FINAL REPORT

Environmental Impact Statement for the Cabano Small Reservoir Irrigation Project (SRIP)

July 2019

National Irrigation Administration – Region VI

Cabano Small Reservoir Irrigation Project

EXECUTIVE SUMMARY

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1.1 PROJECT FACT SHEET

Project Name:	Cabano Small Reservoir Irrigation Project (SRIP)
Project Location:	Location of Dam Site: Sitio Tiprosan, Brgy. Aguilar, San Lorenzo, Guimaras Coordinates: Lat: 10°37'32.21"N Long: 122°39'3.09"E Location of Irrigation Service Area: Barangay Aguilar, M. Chavez, Suclaran, San Enrique, Cabungahan, and Cabano, in the Municipality of San Lorenzo The project location is shown in Figure ES-1. The dam site is located in Sitio Tiprosan, Brgy. Aguilar, Municipality of San Lorenzo, Island and Province of Guimaras. It can be accessed through the road network from Brgy. Gaban connecting Nrgy. Aguilar. The target irrigation service areas are Barangay Aguilar, M. Chavez, Suclaran, San Enrique, Cabungahan, and Cabano. Locations of burrow materials are shown in Figure ES-2. There are four burrow areas located near the dam axis which has a total area of 108.60 hectares. The dam axis is along the line of the borehole and benchmarks locations (BH-01, BM-1 and BM-2).
Key action:	Construction of a 29.0-meter-high zoned earthfill embankment dam with 215 meters long and 8 meters wide crest and elevation of 80 meters with irrigation facilities and appurtenant structures which will serve six (6) barangays of San Lorenzo, Guimaras.
Total Project Land Area	3,823 ha
Total Impoundment	3.69 million cubic meters
Flooded Area	51.0 ha
Service Area	550 ha
Watershed Area	3,228 ha
Project Proponent	Main Office: National Irrigation Administration (NIA)-IGIMO Tacas St., NIA Compound Jaro, Iloilo City, Iloilo Telephone: (033) 320 3849 Contact Person: Engr. GERARDO P. CORSIGA Regional Manager A (033) 329-3862; 331-2315
Environmental Consultant	Global Environmental Concepts Corporation (GECC) Block 14 Lot 4, Lapu-Lapu Street, New Capitol Estates 1, Batasan Hills, Quezon City; Telefax (02) 287-6931 Email: geccplus@geccph.com; website: www.geccph.com Contact Person: Dr. Leizel L. Rombaua President (02) 940-2911; +639159503970

1.2 PROJECT DESCRIPTION SUMMARY

PARTICULAR	DESCRIPTION
Geographic Coordinates of Project Boundaries (PRS 92 Data)	Corner 1: Latitude 10.625602, Longitude 122.650785 Corner 2: Latitude 10.633691, Longitude 122.650726 Corner 3: Latitude 10.609011, Longitude 122.668759 Corner 4: Latitude 10.630049, Longitude 122.718290 Corner 5: Latitude 10.615552, Longitude 122.728834 Corner 6: Latitude 10.592822, Longitude 122.696429 Corner 7: Latitude 10.569002, Longitude 122.694472 Corner 8: Latitude 10.556527, Longitude 122.668968 Corner 9: Latitude 10.556505, Longitude 122.631193 Corner 10: Latitude 10.575661, Longitude 122.633719 Corner 11: Latitude 10.589660, Longitude 122.666516 Corner 12: Latitude 10.626985, Longitude 122.640275
Geographic Coordinates of Dam Site (PRS 92 Data)	*Lat: 10°37'32.21"N Long: 122°39'3.09"E*
Threshold Limits Applied	- Infrastructure Projects (Category A: ECP) - Dams (for irrigation and provision for hydropower plant) - reservoir inundated area ≥ 25 hectares,
Size and Scale	The project will be composed of 29.0 meters high dam by 215.0 meters long and 8.0 m wide crest, zoned earth-fill embankment irrigation dam to irrigate a total of 550.0 hectares of agricultural lands. Its reservoir has an area of 51.0 ha @ MWSE with total storage capacity of 3.69 million cubic meters of water.
Project Components	Components / Specifications A. Watershed Drainage Area: 32.28 sq. km. Inflow Design Flood: 619.68 cms B. Dam Type: Zoned Earth-fill Crest Elevation: Elev. 80 m River Bed Elevation: Elev. 51 m Dam Height: 29.0 m Crest Length: 215.0 m Crest Width: 8.0 m Embankment Slope - upstream: 2.75:1 - downstream: 2.50:1 C. Irrigation Network: 550.0 has. Irrigable Area: 165.0 m long D. Access Road: 20.0 cm thick
Manpower Requirements	• Construction Phase: 205 skilled and unskilled workers • Operation Phase: 21 Employees
Project Cost	Total project cost of the Cabano SRIP is PhP 533.012 Million

