a construction site	Wearing of PPEs, and ensure that the contractor will minimize or prevent the formation of dust	Every time commencing of actual works	Contractor and community workers/volunteers
Ambient sampling of other parameters to be sampled, as appropriate, to validate complaints and pollution events due to project activities	Validate complaints or where the pollution occurred due to the project	Complaints	Community, BLGU, Laborers, MCT / ACT

D. Capacity Building

83. Within the current organization of community, there is no team assigned to handle matters on environmental management. The BSPMC through PIT is responsible for the overall implementation, monitoring of the civil works on construction activities. To strengthen the capacity of the community in the ESMP and EMoP implementation, the training of community volunteers, specifically the ACT Facilitators. Best international construction practices, environmental management, implementation of the ESMP and EMoP and on occupational and community health safety plans will be designed.

84. The capacity building and training activities will be delivered prior to the start of the construction activities.

VIII. CONCLUSION AND RECOMMENDATION

85. The proposed road Construction subproject is not expected to result to any significant adverse impacts because the civil works will be minimal and are not located to any declared environmentally critical area, the impacts are localized, temporary and site-specific that can be prevented and mitigate during the project implementation.

86. The major positive impact of the Subproject will be economic, community empowerment and better accessibility. The project will directly benefit over 876 people located within the project area providing improved access and economic development. The project would also benefit the environment in terms of reduced soil erosion and landslides through slope stabilization measures and construction of retaining structures. Dust generation from the damaged roads will be reduced by the improvement of pavement. Health risk to the roadside communities and damage to the biological environment will be reduced due to pavement improvement and soil erosion control measures. Extent of flooding in road side villages will be reduced by the improvement of drains. Road safety will be improved by stabilizing unstable sections, installing road safety barriers, signs and display boards.

87. The Subproject will have overall beneficial impact and will have minor negative impacts that will be carefully monitored and adequately mitigated through implementation of the ESMP.

IX. DOCUMENTATIONS

A. Stakeholder Consultations – List of Participants

Consultation 1
Regular Session
Date: February 10, 2017, 10:00 AM at Tigunhao Barangay Hall
Participants

Name of the Participant	Position
Hon. Primitivo Santiago	Punong Barangay
Hon. Edison Samsona	Barangay Kagawad
Hon. Rufino Blas	Barangay Kagawad

Hon. Nena Blas	Barangay Kagawad
Hon. Rosalys Lavega	Barangay Kagawad
Hon. Leo Labanon	Barangay Kagawad
Hon. Edmund Puetes	Barangay Kagawad
Mrs. Marsalina Labanon	BSPMC
Marivic Blas	Barangay Treasurer
Catherine Bernabe	Barangay Secretary
Francis Agustin C. Songcog	Area Coordinator
Hector Napat	Technical Facilitator

Consultation 2
Regular Session
Date: February 24, 2017, 2:00 PM at Tigunhao Barangay Hall
Participants

Name of the Participant	**Position**
Hon. Primitivo Santiago	Punong Barangay
Hon. Edison Samsona	Barangay Kagawad
Hon. Rufino Blas	Barangay Kagawad
Hon. Nena Blas	Barangay Kagawad
Hon. Rosalys Lavega	Barangay Kagawad
Hon. Leo Labanon	Barangay Kagawad
Hon. Edmund Puetes	Barangay Kagawad
Mrs. Marsalina Labanon	BSPMC
Marivic Blas	Barangay Treasurer
Catherine Bernabe	Barangay Secretary
Francis Agustin C. Songcog	Area Coordinator
Hector Napat	Technical Facilitator

Consultation 3
Barangay Assembly of Barangay Tigunhao
Date: August 16, 2017, 2:00 PM at Tigunhao Daycare Center
Participants

Name of the Participant	**Position**
Hon. Primitivo Santiago	Punong Barangay
Hon. Edison Jay Samsona	Barangay Kagawad
Hon. Rufino Blas	Barangay Kagawad
Hon. Nena Blas	Barangay Kagawad
Hon. Rosalys Lavega	Barangay Kagawad
Hon. Leo Labanon	Barangay Kagawad
Hon. Edmund Puetes	Barangay Kagawad
Mrs. Marsalina Labanon	BSPMC
Marivic Blas	Barangay Treasurer
Catherine Bernabe	Barangay Secretary
Francis Agustin C. Songcog	Area Coordinator
Hector Napat	Technical Facilitator

Consultation 4
Barangay Assembly of Barangay Latazon
Date: August 16, 2017, 10:00 AM at Latazon Daycare Center

Participants

Name of the Participant	Position
Hon. Jose Joaquin	Punong Barangay
Hon. Elsa Vicente	Barangay Kagawad
Hon. Rolly Narciso	Barangay Kagawad
Hon. Gina Dionesio	Barangay Kagawad
Hon. Manuel Saturnino	Barangay Kagawad
Hon. Nelfa Berto	Barangay Kagawad
Hon. Simplicio Bernabe	Barangay Kagawad
Hon. Naida Joaquin	Barangay Kagawad
Mrs. Marsalina Labanon	BSPMC
Marivic Pedro	Barangay Secretary
Francis Agustin C. Songcog	Area Coordinator
Hector Napat	Technical Facilitator

The summary of the environmental and social concerns from these consultations are: (i) less participation of men; (ii) possible low percentage of IP participation; (iii) land acquisition; (iv) discussed the safeguards documentary requirements such as CNC, NCIP certification, DOD, etc.; (v) Air pollution due to motor/vehicles emissions; (vi) possible disturbance of original soil due to pavement and cut and fill activities; (vii) possible impact to IPs and household; (viii) possible accident and physical injuries; (ix) water quality and conservation to be used during implementation; (x) proper disposal of solid/ wastewater generated during and after the construction; (xi) possible vehicular accidents once the project already functional and etc. These will be mitigated by the following measures: (i) encourage men to participate to have fair participation in decision making; (ii) motivate IP in participating in KC and other program intervention in the barangay; (iii) secure certification from the Barangay/resolution and Municipal Assessor; (iv) ACT/MCT to continuously conduct the project development workshop on safeguard to enhance community knowledge about securing required safeguard documents; (v) Provides warning device or warning sign or sprinkle water on project site to avoid dust or for laborer to wear face mask; (vi) ensure apply the appropriate construction methodology and restore the affected portion to its original condition and observe the soil stability; (vii) ensure IP participation in every assembly and decision making; (viii) to avoid accident by regularly wearing of Personal Protective Equipment (PPEs); (ix) Provision of rainwater collector to conserve water; (x) Provision of Material Recovery Facility (MRF) where the solid waste will be partially disposed and recover before to convey it to the municipal dumpsite/waste pit; (xi) provision of appropriate road signages to avoid accidents; and etc.. Please see ESMP/EMP for the output/details of possible impacts determines during the community consultations and assemblies with the specific mitigating/preventive measures.

B. Summary of Consultations with IP Communities

Department of social welfare and development
Field Office VI
Kalahi CIDSS-NCDDP
Summary of Consultations Conducted with IP Communities
Laua-an, Antique

Summary of Consultations with the IP Communities
(Attachment to Indigenous People's Plan)

Sub-project Title: Establishing a Danger Free and Convenient Access Through Community Managed Concreting of Road with Slope Protection and Line Ditch.

Barangay: Tigunhao, **Municipality:** Laua-an **Province:** Antique **Region:** VI
Joint Barangay: Latazon, Gulamon and San Ramon (lead and joint barangay was identified Indigenous People)
Ethnic Group: Iraynon Bukidnon

Date of consultation(s)	Venue(s) of Consultation	Participants	Number of Participants	Topics Discussed	Issues and Question raised by participants	Conclusion on issues and question raised
February 9, 2017	Day Care Center, Brgy. Tigunhao, Laua-an, Antique	60 female and 24 males were present (household)	84	1st KC NCDDP BA/ orientation on KC NCDDP and gathering of priority needs of the residents in the barangay	Council of the elder asked regarding the status of the land owner nga nagkuon dib ala kita mabudlayan sa tag iya kang lupa nga mag donar?	Bilang isara ka facilitator, gin hambalan sanda nga ipa kunsulta anay sa municipal assessor kag engineer kun bala ano ang status kang dalan kun bala existing, mas manami kanaton tungod kay certification lang kinahanglan kag cadastral map o naga kinahanglan bala kang donasyon sa tag iya. And I had explained to them that we can't donate unless the property is titled and others are considered might be extra judicial , tax declaration and owned by the Republic of the Philippines
February 13, 2017	Day Care Center, Brgy. Tigunao, Laua-an, Antique	31 female and 11 male were present (household)	42	2nd KC NCDDP Barangay Assembly, presentation of minutes of the meeting on first BA, review of the first BA's problems and needs, Agreements made on the priority needs during the participatory situational analysis. Presentation of details of community's final project proposal (to highlight also the ERS and women involvement in paid labor)	Mrs. Marsalina Labanon raised the question about the contribution of Iraynon Bukidnon in the implementation of sub project. And also, she raised the participation of women during the implementation nga dapat kami nga mga babae e abay man sa ubra.	Iraynon Bukidnon (IP) as one of the lenses in CEAC development, were always given due importance especially in Social Preparation and Project Development Stage. They will be involved all throughout the process until the implementation stage and will be given the opportunity to participate especially in paid labor (both men and women). Gin explekar man kanamda nga o kun Community ang ma ubra hindi ma pa disburse ang kwarta kon wan babae nga nag ubra. Pero kon contrata pwede man isturyahon ang contractor to make the arrangement regarding sa concern of paid labor kang mga kabalhan.
March 04, 2017	IP Chieftain Leo Labanon of Brgy. Tigunhao, Laua-an, Antique	4 chieftain elders and 30 members of the council of elders were presented.	34	Joint Special Session together with the council of elders "Konseho sang Kamal-aman of Iraynon Bukidnon" of 4 Joint Barangay.	Jerry Puetas asked about whose will be the possible good contractors for 3rd cycle SP.	It was discussed to the participants during this consultation that after the approval of the proposal and when procurement activities came, we still have to undergo the procurement process and by this we are not certain yet which contractor will implement the sub-project. It was explained further that in order to mitigate the negative implementation experiences from the p so they should be careful in selecting the prospect supplier or contractor.

