



October 27, 2023

MEMORANDUM

FOR : The OIC-PENR Officer

THRU : The Chief, Technical Services Division

ATTENTION : The Chief, Conservation and Development Section

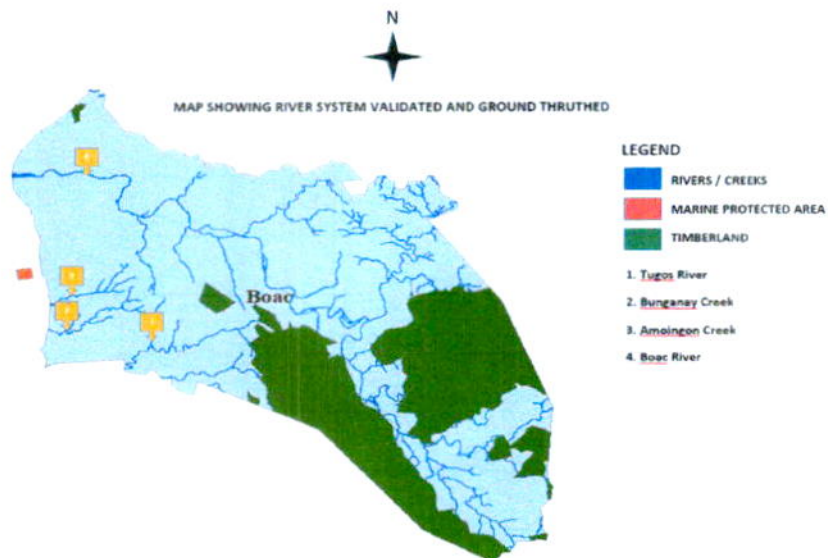
FROM : The Coastal Resources and Foreshore Management Unit