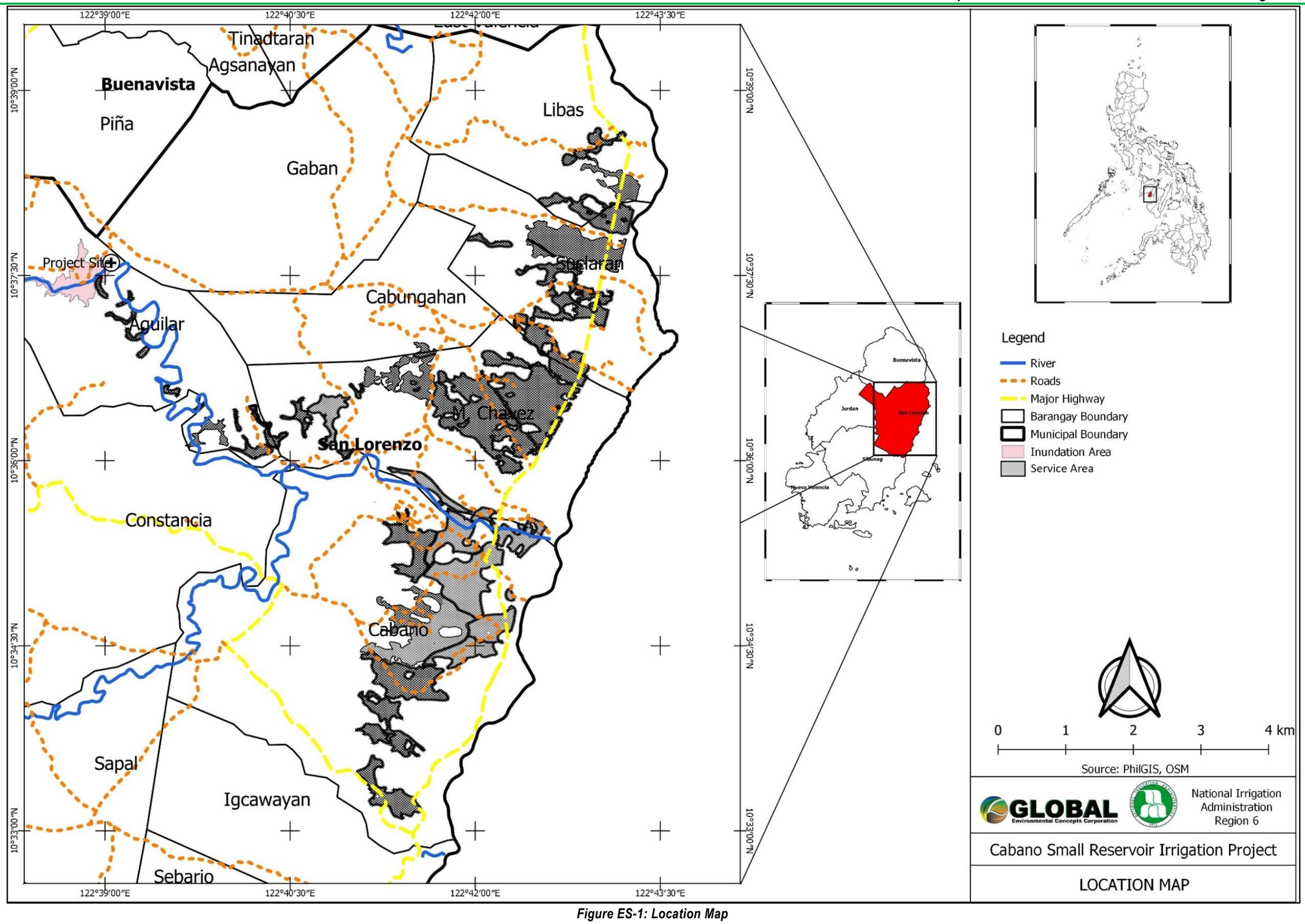