Prepared by:

PEARLY S. MAGBATO
Community Empowerment Facilitator
Date: 3-14-17

Reviewed by:

ADERIANO F. ETO JR.
Municipal Area coordinator
Date: 3-17-17

FRANCIS AGUSTIN C. SONGCOG
Area Coordinator
Date: 3-17-17

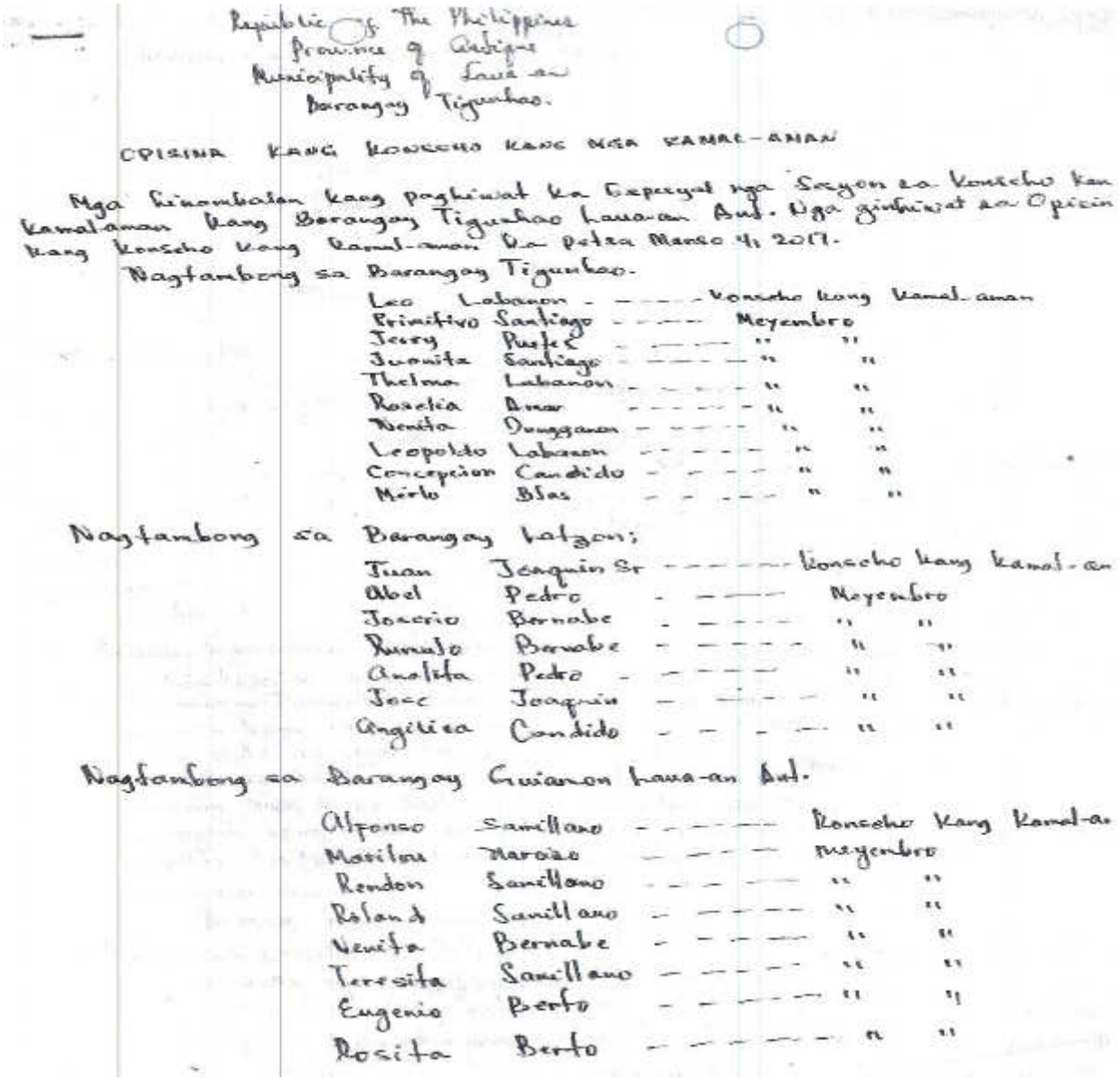
English Translation

Item 1- Conclusion on issues and questions raised

As a facilitator, they were advised to check with the Municipal Assessor's Office and Engineering's Office the status if it is an existing road. Should it be an existing road, we only need to provide certification and/or cadastral map. Otherwise, the requirement will be deed of donation from the owner.

Item 2- Conclusion on issues and questions raised

It was also explained to them that if the community will work, the fund will not be disbursed if there is no women's participation. But if it is contracted they will make arrangement with the contractor to include women in their workforce.



Republic of The Philippines
Province of Antique
Municipality of Laua-an
Barangay Tiguhao.

OPISINA KANG KONSEHO KANG MGA KAMAL-ANAN

Mga hinanbalan kang paghiwat ka Espesyal nga Sayon sa Konseho kan Kamalaman kang Barangay Tiguhao Laua-an Ant. Nga ginhiwat sa Opisin kang Konseho kang Kamal-anan ka Petsa Marso 4, 2017.

Nagtambong sa Barangay Tiguhao.

Leo	Labanon	Konseho kang Kamal-anan
Primitivo	Santiago	Meyembro
Jerry	Pastor	" "
Juanita	Santiago	" "
Thelma	Labanon	" "
Rosalia	Amar	" "
Benita	Dungganon	" "
Leopoldo	Labanon	" "
Concepcion	Candido	" "
Mirlo	Blas	" "

Nagtambong sa Barangay Katgon;

Juan	Joaquin Sr	Konseho kang Kamal-an
Abel	Pedro	Meyembro
Joserio	Bernabe	" "
Rumulo	Bernabe	" "
Analita	Pedro	" "
Jose	Joaquin	" "
Angelica	Candido	" "

Nagtambong sa Barangay Guiaanon Laua-an Ant.

Alfonso	Samillano	Konseho Kang Kamal-an
Marilou	Narciso	meyembro
Rendon	Samillano	" "
Roland	Samillano	" "
Venita	Bernabe	" "
Teresita	Samillano	" "
Eugenio	Berto	" "
Rosita	Berto	" "

Magtambong sa Barangay Sn Ramon.

Roman Samillano	Konseho kang Kanal-anan
Gregorio Fernin	Meyembro
Jovencio Nicor	" "
Domingo Nicor	" "
Luzana Samillano	" "
Hilario Ubaldo	" "
Menita Nicor	" "

Wara Magtambong: Wara

Resalusyon sa Pagpahanugot kang kalahi Cidss DSWD VI sa pag rehabilitate kag pag improbar kang karsada nga may Concreting Slope Protection kag Line Ditch.

Sa diin ang Republika Sector 8371, Kang tuig 1997 gintawag nga Indigenous Peoples Right Act nga naga kilala kang Panag-iya kang mga tumandok o Native nga mga-tawo sa ka lupaan nga Anda gin bariban. kultibar nga dakop ka ana Pangabuhi-an halin pa sa una nga mga kanal-anan asta kadya.

Sa diin ang tribu Iraynon Bukidnon kang Apat ka Barangays. Sn Ramon, Guiamon Latazon, kag Barangay Tiguinhao Lawa-an Antique.

Gin kilala kang Opisina kang National Commission for Indigenous People sa diin kilang Tumandok kag Pumuluyo kang banwa kang Lawa-an, Naga kinahanglan man kami kang kinahanglanon para mapanami ang anon Arayyan hak sa banwa asta sa Apat ka kabarangayan.

Sa diin kami nga Konseho kang kanal-anan. sa anon paghimuanon nakita ang prioridad nga kinahanglan nga dapat tugru-an ka Atensyon ang ikamayad kang tanan. sa diin anon nanan-an nga ang KALAHI CIDSS may Proyekto Imprastraktura nga gina Buligan kang Munisipyo Local k Banwang Lawa-an

Bilang ikasa kang Municipalidad nga may KALAHI CIDSS.