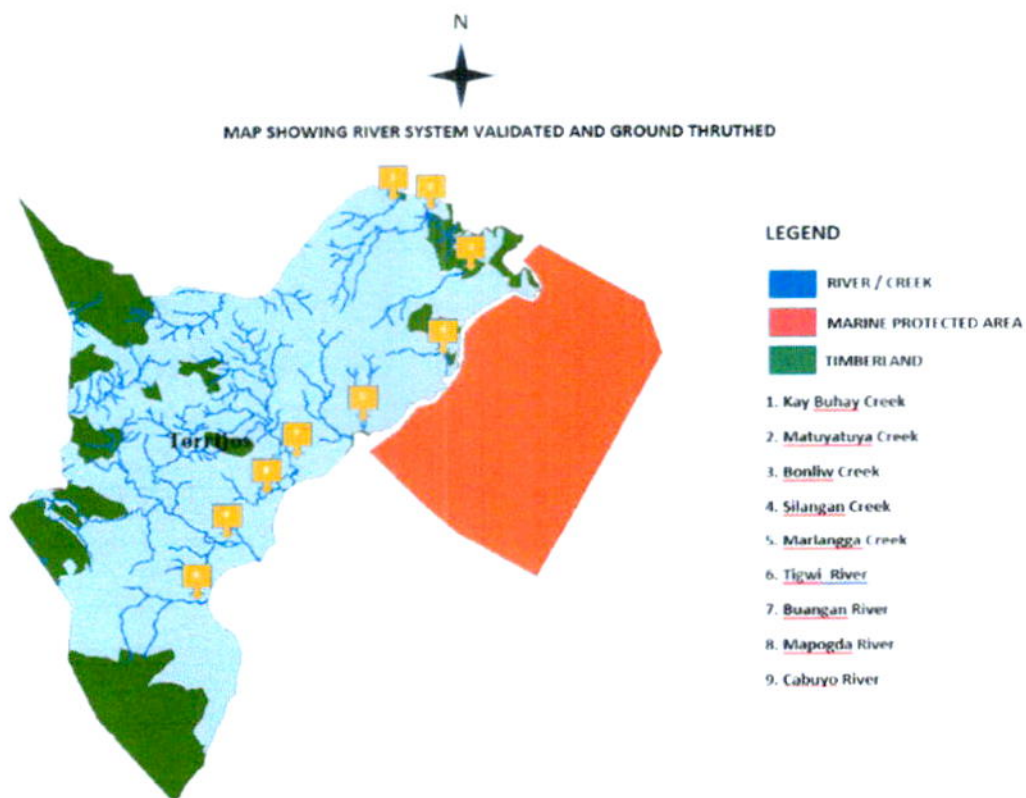
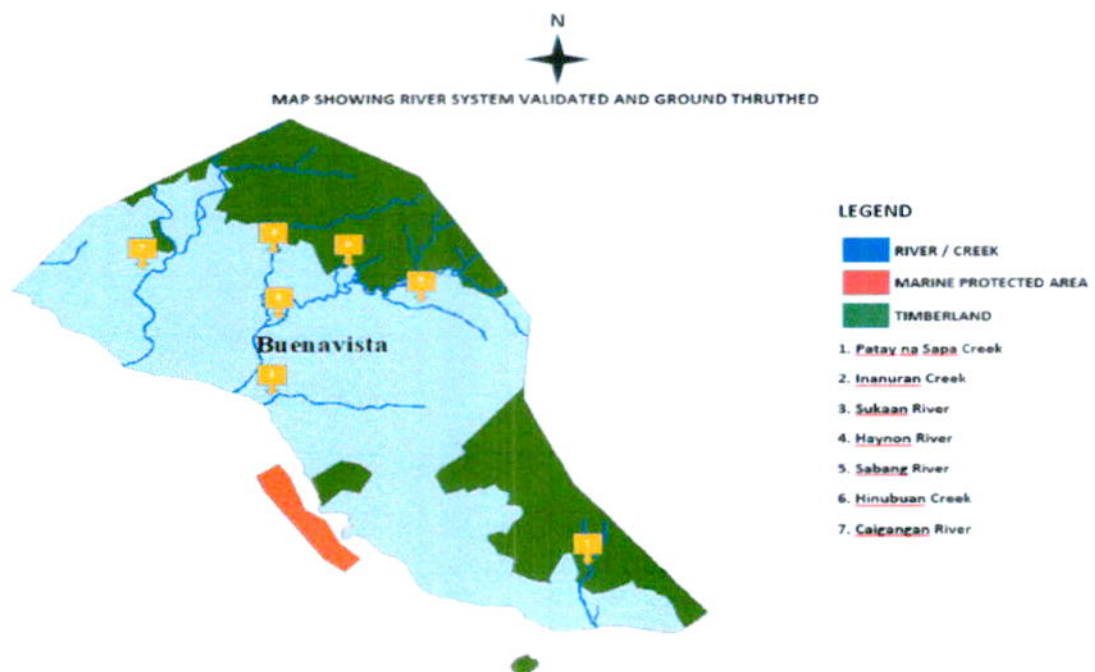
SUBJECT : **DOCUMENTATION REPORT ON THE CONDUCTED ACTIVITIES OF INCEPTION PHASE RE: INTEGRATED COASTAL MANAGEMENT (ICM) MAINSTREAMING THE COMPREHENSIVE LAND USE PLAN (CLUP) OF THE SIX MLGUs IN THE PROVINCE OF MARINDUQUE.**