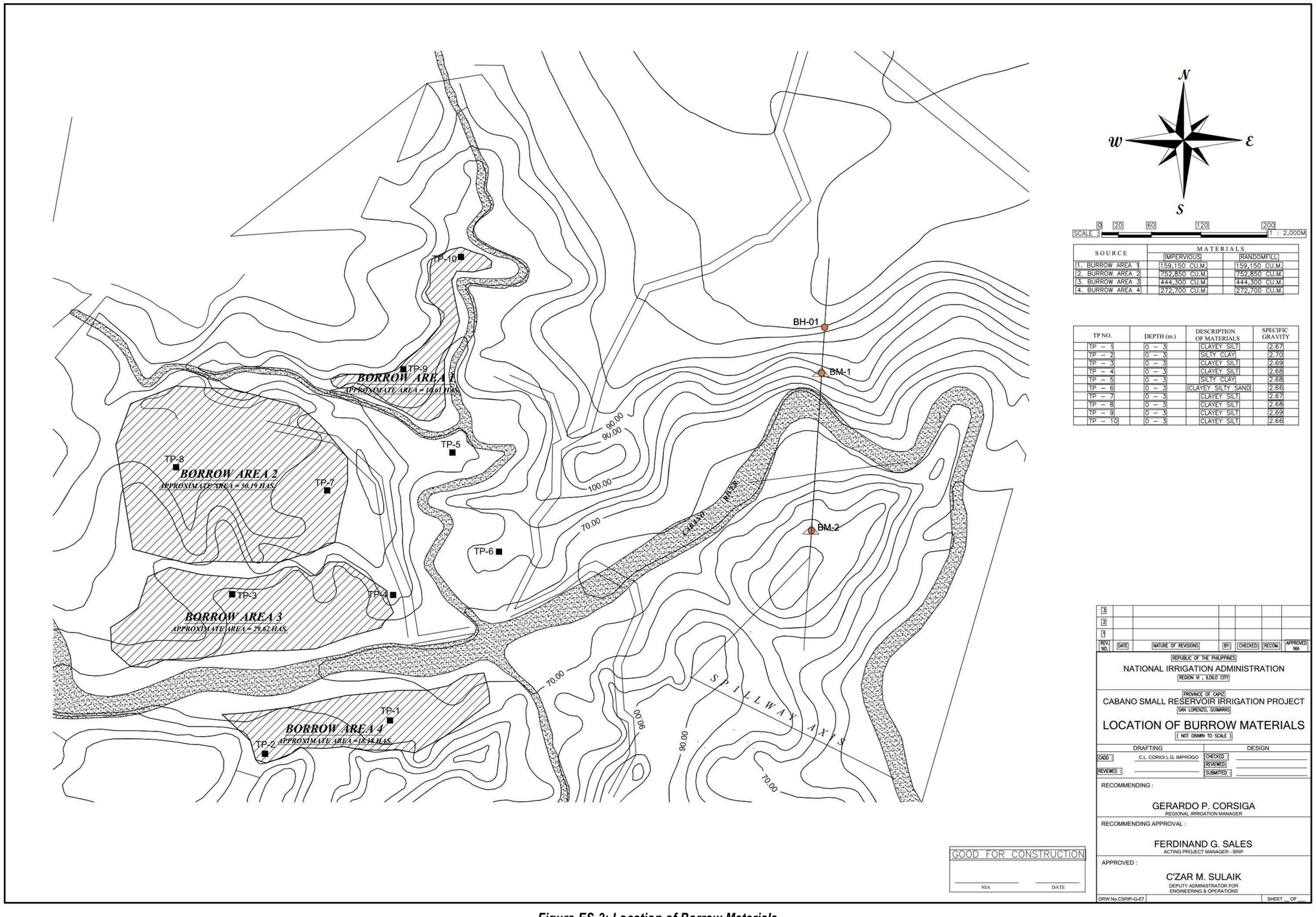