Kag Motion sa konseho si Roland Samillano kag ginsegundahan si Leo Labaro

Naman-an nga ang konseho kang kanal-anan kang Tribu Iraynon Bukidnon kang Apat ka kabarangayan Sn Ramon, Guiamo. Latazan Tiguinh Lawa-an Antique, Nagapanugot sa KALAHI CIDSS DSWD VI sa pagtindog nkon Nagrehabilitate kang karsada halin sa Barangay Tiguinhao Ant Barangay Sn Ramon.

Kanan-an pinal nga ang kapga kalya nga resolusyon nadug-ue ang Opicina kang KALAHI CIDSS DSWD II- Opisina kang Commission on Indigenous Peoples. Ilo-Ilo city kag ang Municipyo Local sa banwa ka Laua-an para sa andang dugang nga kaaram kag konsedinsyan.

Approbado:

Ako nagapamatuod nga insakto dya nga Resalusyon,

Leo C. Labanon
Tribal Leader Tiguhao

Juan Joquin
Tribal Leader - Latugon

Alfonso Camillano
Tribal Leader - Guiamon

Roman Camillano
Tribal Leader - San Ramon

English Translation

Office of the Council of Elders

Agreements made during the Special Session of the Council of Elders of Barangay Tigunhao, Laua-an, Antique held at the Office of the Council of Elders last March 4, 2017.

"Resolution allowing for the rehabilitation and concreting of road with slope protection and line ditch through Kalahi CIDSS NCDDP DSWD Field Office VI."

Whereas, Republic Act 8371 also known as Indigenous Peoples Rights Act (IPRA), passed a law in the year 1997. IPRA recognizes and protect the rights of an IP over its ancestral domain, which was cultivated and developed by our elders since then;

Whereas, there are four IP barangays in Laua-an recognized by the National Commission on Indigenous Peoples namely barangay San Ramon, GUiamon, Tigunhao and Latazon where Panay Bukidnon as an ethnic group;

Whereas, as native and residents of the Municipality of Laua-an, we have the need to improve our access road from the town proper going to the four barangays;

Whereas, based on our consultations among the council of elders, we have seen the priority need that needs to be addressed by the Agency for the welfare of the whole community. We have learned that Kalahi CIDSS can be a medium to address our concern with full support of the Municipality of Laua-an;

Whereas, as one municipality with Kalahi CIDSS, Roland Samillano motioned the that, the council of elders of Iraynon Bukidnon from the four barangays have understood the process and allow the rehabilitation of the road thru concreting from Brgy tigunhao to Brgy. San Ramon. The motion was seconded by Leo Labano;

Whereas, let the copy of this resolution be given to the office of Kalahi CIDSS DSWD Region 6 and the office of NCIP in Iloilo City and the Municipality of Laua-an for their information and consideration.

APPROVED:

I have attested the correctness of this resolution.

C. Photographs

Photos Taken Before the Implementation

@ Station 1+700m **@ Station 1+986.50 – 2+030.50m**

Photos Taken During the Construction

Tree planting activity (July 30, 2018)

X. ANNEXES

A. Initial Environmental Examination (IEE) Checklist

Initial Environmental Examination (IEE) Checklist Report Form for Road and Bridge Projects

ROAD AND BRIDGE PROJECTS

II. ENVIRONMENTAL IMPACT MANAGEMENT AND MONITORING PLAN

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation	Remarks
LAND				
☑ Consistency with land use	Current land use w/in 1km radius (as per zoning ordinance): ☑ Residential ☐ Commercial/ Institutional ☐ Industrial ☑ Agricultural/ Recreational ☐ Protected Areas ☐ Others, specify Actual land uses w/in 1km radius: ☑ Residential ☐ Commercial/ Institutional ☐ Industrial ☑ Agricultural/ Recreational ☐ Protected Areas ☐ Others, specify	☑ See attached proof of compatibility with land use ☐ Others, specify	Actual land uses w/in 1km radius: ☑ Residential ☐ Commercial/ Institutional ☐ Industrial ☑ Agricultural/ Recreational ☐ Protected Areas ☐ Others, specify	

Project Name: _____ Page 1 of 11

Initial Environmental Examination (IEE) Checklist Report Form for Road and Bridge Projects

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation	Remarks
☐ Land tenure / compatibility issue	Identify tenure/ compatibility issues: ☐ CARP ☑ CADC/ CADT/ CALC/ CALT ☐ ROW ☐ Informal settlers ☐ Ecologically sensitive or protected area ☐ Others, specify	☐ Obtain the following clearances/ permits from concerned agencies: [illegible] PERMIT FROM NCIP ☐ Resettlement Plan prepared ☐ Provide relocation/disturbance compensation packages ☑ Ensure participation of IPs in consultations and dialogues ☐ MOA prepared/signed ☐ Provide adequate buffer ☐ Others, specify	☑ Regularly monitor presence/absence of complaints ☑ Regular coordination with LGU or appropriate agencies ☐ Others, specify	
☐ Disturbance to wildlife due to vegetation clearing	Existing vegetation in the area: ☑ Forestland ☐ Marshland ☐ Grassland ☐ Mangrove ☐ Wetland	☑ Comply with conditions of DENR/LGU SLUP, Tree Cutting Permit, ROW, PCA Permit ☑ Limit land clearing as much as possible ☑ Provide temporary fencing for vegetation that will be retained	☑ Annual inspection of area replanted/ re-vegetated ☐ Others, specify	

Project Name: _____ Page 2 of 11

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of prevent/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation	Remarks
	☐ Others, specify	☑ Promote restoration of damaged or destroyed vegetation where possible (e.g., tree planting) ☐ Others, specify		
☑ Change in surface landform/ topography/ terrain/slope ☑ Soil Erosion	Slope: ☐ Flat (0-3%) ☑ Gently sloping to rolling (3-18%) ☐ Steep (>18%) Is the project site located in an area identified by MGB/ PAG-ASA/ PHIVOLCS as hazard prone? ☑ Yes ☑ No	Considering the natural hazards and climate projections in the area: ☑ Employ erosion control and slope protection measures ☐ Designate a spoils storage area, with topsoil set aside for later use and allow maximum re-use of spoils ☐ Construct during dry season ☐ Stabilize embankment with grasses or other soil cover ☐ Conduct Engineering Geological and Geo-hazard Assessment (EGGA) and implement corresponding recommendation ☐ Others, specify	☑ Regular inspection of slope protection measures in erosion-prone areas ☑ Regular inspection for new eroded areas near the site ☐ Others, specify	

Project Name: _____ Page 3 of 11

Initial Environmental Examination (IEE) Checklist Report Form for Road and Bridge Projects

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of prevent/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation	Remarks
Building of structure and improper solid waste disposal leading to: ☐ Impairment of visual aesthetics ☑ Devaluation of land values	Solid Waste Management Scheme in the area: ☐ SLF ☐ MRF ☑ Composting ☑ Regular Collection of Solid Wastes Presence of visually significant landforms/landscape/structures? ☐ Yes ☑ No	☑ Implement recovery re-use and recycling of waste materials ☑ Provide receptacles / bins for solid wastes ☐ Composting of Organic Wastes ☑ Coordinate with the municipal / city waste collectors ☐ Implement landscaping and other beautification measures ☐ Provide adequate buffer ☐ Compensate adjacent property owners ☐ Others, specify	☑ Daily inspection of waste handling including segregation in waste/recycling bins ☑ Weekly inspection of waste accumulation and disposal ☐ Regular inspection of landscaping and other beautification activities ☐ Regular monitoring of buffer zones ☐ Regular monitoring for presence/absence of complaints from adjacent property owners ☐ Others, specify	☑ Cost integrated in the construction/ operation cost
WATER				
☑ Increased siltation due to project activities ☐ Water quality degradation ☐ Others, specify	Specify nearest water body: Distance to nearest water body: ☑ 0 to less than 0.5 km	☑ Set up proper and adequate sanitary facilities ☑ Ensure strict observance of proper waste handling and disposal and proper sanitation including by the contractor and its workers ☐ Set up silt trap (Gabions,	Regular (ocular) inspection of: ☑ Drainage / canal systems ☐ Sanitation facilities Monitoring of ambient water during construction for: ☑ Turbidity and/or silted condition ☑ Floating wastes or debris	

Project Name: _____ Page 4 of 11

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation	Remarks
	☑ 0.5 to 1 km ☐ More than 1 km Classification of nearest water body: ☐ Freshwater ☐ Marine/ coastal water ☐ AA ☐ SA ☐ A ☐ SB ☐ B ☐ SC ☑ C ☐ SD ☐ D Current use of nearest/receiving water body: ☑ Fishery ☐ Tourist Zone / Park ☐ Recreational ☐ Industrial ☑ Agricultural ☐ Others, specify: Distance of project area to the nearest well used: ☑ 0 to less than 0.5 km	Fascines)/setting ponds to minimize downstream siltation ☐ Others, specify		