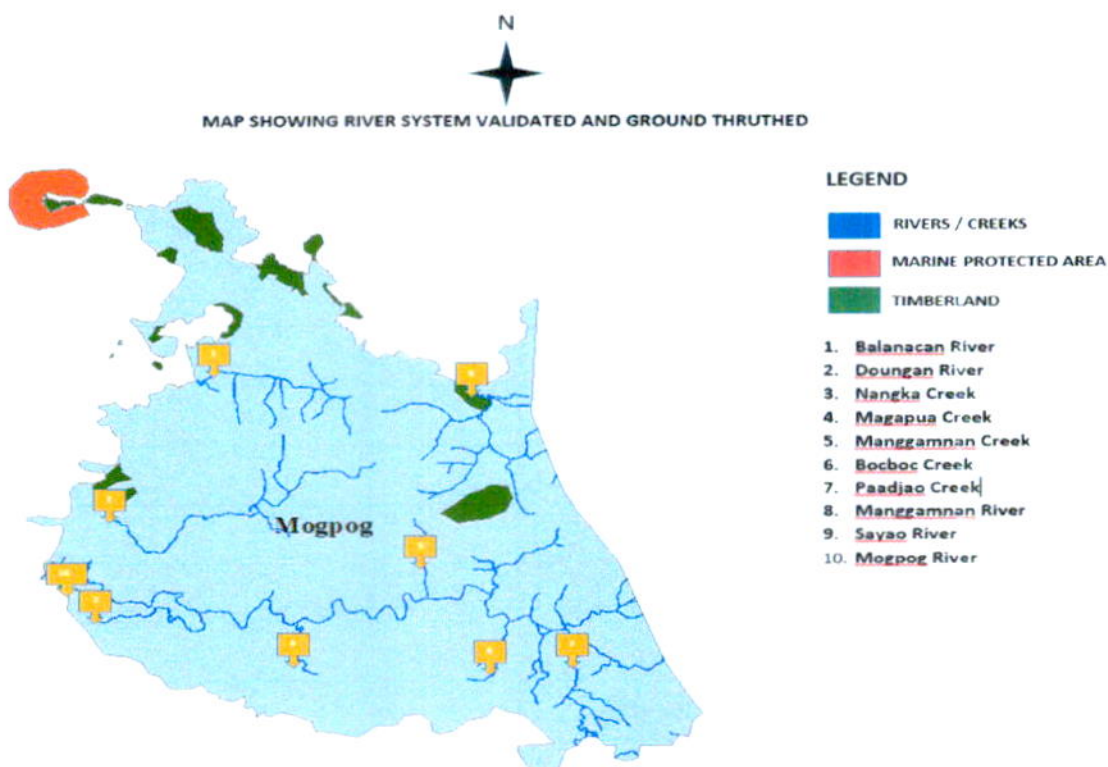
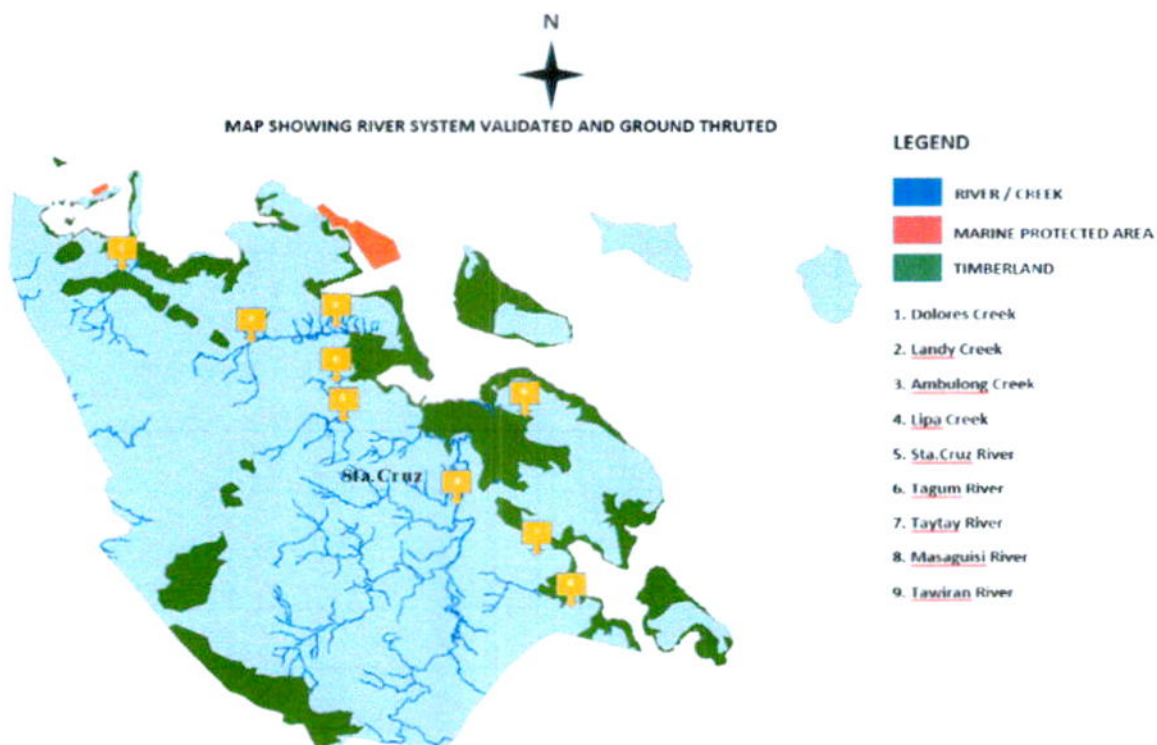
The Inception Phase of ICM mainstreaming comprised of the different activities enumerated in the BMB Technical Bulletin 2022-02 (Guide in mainstreaming the Integrated Coastal Management (ICM) Approach to the Local Government Units' Comprehensive Land Use Plan (CLUP). Primarily it serve as guide for DENR Field Offices in extending Technical Assistance to the LGUs on mainstreaming ICM into the 12 steps CLUP develop planning process. Listed below are the initial activities conducted/accomplished in the inception phase, to wit;