Figure ES-1: Location Map



SOURCE	MATERIALS	
	IMPERVIOUS	RANDOMFILL
1. BURROW AREA 1	159,150 CU.M.	159,150 CU.M.
2. BURROW AREA 2	752,850 CU.M.	752,850 CU.M.
3. BURROW AREA 3	444,300 CU.M.	444,300 CU.M.
4. BURROW AREA 4	272,700 CU.M.	272,700 CU.M.

TP NO.	DEPTH (m.)	DESCRIPTION OF MATERIALS	SPECIFIC GRAVITY
TP – 1	0 – 3	CLAYEY SILT	2.67
TP – 2	0 – 3	SILTY CLAY	2.70
TP – 3	0 – 3	CLAYEY SILT	2.69
TP – 4	0 – 3	CLAYEY SILT	2.68
TP – 5	0 – 3	SILTY CLAY	2.68
TP – 6	0 – 3	CLAYEY SILTY SAND	2.66
TP – 7	0 – 3	CLAYEY SILT	2.67
TP – 8	0 – 3	CLAYEY SILT	2.65
TP – 9	0 – 3	CLAYEY SILT	2.69
TP – 10	0 – 3	CLAYEY SILT	2.66

REV. NO.	DATE	NATURE OF REVISIONS	BY:	CHECKED:	RECOM.:	APPROVED: NIA
3						
2						
1						

Figure ES-2: Location of Borrow Materials

1.3 PROJECT RATIONALE

The province of Guimaras is largely agriculture-based in economic terms. Agriculture however is threatened by a multitude of problems: the increasing demand for residential and commercial lands as a result of regional population growth is causing agriculture land use to decline; and low productivity and farm income are among the problems in the project area. The root causes of which, as mentioned by barangay officials and farmers interviewed, are insufficient water for irrigation to have a second or third cropping in a year.

The Cabano Small Reservoir Irrigation Project (SRIP) is aimed to address these concerns, The project is consistent with PDP 2017-2022 goals of ensuring the sustainability of government efforts to improve the productivity of the agriculture, forestry, and fisheries (AFF) sector; to continuously build the capacity of AFF stakeholders; and to expand the access of farmers and fisherfolk to economic opportunities by improving AFF productivity within the ecological limit through, among others, accelerating construction of disaster- and climate-resilient small-scale irrigation systems and improve existing ones, facilitating the use of appropriate farm and fishery machinery and equipment, and pursuing an ecosystems approach to fisheries management.

Such strategy will likewise revitalize the country's irrigation sector and subsequently improve the performance of irrigation systems. Present performance of irrigation systems has been observed at levels below their respective potential cropping intensities and crop yields as average cropping intensity and yield are estimated at 144 percent and 3.30 tons/ha, respectively.

Through the Cabano SRIP, about 550 hectares of irrigable land which are operated by 833 farmers within the farming communities of six (6) Barangays of San Lorenzo, Guimaras, namely: Aguilar, Cabano, San Enrique, M. Chavez, Cabungahan and Suclaran will be benefited. The area currently consists of rain fed croplands except those covered by the Cabano Communal Irrigation System (CIS). These areas are devoted mostly to paddy rice. Diversified crops are planted in aggregate to contiguous areas during the dry season. Due to inadequate water supply, widespread use of irrigation pumps is resorted to by a number of farmers.

In line with the NIA's environmental policy, the proponent is committed to comply with all pertinent environmental laws and regulations and put into practice these compliance requirements. Among those being targeted for full compliance are the environmental requirements of EMB-DENR in securing an Environmental Compliance Certificate (ECC) for the project through this EIS documentation and ECC application.