Project Name: _____

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation	Remarks
	☑ 0.5 to 1 km ☐ More than 1 km Use of nearest well: ☑ Drinking/Domestic ☐ Industrial ☑ Agricultural			
☑ Competition in water use ☐ Depletion of water resources	Size of population using water source: ☑ ≤ 1,000 persons ☐ >1,000 and ≤ 5,000 persons ☐ >5,000 persons Available/nearest water source: ☑ Deep well ☑ Water district/LGU ☐ Surface water ☐ Others, specify Current Use of water source : ☑ Fishery ☐ Tourist Zone / Park ☐ Recreational ☐ Industrial ☑ Agricultural ☐ Others, specify	☑ Implement rainwater harvesting and similar measures as an alternative source of water ☑ Observe water conservation measures ☐ Others, specify	☑ Regular monitoring for presence/absence of complaints ☑ Regular coordination with concerned agencies ☑ Regular monitoring for occurrences of water shortage ☐ Others specify	

Project Name: _____

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures	Monitoring Parameters/ Implementation	Remarks
		☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
☑ Increased occurrence of flooding	Is the project site located in an area identified by MGB/ PAG-ASA as flood prone? ☐ Yes ☑ No	☑ Use appropriate design for project facilities including appropriate drainage mechanism considering the existing local drainage system. ☑ Regularly remove debris and other materials that may obstruct water flow ☐ Others, specify	☑ Regular monitoring for presence/absence of complaints ☑ Regular coordination with concerned agencies ☑ Regular monitoring for increased frequency of flooding ☐ Others, specify	
AIR / NOISE				
Air quality degradation	Distance to nearest community: ☐ 0 to less than 0.5 km ☐ 0.5 to 1 km ☑ More than 1 km	☐ Properly operate and maintain all emission sources (e.g. vehicles, generator, etc) ☐ Install appropriate air pollution control device/s ☑ Strictly enforce good housekeeping practices ☑ Control vehicle speed to lessen	☑ Regular monitoring for presence/absence of complaints Regular (ocular) inspection of: ☐ Absence of white or black smoke from vehicles, generator, etc.	

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures	Monitoring Parameters/ Implementation	Remarks
		☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
		suspension of road dust ☐ Conduct water spraying to suppress dust sources and minimize discomfort to nearby residents ☑ Use covered vehicles to deliver materials that may generate dust ☐ Others, specify	☑ Presence of truck cover during deliveries	
☑ Nuisance due to noise generation	Distance to nearest community: ☐ 0 to less than 0.5 km ☐ 0.5 to 1 km ☑ More than 1 km	☑ Properly operate and maintain all noise sources (e.g., vehicles, generator, etc.) ☑ Install, when applicable, the appropriate noise control device/s (e.g., mufflers, silencer, sound barriers, etc.) ☐ Implement appropriate operating hours ☑ Provide adequate buffer and/or planting of trees ☐ Others, specify	☑ Regular monitoring for presence/absence of complaints ☐ Regular monitoring of buffer zones ☑ Quarterly monitoring of noise level ☐ Others, specify	

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation	Remarks
PEOPLE				
☐ Displacement of residents including indigenous people (if any) in the project site and within its vicinity ☑ Enhanced employment and/or livelihood opportunities ☐ Reduced employment and/or livelihood opportunities ☑ Increased revenues for LGU ☐ Disruption/ Competition in delivery of public services (e.g., education, peace and order, etc.) ☑ Enhanced delivery of public services (e.g., education, peace and order, etc.) ☐ Increase in traffic volume and worsening of traffic flow	Size of population of host barangay: ☑ ≤ 1,000 persons ☐ >1,000 and ≤ 5,000 persons ☐ >5,000 persons Classification of host barangay: ☐ Urban ☑ Rural Employment/Livelihood Opportunity Rate in the host Municipality: ☐ High ☑ Low Description: Available services within/near the host barangay: ☑ Schools (e.g., elementary, high school, college)	☐ Provide relocation/disturbance compensation packages ☑ Prioritize local residents for employment ☑ Promptly pay local taxes and other financial obligations ☑ Regularly coordinate with LGU ☐ Conduct prior consultation and coordination to minimize disruption of daily domestic activities ☐ Ensure participation of IPs in consultations and dialogues and consider IP rights and cultural practices in the provision of relocation/disturbance compensation packages ☐ Provide appropriate traffic/warning signs, lighting, etc. ☐ Others, specify	☑ Regular monitoring for presence/absence of complaints ☑ Regular coordination with LGU ☐ Others, specify	☑ Cost integrated in the construction/ operation cost

Project Name: _____

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation	Remarks
	☐ Health facilities (e.g., clinics, hospitals, etc.) ☐ Peace and order (e.g., police outpost, Brgy. Tanod, etc.) ☐ Recreation and sports facilities ☐ Others, specify			
☑ Destruction/disturbance of physical cultural resources. (✓ if project site has been identified to have such by NM, NHCP, NCAA and LGUs)	Physical Cultural resources within the vicinity of the project site:	☐ Implement appropriate protocols based on NM, NHCP, NCAA and LGU guidelines including those for chance finds (if any). Specify:	☑ Regular coordination with NM, NHCP, NCAA and LGU	
☑ Impacts on community safety	☑ Structures posing safety risk to the community:	☑ Regularly coordinate with LGU ☐ Provide appropriate warning signs, lighting and barricades, whenever practicable ☑ Observe proper housekeeping ☐ Provide on-site medical services for any emergency. ☐ Participate in public awareness programs on health and safety	☑ Regular monitoring for presence/absence of complaints ☑ Regular coordination with LGU ☑ Regular submission of reports to concerned agency	

Project Name: _____

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation	Remarks
		☑ Implement appropriate safety programs for both community and workers ☐ Others, specify	☐ Others, specify	

B. Environmental Compliance Certificate (ECC)

Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
3/F Pacita Salazar Bldg., El 98 St., Jaro, Iloilo City
Telephone No.(033) 309-1135 Fax No.(033) 509-9133
emb6@yahoo.com
Visit us at http://www.emb.gov.ph/portal/r06

March 16, 2018

ECC-OL-R06-2018-0101

CAPT. FRANCISCO BALADJAY, JR.
Municipal Mayor
Local Government Unit of Laua-an, Antique
Poblacion, Laua-an,Antique

Subject: **ENVIRONMENTAL COMPLIANCE CERTIFICATE**

Dear Sir:

This refers to the Environmental Compliance Certificate (ECC) application for the proposed **Improvement of 2.500 km. Road with PCCP of 5m wide and 200mm thick with 0.5m wide shouldering on both sides with 2,955 lm canal 30lm RCPC and 81lm (190.74cu.m) Slope protection (Grouted Riprap)Project** to be located at **Barangays Tigunhao to Lataxon, Laua-an, Antique.**

After satisfying the requirements of the said application, this Bureau has decided to grant an ECC for the above-mentioned project.

With the issuance of this ECC, you are expected to implement the measures presented in the Initial Environmental Examination Checklist (IEEC), intended to protect and mitigate the project's adverse impacts on community health, welfare and the environment. Environmental considerations shall be incorporated in all phases and aspects of the project.

This Certificate does not create any right nor be used as an authorization to implement the project, you may proceed with the implementation only after securing all the necessary and relevant permits from other pertinent Government Agencies. This Office shall be monitoring the project periodically to ensure strict compliance with the stipulations cited in the attached ECC.

Please be guided accordingly.

DR. SOPHIE T. MANUEL, CESO V
Regional Director

Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
2/F PenAsia Salazar Bldg., El 98 St., Jaro, Iloilo City
Telephone No.(033) 320-1135 Fax No.(033) 509-9133
emb6@yahoo.com
Visit us at http://www.emb.gov.ph/portal/r06/

ENVIRONMENTAL COMPLIANCE CERTIFICATE
(Issued under Presidential Decree 1586)
ECC-OL-R06-2018-0101

THIS IS TO CERTIFY THAT THE PROPONENT, **LOCAL GOVERNMENT UNIT OF LAUA-AN, ANTIQUE**, represented by its Municipal Mayor, **Capt. Francisco Baladjay, Jr.**, is granted this Environmental Compliance Certificate (ECC), for the proposed **Improvement of 2.500 km. Road with PCCP of 5m wide and 200mm thick with 0.5m wide shouldering on both sides with 2,955lm canal 30lm RCPC and 81lm (190.74cu.m) Slope protection (Grouted Riprap) Project** located at **Barangays Tigunhao to Latazon, Laua-an, Antique.**, by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB).

SUBJECT ONLY to the conditions and restrictions set in this ECC and in the attached document labelled as Annexes A and B.

This Certificate is issued with the following details:

PROJECT DESCRIPTION

The ECC covers the proposed Improvement/Concreting of Two point Five (2.500) kilometers Farm to Market Road with PCCP of five (5) meters wide and 200mm thick with 0.5muide shouldering on both sides with 2,955 lm canal 30lm RCPC and 81lm (190.74cu.m) Slope protection (Grouted Riprap) Projectlocated atBarangays Tigunhao to Latazon, Laua-an, Antique Province, Region R06. Portions of the applied area are geographically located at ***11°08'35.7", 11°08'49.88", 11°09'17.71" North Latitude*** *and* ***122°04'53.38", 121°05'20.38", 121°05'40.19"East Longitude.***

This Certificate is issued in compliance with the requirements of Presidential Decree No. 1586, and in accordance to DENR Administrative Order (D.A.O.) No. 2003-30. Non-compliance with any of the provisions of this Certificate shall be a sufficient cause for the cancellation of this Certificate and/or imposition of a fine in an amount not to exceed Fifty Thousand Pesos (P50, 000.00) for every violation thereof without prejudice to imposition of fines and penalties under other environmental laws. The EMB, however, is not precluded from reevaluating and correcting any deficiencies or errors that may be found after issuance of this Certificate.