Mapping of River Systems

Mapping of river system influencing locally managed MPA was undertaken with the help of PENRO Marinduque GIS focal. The following maps show the location of inventoried rivers and creeks subjected to ground validation for each municipality in the province of Marinduque.

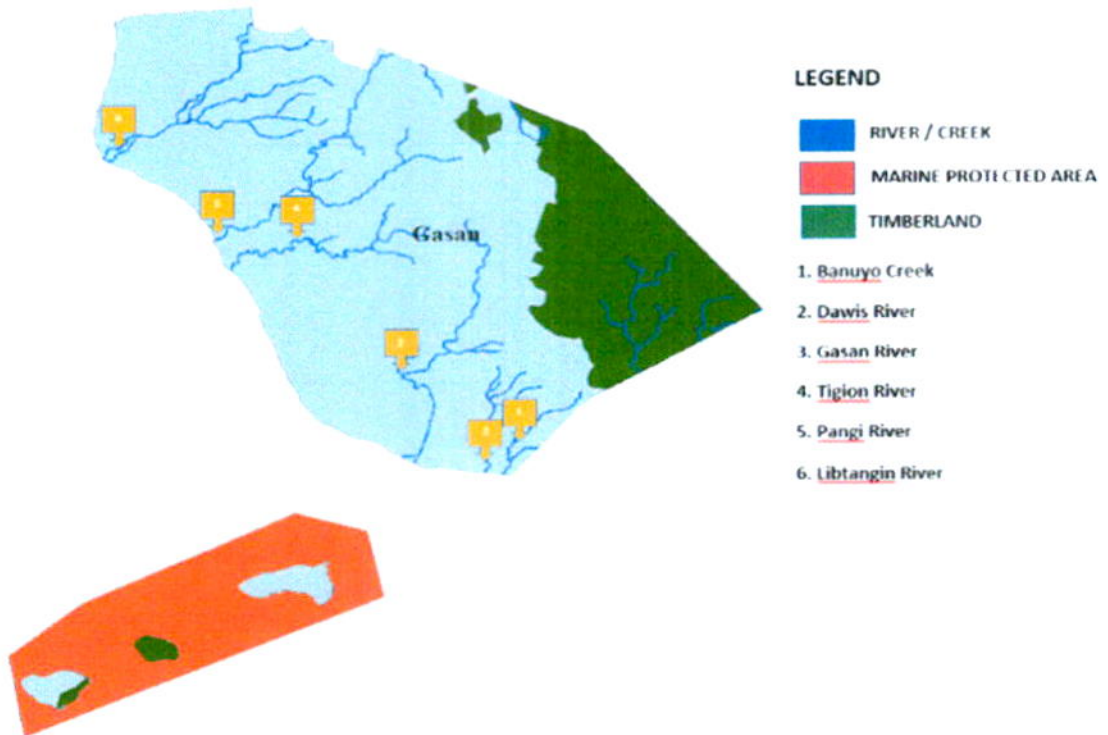








MAP SHOWING RIVER SYSTEM VALIDATED AND GROUND THRU THED





A. Ground Validation and Inventory of River Systems and ENR Profiling

1. LGU Sta. Cruz

Several rivers and creeks such as those found located in Brgys Dolores, Landy, Lipa, Lapu-lapu, Tagum, Taytay and Masaguisi which are directly and indirectly draining into the sea were subjected to the said activity. Among those rivers and creeks that have been validated, Lapu-lapu creek was observed to have different pollutants coming from several drainage outlets of households, livestock facilities, solid wastes, other concomitants, treated water from fishponds, disturbed river beds due to passing of fishing and passenger vessels as well as the influence of tides. Causing brown to black coloration of water of the river. In addition, crowded residential area and unusual wastes disposal especially plastics were found along canals and mangrove area. This is a clear threats to the marine ecosystems and habitats within the barangay and adjacent areas. Likewise, spoiled water from the public market, cemetery and esteros. All contaminants and pollutants were probably carried along the way to the sea affecting water quality and will be resulted into coastal and marine resources degradation in the long run.

2. LGU Torrijos

Among rivers and creeks ground thruted /validated in the municipality of Torrijos, Marlangga Creek traversing the public market and nearby residential areas was observed threatened by wastes coming from the said areas. Poor water quality characterized with water discoloration and algae at the surface indicates that this creek is nearly polluted. Most likely observed on the other hand were presence of solid wastes such as plastics, organic wastes such as tree trunks, coconut husk and bamboo twigs and other trashes at small sizes.

3. LGU Buenavista

Observations were noted that majority of rivers and creeks have solid wastes that immediately seen especially in the mouth of these rivers either floating in the surface or clogging along with other trashes. A presence of slash and burn was noted in private land Brgy. Bagtingon as well as agricultural areas/ rice fields in Brgy. Malbog and Poblacion, Buenavista. In addition livestock such piggery were seen in some adjacent residential areas. Moreover, quarrying activities were observed in major rivers of the municipalities. In fact, large volume of sand and gravel and boulders were currently stocked at the upper part of Caigangan river and said quarrying is still operated.