Issued at EMB-R06, 2/F Pacita Salazar Bldg., El 98 St., Jaro, Iloilo City this March 16, 2018.

Recommending Approval:

ENGR. VIRGILIO F. FABRONERO
Chief, Clearance & Permitting Division

Approved:

DR.SOPHIE T. MANUEL, CESO V
Regional Director

SWORN ACCOUNTABILITY STATEMENT

I, **Capt. Francisco Baladjay, Jr.**, Municipal Mayor and representing **Local Government Unit of Laua-an, Antique** with office address located in Poblacion, Laua-an, Antique takes full responsibility in complying with all conditions in this Environmental Compliance Certificate (ECC).

Capt. Francisco Baladjay, Jr.
Signature

TIN No. 102-704-263-000

Subscribed and sworn before me this MAY 04 2018, the above-named affiant taking oath presenting _____, issued on _____ at _____.

ATTY. ARTHUR M. CUEVAS, JR.
Notary Public

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Page No. 44
Book No. CCCLXXIII
Series of 2018

Environmental Compliance Certificate
Improvement of 2.500 km road with PCCP of 5m wide and 200mm thick with 0.5m wide shouldering on both sides with 2,955lm canal 30lm RCPC and 81lm (190.74cu.m) Slope protection (Grouted Riprap)
Brgy. Tigunhao, Laua-an, Antique Laua-an, Antique
Local Government Unit of Laua-an, Antique

Annex A

I. CONDITIONS

ENVIRONMENTAL MANAGEMENT

All commitments, mitigating measures and monitoring requirements, contained in the Initial Environmental Examination Checklist Report for the proposed **Improvement of 2.500 km road with PCCP of 5m wide and 200mm thick with 0.5m wide shouldering on both sides with 2,955lm canal 30lm RCPC and 81lm (190.74cu.m) Slope protection (Grouted Riprap)Project**, particularly in the Environmental Management Plan/ Environmental Monitoring Plan, including any modifications and/or additional information as approved by the EMB, shall be instituted to minimize any adverse impact of the project to the environment throughout its implementation, which shall include among others to wit:

1. Proponent and contractor shall adopt the suitable construction method that will minimize odor, dust, fumes, noise and vibrations and shall comply with the provisions in the Clean Air Act. This include but not limited to the regular spraying of the construction site and proper scheduling of the operation of earthmoving equipment. Adequate warning signs, lighting and barricades whenever practicable shall also be provided. Likewise, used oils from heavy equipment shall be properly stored, handled and disposed as mandated under the provisions of R.A. 6969 otherwise known as "The Toxic and Hazardous and Nuclear Waste Control Act";

2. Excavated materials shall be properly stockpiled and properly disposed or reused. Excess soil materials shall not be deposited along areas traversed by run off and away from waterways and valuable crops;

3. Temporary silt traps/ponds shall be set-up along the adjacent areas and nearby water body to prevent siltation. Moreover, spoils shall be stockpiled on flat areas away from working area;

4. No cutting of trees specially banned species shall be done along the route without proper clearance from authorities and be subjected to Forestry laws, rules and regulations. Permit to Cut from Forest Management Services (FMS) shall be secured prior to cutting of trees. Burning of waste generated from land clearing such as leaves and branches shall be strictly prohibited;

5. Affected residents/properties shall be properly relocated and be given necessary assistance (but not limited only to financial assistance). Properties (including cutting of trees) affected by the project shall be justly compensated;

6. Proponent shall be held responsible to any damages caused by the project implementation, such as damage to crops, plants and trees. Damages shall be properly determined and timely compensated;

7. Tree planting of at least **200 fruit or forest tree species**(preferably those endemic in the area) shall be conducted to any preferential area within the affected barangays or any applicable areas within the vicinity. Assessment of the condition of the planted trees/mangroves shall be done in order that trees lost or damaged or those which will show low probability of survival will be replaced;

GENERAL CONDITIONS

8. Segregation, recycling, re-use and composting and proper disposal of solid wastes generated during construction and operation shall be in accordance with the provision of the Ecological Solid Waste Management under R.A. 9003 and its Implementing Rules and Regulations;

9. The proponent shall set-up an Environmental Unit (EU) or assign a Pollution Control Officer (PCO) who shall handle the environmental aspects of the project, which shall have the following responsibilities:

   a. Monitoring requirements as defined under the EMP, Monitor actual project impact vis-à-vis predicted impacts and management measures in the EMP;
   b. Make recommendations for the revision of the EMP as necessary;
   c. Ensure that post-assessment permits are in place;
   d. Ensure compliance to all the conditions and restrictions of the approved ECC and Ensure that monitoring and reporting are undertaken;
   e. Submit environmental monitoring reports on semi-annual basis using the **ECCCompliance Monitoring Report (CMR), Module No. 05 of the SMR**;
   f. Ensure that all relevant conditions of this Certificate and the EMPs shall be properly complied with by its commissioned contractors and shall be included in the Terms of Reference (TOR) of the contractors.

10. A 2' x 4' billboard containing this message: **"Notice to the Public, This project (title of the project) of (Name of the proponent) has been issued an Environmental Compliance Certificate (ECC Number) by the Environmental Management Bureau of the Department of Environment and Natural Resources, Region 6, on (date)."** This message must be installed at all entry and exit points and at all perimeters of the project facing the road to inform the general public within thirty (30) days from receipt of the certificate. A copy of the certificate shall also be posted by the Proponent at the barangay bulletin board of the affected barangays within thirty (30) days from receipt of the certificate. An accomplishment report which shall be include picture verification of compliance to the posting of notices and the billboards shall be submitted to this Office within ninety (90) days from receipt of the ECC;

11. Proponent shall allow entry of EMB-R6 Field Personnel, DENR CENRO, PENRO and EMB R6 Focal Persons, into the project site at all times to conduct tangible monitoring and to validate project's compliance to the ECC conditions and EMP mitigating measures stipulated therein and in case there is a need for additional conditions in this ECC, the same shall be imposed by this office upon inspection if found necessary;

II. RESTRICTIONS

1. No activities shall be undertaken other than what were stipulated in the IEEC. Should there be any expansion of the project beyond the project description or any change in the activity or transfer of location shall be subject to a new Environmental Impact Assessment;

2. The proponent shall direct the Contractor to secure a separate ECC for the batching plant in case it will be used as project component;

3. Any request/s for ECC amendments, except for change in ownerships and/or modification should be in accordance with Annex B of MC 2014-005;

4. In case of transfer of ownership of this project, these same conditions and restrictions shall apply and the transferee shall be required to notify the EMB Central Office within fifteen (15) days from the transfer of ownership to allow the necessary changes brought about by such transfer;

5. This Certificate shall be considered automatically revoked if the project has not commenced within the period of five (5) years from the issuance thereof or if the ECC was not requested for extension within three (3) months from the expiration of its validity provided that no significant changes in land and resources uses have occurred in the project area or its vicinities to the extent that the impact assessment as embodied in the Environmental Management Plan (EMP) is no longer appropriate.

Annex B

PROJECT ASSESSMENT PLANNING TOOL

For the assistance of the Proponent and the Government agencies concerned in the management of the Project and for better coordination in mitigation of the impacts of the Project on its surrounding areas and the environment, and by way of recommendation, forwarding these recommendations to the parties and authorities concerned for appropriate action.

	OTHER REGULATORY REQUIREMENTS/CONDITIONS	CONCERNED GOVERNMENT AGENCIES/ ENTITIES
1	Consider Project's proper storm drainage canal, concrete culverts and other flood control measures needs to be provided to adequately receive and channel the run-off of silt-laden rain water to the nearby receiving body of water;	Municipality concerned
2	Consider Project's construction shall conform to the existing rules and regulations of the National Building Code of the Philippines. Plans and design specifications shall be approved by the concerned Municipal Engineer prior to the project construction. All other plans and design specifications of facilities and amenities shall strictly conform to all applicable standards, rules and regulations and other standards, rules and regulations applicable to this kind of undertaking;	Municipality concerned
3	Consider Project's easement shall be provided from the river bank in case processing facilities or plant shall be installed along the periphery of the river with the following measurement; a. Urban Areas - 3 meters b. Agricultural Areas - 20 meters	DENR-FMS/ DPWH

	c. Forest Areas - 40 meters	
4	Consider Project's traffic management in the area affected in anticipation of the growth of traffic caused by the project; Observance of traffic rules and regulation including observance of load limit	LTO/ Municipality concerned

	OTHER REGULATORY REQUIREMENTS/CONDITIONS	CONCERNED GOVERNMENT AGENCIES/ ENTITIES
5	Consider Project's need for the provision of a segregation, collection, recycling, and disposal mechanism for solid waste;	Municipality concerned
6	Consider Project's preference to local populace for employment provided that they met the required skill requirements. Laborers/workers shall be provided with safely paraphernalia such as mask, boots, etc. and in case of accident proper compensation shall be given to the affected parties;	DOLE
7	Consider Project's construction materials particularly sand and gravel (SAG) and other quarry materials shall be sourced only from legitimate operators, if sourced from a River, quarry permits shall be secured and an ECC if it warrants, including those of its construction support facilities such as crushing and batching plants (if there is any);	ENRO-Province of Antique
8	Consider Project's regulation on occupational health and safety standards shall be complied with;	DOLE/ Municipality concerned
9	Consider Project's temporary sanitary toilet facilities should be provided to the constructions workers and any waste should be properly disposed so as not to cause nuisance to the immediate environment;	DOLE/DOH
10	Consider Project's compliance to the DENR no tree cutting policy and requiring the planting of trees in certain places and penalizing unauthorized cutting, destruction, damaging and injuring of trees, plants and vegetation of any kind including mangroves as per P.D. 953. Permit to Cut shall be secured prior to cutting of trees in the area;	DENR-FMS

ENVIRONMENTAL PLANNING RECOMMENDATIONS FOR THE PROPONENT

The following are the recommendations for the Proponent for the protection of the project area and the affected environment. It is strongly recommended that the same be strictly complied by the proponent.

1. **Permits from other government agencies shall be secured prior to project implementation;**
2. **Close monitoring of the project should be undertaken by the proponent to maintain a high level of safety and efficiency at all stages of project's implementation and to immediately address any environmental hazard/change that may take place;**
3. **Management and Contingency Plan of the project for Road and Facility Spillage shall be in place and periodic seminars/drills among workers shall be undertaken;**
4. **Schedule noisy activities during daytime;**
5. **Make use of energy saving devices;**
6. **Donate collectible recyclables to the LGU;**
7. **Implementation of good housekeeping rules and regulations;**
8. **First aid facilities and services for workers must be available on-site;**
9. **Proponent shall provide copy of this approved ECC to the concerned government agencies as listed in the Project Assessment Planning Tool.**

ENGR. VIRGILIO F. FABRONERO
Chief, Clearance & Permitting Division

Environmental Compliance Certificate
Improvement of 2.500 km road with PCCP of 5m wide and 200mm thick with 0.5m wide shouldering on both sides with 2,955lm canal 30lm RCPC and 81lm (190.74cu.m) Slope protection (Grouted Riprap)
Brgy. Tigunhao. Laua-an, Antique Lawa-an, Antique
Local Government Unit of Laua-an, Antique

C. Environmental and Social Safeguard Checklist (ESSC)

Environmental and social safeguard checklist

Name of Sub-Project: ***Establishing a danger free and convenient access through community managed concreting of road with slope protection and line ditch.***

Location: Barangay Tigungao, Latazon, Gulamon to San Ramon, Laua-an Antique

Community Representative and Address:

RPMO Representative and Address:

I. Subproject screening:
   a. Has the sub-project been screened against the list of ineligible activities (negative list)? If yes, proceed. If no, contact ACT/MCT to conduct screening.

II. Site Selection:
   a. When considering the location of a subproject, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher rating do not necessarily mean that a site is unsuitable. They do indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/ or social planning may be required to adequately avoid, mitigate or managed potential effects.

Issues	Site Sensitivity			rating
	Low	Medium	High	
Natural Habitats	No natural habitats present of any kind	No critical natural habitats, other natural habitats occur	Critical natural habitats present. Within declared protected areas.	low
Water quality and water resource availability and use	Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues.	Medium intensity of water use; multiple water users; water quality issues are important.	Intensive water use multiple water users; potential for conflicts is high; water quality issues are important	low
Natural hazards vulnerability, floods, soil stability / erosion	Flat terrain; no potential stability/ erosion problems; no known volcanic / seismic/ flood risk	Medium slopes; some erosion potential; medium risk from volcanic/ seismic flood/ typhoons.	Mountainous terrain steep slopes; unstable soils; high erosion potential; volcanic seismic or flood risk.	Medium
Physical Cultural property	No known or suspected physical cultural heritage sites	Suspected cultural heritage sites; known heritage sites in broader area of influence	Known heritage sites in subproject area	low
Involuntary Resettlement	Low population density; dispersed population; legal tenure is well defined	Medium population density; mixed ownership and land tenure	High population density; major towns and villages; low income families and/or illegal ownership of land; communal properties	low
Indigenous peoples	No indigenous population	Dispersed and mixed indigenous populations; highly acculturated	Indigenous territories (CADT), reserves and/ or lands	Medium

III. Areas for potential environmental and social impact

		yes	No
A.	Environment – Will the Subproject		
1.	Risk the contamination of drinking water.		✓
2.	Cause poor water drainage and increase the risk of water related diseases such as malaria, dengue and schistosomiais.		✓
3.	Harvest or exploit a significant amount of natural resources such as trees wood for fuel or water?		✓
4.	Be located within or nearby environmentally sensitive areas, protected areas (e.g. intact natural forest, mangroves, wetland or threatened species?)		✓
5.	Create a risk of increased soil degradation or erosion?		✓
6.	Create a risk of increasing soil salinity?	✓	
7.	Produce, or increase the production of solid wastes? (e.g. water, medical/ healthcare, domestic or construction wastes?)		✓
8.	Affect the quality or quality surface waters (e.g. rivers, streams, wetlands), or groundwater(e.g. wells)		✓
9.	Result in the production of solid or liquid waste, or result in an increase in waste production, during construction or operation?		✓
If the answer to any question from 1-9 " yes", please include an Environmental and Social Management Plan (ESMP) with the subproject application			
B.	Land acquisition and access to resources – will the subproject:		
10.	Required that land (public or private) be acquired (temporarily or permanently) for its development?		✓
11.	Use land that is currently occupied or regularly used for productive purposes. (e.g. gardening, farming, pasture, fishing , forests)		✓
12.	Displace individuals, families, businesses?		✓
13.	Result in the temporary or permanent loss of crops, fruits trees or household infrastructure such as crop storage facilities, outside and kitchens		✓
14.	Result in the involuntary restriction of access by people to legally designated parks and protected areas?		✓
If the answer to any the question 10-14 "yes ", please inform the RPMO and prepare appropriate documents required under the LARR framework (see Annex G).			
C.	Indigenous People – Are there:		
15.	Any indigenous groups living within the boundaries of the barangay where the subproject will be located?		✓
16.	Resources (land,water,etc.) to be used for the subject, over which the indigenous people have prior claim?		✓
17.	Members of these indigenous groups who would be affected (ie. Benefit from, or be adversely affected) by the subproject)		✓
			✓
18.	Will the subproject increase agricultural productivity? This may happen when the subproject is an irrigation or water impounding activity		✓
If the answers to the question 18 is " yes" please inform the RPMO and coordinate with the Municipal Agricultural officer of the LGU. Integrated pest Management techniques should be promoted among the beneficiaries.			

CERTIFICATION

We certify that we have thoroughly examined all the potential adverse effects of this subproject. To the best of our knowledge, the subproject plan as described in the application and associated planning reports (e.g. ESMP, RAP, IPP), if any will be adequate to avoid or minimize all adverse environmental and social impacts.

Community Representative (signature) MARCELINA L. LAPARIGO

PMO team representative (signature) PERRY M. IMGBONG

4-3-17

Environmental and social safeguard checklist

Name of Sub-Project: ***"Establishing A Danger Free and Convenient Access Through Community Managed Concreting of Road with Slope Protection and Line Ditch."***

Location: Barangay Latazon, Laua-an Antique

Community Representative and Address:
RPMO Representative and Address:

I. Subproject screening:
   a. Has the sub-project been screened against the list of ineligible activities (negative list)? *If yes, proceed. If no, contact ACT/MCT to conduct screening.*

II. Site Selection:
   a. When considering the location of a subproject, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher rating do not necessarily mean that a site is unsuitable. They do indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/ or social planning may be required to adequately avoid, mitigate or managed potential effects.