4. LGU Gasan

Tiguion river in the municipality of Gasan which drained in coastal area of Poblacion is traversing beside municipal public market. Drainage secreting discharge from commercial areas were observed with tainted water and other pollutants. Plastic



wastes along with twigs/tree branches leaves and other organic debris were accumulated at the base of the bridged. This is similarly observed in Dawis River.

5. LGU's Boac and Mogpog

For the municipalities of Mogpog and Boac, rivers and creeks validated were observed to have the same in terms of organic trashes/wastes and the common issue is the water coloration of its major rivers (Mogpog River, Boac River). It has greenish to blue coloration of water but were observed with existence of aquatic life species such as fish, shrimps and snails. It was also observed that residents used to wash their clothes in the river as well as a reactional area. Aside from these observations, there was also a quarrying at the upper part of Boac river especially in areas of Brgy. Sawi.

Table 1. List of rivers and creeks validated/ground thruted in 6 municipalities of Marinduque province.

No.	Name of River/Creek	Mun	Length (Km)	Outflow	Characteristics	Observed Threats
1	Dolores Creek	Sta. Cruz	4.35	Sayao Bay	Wet/flowing	Silted
2	Landy Creek	Sta. Cruz	4.32	Mongpong Pass	Wet/flowing	Households discharges
3	Ambulong Creek	Sta. Cruz	10.19	Mongpong Pass	Dry and vegetated	Erosion
4	Lipa Creek	Sta. Cruz	2.78	Mongpong Pass	Dry	None observed
5	Sta. Cruz River	Sta. Cruz	5.12	Mongpong Pass	Wet/flowing	Contaminated water from liestock facilities, public market, cemetery and residential areas. Scattered solid wastes (plastics)
6	Tagum River	Sta. Cruz	5.4	Sayao Bay	Wet/flowing	Agriculture and Acuaculture wastes
7	Taytay Creek	Sta. Cruz	2.53	Mongpong Pass	Dry	None observed
8	Masaguisi Creek	Sta. Cruz	1.52	Mongpong Pass	Dry	None observed
9	Tawiran River	Sta. Cruz	22.22	Mongpong Pass	Wet/flowing	Erosion, Agricultural wastes, households wastes, Quarrying
10	Balanacan River	Mogpog	3.47	Olong Bay	Wet/flowing	Contaminated water from liestock facilities and residential areas. Scattered plastic
11	Duungan River	Mogpog	7.25	Olong Bay	Wet/flowing	Agriculture wastes
12	Nangka Creek	Mogpog	2.18	Olong Bay	Wet/flowing	Solid wastes