Issues	Site Sensitivity			rating
	Low	Medium	High	
Natural Habitats	No natural habitats present of any kind	No critical natural habitats; other natural habitats occur	Critical natural habitats present. Within declared protected areas.	low
Water quality and water resource availability and use	Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues.	Medium intensity of water use; multiple water users; water quality issues are important.	Intensive water use multiple water users; potential for conflicts is high; water quality issues are important	low
Natural hazards vulnerability, floods, soil stability / erosion	Flat terrain; no potential stability/ erosion problems; no known volcanic / seismic/ flood risk	Medium slopes; some erosion potential; medium risk from volcanic/ seismic flood/ typhoons.	Mountainous terrain steep slopes; unstable soils; high erosion potential; volcanic seismic or flood risk.	Medium
Physical Cultural property	No known or suspected physical cultural heritage sites	Suspected cultural heritage sites; known heritage sites in broader area of influence	Known heritage sites in subproject area	low
Involuntary Resettlement	Low population density; dispersed population; legal tenure is well defined	Medium population density; mixed ownership and land tenure	High population density; major towns and villages; low income families and/or illegal ownership of land; communal properties	low
Indigenous peoples	No indigenous population	Dispersed and mixed indigenous populations; highly acculturated indigenous populations	Indigenous territories (CADT), reserves and/ or lands vulnerable indigenous populations.	Medium

III. Areas for potential environmental and social impact

		Yes	No
	A. Environment – Will the Subproject		
1.	Risk the contamination of drinking water.		✓
2.	Cause poor water drainage and increase the risk of water related diseases such as malaria, dengue and schistosomiasis.		✓
3.	Harvest or exploit a significant amount of natural resources such as trees wood for fuel or water?		✓
4.	Be located within or nearby environmentally sensitive areas, protected areas (e.g. intact natural forest, mangroves, wetland or threatened species?)		✓
5.	Create a risk of increased soil degradation or erosion?		✓
6.	Create a risk of increasing soil salinity?	✓	
7.	Produce, or increase the production of solid wastes? (e.g. water, medical/ healthcare, domestic or construction wastes?)		✓
8.	Affect the quality or quality surface waters (e.g. rivers, streams, wetlands), or groundwater(e.g. wells)		✓
9.	Result in the production of solid or liquid waste, or result in an increase in waste production, during construction or operation?		✓
If the answer to any question from 1-9 " yes", please include an Environmental and Social Management Plan (ESMP) with the subproject application			
	B. Land acquisition and access to resources – will the subproject:		
10.	Required that land (public or private) be acquired (temporarily or permanently) for its development?		✓
11.	Use land that is currently occupied or regularly used for productive purposes. (e.g. gardening, farming, pasture, fishing , forests)		✓
12.	Displace individuals, families, businesses?		✓
13.	Result in the temporary or permanent loss of crops, fruits trees or household infrastructure such as crop storage facilities, outside and kitchens		✓
14.	Result in the involuntary restriction of access by people to legally designated parks and protected areas?		✓
If the answer to any the question 10-14 "yes ", please inform the RPMO and prepare appropriate documents required under the LARR framework (see Annex G).			
	C. Indigenous People – Are there:		
15.	Any indigenous groups living within the boundaries of the barangay where the subproject will be located?		✓
16.	Resources (land,water,etc.) to be used for the subject, over which the indigenous people have prior claim?		✓
17.	Members of these indigenous groups who would be affected (ie. Benefit from, or be adversely affected) by the subproject)		✓
18.	Will the subproject increase agricultural productivity? This may happen when the subproject is an irrigation or water impounding activity		✓
If the answers to the question 18 is "yes" please inform the RPMO and coordinate with the Municipal Agricultural officer of the LGU. Integrated pest Management techniques should be promoted among the beneficiaries.			

CERTIFICATION

We certify that we have thoroughly examined all the potential adverse effects of this subproject. To the best of our knowledge, the subproject plan as described in the application and associated planning reports (e.g. ESMP, RAP, IPP), if any will be adequate to avoid or minimize all adverse environmental and social impacts.

Community Representative (signature) JELYN T. JARILLA

PMO team representative (signature)_____

Date 9-3-17

D. Environmental and Social Management Plan (ESMP)

Environmental and Social Management Plan (ESMP) and Mitigating Measures
For Eligible Sub-projects under the KC-NCDDP

Name of Sub Project: **Establishing a Danger Free and Convenient Access through Community Managed Concreting of load with Slope Protection and Line Ditch.**
Joint Barangays: Tigunhao, Guiamon, Latazon and San Ramon, Laua-an, Antique

(Barangay Tigunhao, Municipality of Laua-an, Province of Antique, Region VI)

NOTE: Summary of consultations (signed by community empowerment facilitator) must be attached with the following information for each consultation: (i) date of consultation; (ii) venues of consultation; (iii) who are participants (for example: residents of the barangay, women, indigenous peoples, etc.), number of participants (number of women, number of men, number of members of ethnic minority/indigenous peoples); (iv) topic discussed; (v) issues and questions raised by participants; (vi) conclusions/issues and questions raised

Potential Impacts	Mitigation/ Enhancement Measures	Monitoring Parameter	*Responsible Entity*	*Implementation Schedule*	Cost and Source of Funds	Remarks
Phase 1: Planning, Development, and Pre-Implementation/Construction Phase						
1.1 In Compliance with: **Govt. Policies on a) Program policies on participation of women, and Gender and Development, and; b) GOP: RA 9172 Women in Development and Nation Building;**						
1.1.1 *Laban nga mga babahi ang naga participate sa actividades especially sa pag plano ukon pag patawag kang meeting ukon assemblaya. *Kulang ang mga partisipasyon kang mga lalaki kung oras kang pag plano ukon pag patawag kang meeting.	*Ma conduct kang gender sensitivity training para mapalin pan ang mga sector laki na gid sa mga kababayhan especially ang mga pantawid pamilyahan para maman-an ang importansya kang gender equality. *Tuguan kang importansya ukon E required gid nga 80% nga mga lalaki ang ma attend kang mga meeting ukon decision making tungod tanda ang may bahol nga contribution especially sa pag plano.	Barangay Assembly (Open Forum) Attendance Sheet Minutes of Meeting Household Participation Barangay Profile	GAD focal person of BLGU and LGU	*Prior to finalization of the sub-project deign and planning *Prior to project implementation and construction	BLGU counterpart (LCC in kind)	
1.2 In compliance with RA 8371 Indigenous Peoples Rights Act (IPRA) and NCIP AO No. 3 series 2012, and WB and ADB safeguards policies on Indigenous Peoples						
1.1.1						

Potential Impacts	Mitigation/ Enhancement Measures	Monitoring Parameter	Responsible Entity	*Implementation Schedule*	Cost and Source of Funds	Remarks
Laban nga mga trayron Bukidnon na mayha nga mag attend kag mag partisipar kang regular planning nga process kang KALAHI CIDSS: NCDDP tungod ang rason kulang ang andang kaaram	Prior sa Coordination kag consultasion sa mga trayron kag Bukidnon; Tuguan tanda kang kahigayonan kag importansya sa partisipar kang mga actibidades angot sa pormal nga edukasyon kag paghanas kang iban nga capability building activities. *sesplekar kag ipakita sa IP's community nga tanda my bahol nga katungdanan kag explain man nga bisan kulang anda nga kina aram piro tanda my ikasarang kag kinaiya nga kinaaram sa pag preparar kag anda mga documento para sa anda proyekto	Minutes of Meeting, Attendance sheet Photo documentation	Chieftain and council of the elders, BLGU, MLGU, NCIP KC staff kag community volunteers	During sub project conceptualization meeting will be encuidered by the BLGU as part of their LCC in kind	LCC in kind by the BLGU LCC in Kind	
1.3 In compliance with PD 1067 Water Code of the Philippines, regulations on easements, and guidelines on No build, No dwelling, and Multi-hazard risk areas.						
1.1.1 N/A	N/A	N/A	N/A	N/A		
1.4 In compliance with RA 8974 and RA 7279; EO 1035 Acquisition of Private Property, and latest issuances on WB and ADB safeguards Policies on involuntary resettlement						
1.1.1 a. existing na nga barangay road b. Delay ang issuance kang Certificate of Non Coverage. c. Delay of NCIP validation to IP community, Barangay Tigunhao, Latazon, Guiamon and San Ramon	*Secure ukon kuliktahon ang barangay resolution kag certification helin sa municipal assessor. *Secure the CNC prior to the SPI *Early validation of IP community prior to the SPI * ensure the list of requirements for issuing of Certificate of non-overlap prior to the preparation of RFR	* Deed of Donation, (Land Title, Tax Declaration, and Quit Claim if needed) *Certificate of Non Coverage (CNC) *Free Prior Inform Consent *approved certificate of non overlap	*BLGU *Community Volunteers especially BSPVC chairperson	*All activities to be implemented prior to construction	Contribution of the BLGU as pag process kang mga dokumento especially sa CNC kagban pa nga mga dokumento o pang notario	
1.5 In compliance with PD 1144 Fertilizer and Pesticides Act, and ADB and WB regulations on the use of pesticides.						
1.1.1 N/A	N/A					
1.6 In compliance with other relevant laws and regulations						
1.1.1 A. Ang tanan nga kinahanglanon nga mga dokumento parahas kang Brgy. Resolution, Assessor's certification, CNC kag NCIP validation na delay sa pag comply ukon pag	*Gina practice kang community ang proper kag legal nga pag secure kang mga dokumento. *Ang pag hayag kang mga dokumento nga	*Certifications and permits	*BLGU, Community Volunteers, Staff of KC-NCDDP	*All documents required prior to the implementation	MLGU and BLGU support/counterpart	

Potential Impacts	Mitigation/ Enhancement Measures	Monitoring Parameter	*Responsible Entity*	*Implementation* Schedule	Cost and Source of Funds	Remarks
process,	panaon nga nag ging matsas ang pag obwiko sa kada aktividades. *Ang LGU nag bulig sa comply kang mga na sari-sari nga mga dokumento (DOD, DXC)		to facilitate			
Phase 2: Implementation / Construction Phase						
2.1 Physical Environment						
2.1.1 Land a. Posible ang kondisyon kang lupa nga ta-o sang soil salinity kag naga lupro kang pag hubag kang lupa tungod kang formation kang land bukot nakabagay sa pag construct kang Farm to Market Road/FMR, b. Ang komunidad naga expectar nga malabo nga accidenti sa tion kang lig ururan tungod sa bukot parehas ang level kang lupa kung oras kang pag ubrahanay.	*Schedule the Construction works during the relatively drier months *In case of rain should construct temporary canals to prevent soil degradation. *Contractor's coordination to the barangay officials informing the community for the availability and the development of the sub. Project. *Mapadasig ang pag paubra kang FMR sa dale nga gina expectar ang physical accomplishment para malikawan ang aksidente kag ang oras nga ginagamit kang nga mangunguma nga nagadala kang andang mga produkto sa oras kang adlaw nga may tienda kag iba pa nga pangabuhi-an nga mapuslan.	*Presence of erosion control, slope stabilization and protection structures in the site. *Presence of barangay volunteers during implementation/constr uction that will supervise workers. *Provide warning device *Putting up of safety signs (eg. Slow down on going construction, and other warning device.) * Transparency of the sub-project billboard stating status of SP implementation.	*BLGU/Barangay volunteers shall plan what is necessary measures to prevent soil salinity within the site *make a contingency action plan in case of emergency. * Contractor *CEF *Barangay Officials *Community	*Prior to and after construction *Prior to finalization of the sub project design planning. *prior to project implementation and construction	*Realignment of the BLGU allocation kung kulangangmgam ateryales if necessarily *Barangay Counterpart *Kalahi fund *MLGU	
2.1.2 Water Quality/Hydrology a. Sa oras kang implementation stage, ang project naga kinahanglan kang rako nga amount kang tubig para sa paghalo kang mga semento sa lupa para maging macag on	*To conserve water put water reservoir to catch water from the rain that can be used in the project. *Observe proper solid waste management.	*Presence of Water reservoir *Presence of garbage.	*BLGU *MLGU *Foreman/labors and will be sassted by	*Daily operation	*No additional Cost	

Potential Impacts	Mitigation/ Enhancement Measures	Monitoring Parameter	*Responsible Entity*	*Implementation* Schedule	Cost and Source of Funds	Remarks
b. During rainy seasons the waste materials can cause siltation to water that flow to Cairawan River that is plenty Dalupingan Fish and other fresh water animals.	*Coordination and advice to Foreman/labors to observe proper solid waste materials		LGU's,TF,CEF			
2.1.3 Air Quality a. Presence of air pollutants/dust during excavation and hauling of cements and other construction material. b. Noise and smoke from the equipment can cause health hazard to the workers especially affects the atmosphere of community	*Make sure that the site where excavation will be done is wet. *Minimize falling of dust and other air pollutant. *Wear dust mask. *	*Presence of tarpaulin during the hauling of materials	*BLGU/Barangay volunteers to supervise and monitor during the operation	*Daily operation	*Fund is not necessary needed/practice proper hazard precaution	
2.2 Biological Environment						
2.2.1 Forest and plant life a. N/A						
2.2.2 Wildlife a. N/A						
2.2.3 Fisheries, Aquatic life a. N/A						
2.3 Social Environment						
2.3.1 Participation of women in paid labor and implementation management a. Kulang ang partisipasyon kang mga kababainhan specifically sa paid labor.	*Interested women to work in the construction will be trained to be equipped for the job. *No disbursement when no women are enlisted in ERS with 8:1 ratio or 10% women's participation on paid labor *Proper scheduling of work activities (scope for works) in order to cater women	*Employment record sheet and *Attendance sheet *Monitoring tools just like visiting and updating DTR	*BSPMC volunteers, particular to PIT and CEF also	*As much as possible should do monitor their participation	*KALAHI Fund *BLGU/MLGU counterpart	

Potential Impacts	Mitigation/ Enhancement Measures	Monitoring Parameter	Responsible Entity	Implementation Schedule	Cost and Source of Funds	Remarks
	participation in paid labor.					
2.3.2 Impacts on indigenous peoples (IP), including participation in paid labor and implementation/management of the sub-project, participatory monitoring						
a.Kulang ang partisipasyon kang insynan Bukidnon considering that they don't have enough knowledge when it comes to skilled works. b. 20% ka mga IPs nga kalalakihan kag may 10% sa mga kababaihan nga mag laborer sa kada kabarangayan ang mag partisiper sa oras kang implimentasyon.	*Conduct trainings and orientation antes ang implementasyon (e.g Demonstration proper ways to do even small works like mixing cement/correct cement mixure)	*Attendance sheets certificates *Photo document *ERS	*TF and CEF with the coordination of LGU (Mun. engineers)	*Prior to implementation/ Construction stage	No additional fund	
2.3.3 Safety in construction a. Delikado mag agisa Construction areas during the implementation stage.Dyamagatlugakangaccidentes amganagahasi-habalnganagaagisakarsadanga kung sadlin subject for Construction.	*Orient workers to use masks and protectors when working especially during excavation. *Signage (slow down on going construction and other warning signs.) * Procurement of protective gears	*Photo document *Workers using masks and protectors when working *Presence of signages and lighting and cautions.	*BLGU *Barangay Volunteers will assist and facilitate during the construction period. *Depend on the project design which included PPE *Contractor if local shopping for works	Daily operation	KALAHI Grant if not included the barangay will provide BLGU (LCC Inkind	
2.3.4 Resettlement Impacts during construction, including access restriction, temporary impacts on livelihood						
a. N/A						
2.4 Other Impacts						
a. NA						

Potential Impacts	Mitigation/ Enhancement Measure	Monitoring Parameter	Responsible Entity	Implementation Schedule	Cost and Source of Funds	Remarks
Phase 3: Operation and Maintenance Phase						
3.1 Physical Environment						
3.1.1 Land a. Pag panami kag pag pa pag-on kang lupa.	*hinggenyunon kag espliker nga kainagan gid kang community kag sa ibe pa nga mange binipiseryo nga halungan ang proyekto pamagsi sa pag tanom kang nga kahoy sa kilid kang mga kanal para nga maikawan ang mga pag hubag kag mangin mapusinon ang lupa.	* may presencia kang mga kahoy sa paibot *Barangay assembly	*Community as a whole	*Daily as per required	*BLGU O and M annual budget	
3.1.2 Water Quality/Hydrology a. N.A						
3.1.3 Air Quality a. N.A						
3.2 Biological Environment						
3.2.1 Forest and plant life a. N/A						
3.2.2 Wildlife a. N.A						
3.2.3 Fisheries, Aquatic life a. N.A						
3.3 Social Environment						
3.3.1 Participation of women in management of O&M A.Ang mga kababaihan wiling gid mag partisipar para sa O & M ilabi pa sa kon kainenglan na nga limpyohan ang aanda proyekto pagkatapos nga matum uver ang	Suitainaron kag padayunon ang partisipasyon kang mga kababaihan sa pamagsi kang paghiwat kang mga actividade para sa pagdumara sa anda nga proyekto	*Proof of coordination and participation of women. *Attendance sheets, minutes of meetings	BLGU together the BSPMC Committee and the community	*Inspection period or any time if the need arises.	*From their O and M saving account	

Potential Impacts	Mitigation/ Enhancement Measures	Monitoring Parameter	Responsible Entity	Implementation Schedule	Cost and Source of Funds	Remarks
ania proyekto.		*Inventory of roles and tasks assumed by women.				
3.3.2 IP participation in O&M a.Kulang eng partisipasyon kang inaynon Bukidnon tungod kulang eng anciang kinaasam parti sa Operation and Maintenance.	*Discuss ang O and M plans property and ie: the O and M committee para maintindihan eng importansya sa pag maintain kang sub-project para sa sustainability.	*O and M Plan *Attendance sheet	*O and M group and association *LGU assisted by CEF	*Regular Operations	*No additional cost *Community will render voluntary services	
3.3.3 Participation of Households affected by involuntary resettlement in O&M a. N.A						
3.3.4 Access and/or use restriction a. N.A						
3.3.5 Induced activities with negative cumulative effects a. N.A						
3.4 Other impacts						
a. Accessibility of transporting of any agricultural products going to the public market is continued	*Barangay Officials should allocate fund from the Barangay IRA for the maintenance of the project. *The community should practice bayanihan system to promote harmonious relationship among residents.	*No. of vehicle had across the Road	*O and M and Barangay Council	*Daily routine	*Owner of vehicles or beneficiaries	
Phase 4: Abandonment Phase						
a. This sub project has no abandonment phase because it has a component of O&M for the sustainability of the intended social services up to the next generation.						

Prepared by:

EDNA FRANCISCO
PPT CHAIRPERSON

Date: 4-3-17

The LGU OF BRGY. TIGUNHAO is confirming its willingness and commitment to implement and allocate funds for the above mentioned ESMP

MARSALINA LABANON
Barangay Sub-Project Chairperson

Date: 4-3-17

Approved and noted by:

HON. FRANCISCO G. BALADJAY JR.
Municipal Mayor

Date: 4-5-17

Reviewed and Endorsed to the SRPMO by:	Reviewed and Endorsed to the RPMO by:
FRANCIS AGUSTIN SONGCOG **Area Coordinator** Date: 4-5-17	JOCELYN V. VELASCO **SRPMO Head** Date: 4-10-17