Republic of the Philippines
Department of Environment and Natural Resources
PENRO MARINDUQUE

13	Mangamnan Creek	Mogpog	2.75	Olong Bay	Wet/flowing	Agricultural wastes
14	Bocboc Creek	Mogpog	1.45	Olong Bay	Wet/flowing	Households discharges
15	Paadjao Creek	Mogpog	1.7	Olong Bay	Wet/flowing	None observed
16	Sayao River	Mogpog	2.78	Mongpong Pass	Wet/flowing	Solid wastes, wastes water from residential area
17	Magapua Creek	Mogpog	3.15	Olong Bay	Wet/flowing	Agircultural wastes
18	Mangamnan River	Mogpog	11.31	Olong Bay	Wet/flowing	Agircultural wastes
19	Bunganay Creek	Boac	4.53	Olong Bay	Wet/flowing	Solid wastes
21	Caganhao Creek	Boac	4.13	Olong Bay	Wet/flowing	Solid wastes
22	Balaring Creek	Boac	2.52	Olong Bay	Wet/flowing	Solid wastes
23	Boac River	Boac	30.03	Olong Bay	Wet/flowing	Erosion
24	Kay Buhay Creek	Torrijos	3.55	Marlanga Bay	Wet/flowing	Agriculturel wastes
25	Matuya-tuya creek	Torrijos	4.34	Marlanga Bay	Wet/flowing	Agriculturel wastes
26	Bonliw Creek	Torrijos	3.51	Marlanga Bay	Dry	None observed
27	Silangan Creek	Torrijos	2.82	Marlanga Bay	Dry	None observed
28	Marlangga Creek	Torrijos	3.05	Marlanga Bay	Wet/flowing	Solid wastes, wastes water from residential area
29	Tigwi River	Torrijos	3.25	Marlanga Bay	Wet/flowing	Solid wastes, wastes water from residential area
30	Buangan River	Torrijos	3.67	Marlanga Bay	Wet/flowing	Solid wastes, wastes water from residential area
31	Mapugda Creek	Torrijos	3.14	Marlanga Bay	Wet/flowing	Solid wastes
32	Cabuyo River	Torrijos	8.77	Marlanga Bay	Wet/flowing	Solid wastes, wastes water from residential area, livestock wastes
33	Banuyo Creek	Gasán	3.04	Tablas Straight	Wet/flowing	Agriultural waste
34	Dawis River	Gasán	8.51	Tablas Straight	Wet/flowing	Agricultural and solid waste
35	Gasán River	Gasán	8.49	Tablas Straight	Wet/flowing	Solid waste, Agricultural waste, livestock waste
36	Tiguion River	Gasán	10.47	Tablas Straight	Wet/flowing	Solid waste, Agricultural waste, livestock waste
37	Pangi river	Gasán	1.81	Tablas Straight	Wet/flowing	Solid waste



38	Libtangan river	Gasán	14.43	Tablas Straight	Wet/flowing	Agricultural wastes
39	Patay na sapa creek	Bueanavista	2.5	Tablas Straight	Dry	Agricultural wastes
40	Inanuran Creek	Bueanavista	3.51	Tablas Straight	Wet/flowing	Agricultural wastes and Solid waste
41	Sukaan River	Bueanavista	4.73	Tablas Straight	Wet/flowing	Agricultural waste
42	Haynon Creek	Bueanavista	5.2	Tablas Straight	Dry	Agricultural waste, solid waste
43	Sabang River	Bueanavista	8.83	Tablas Straight	Wet/flowing	Agricultural waste, solid waste
44	Hinubuan Creek	Bueanavista	4.3	Tablas Straight	Dry	Agricultural waste, solid waste
45	Caigangan River	Bueanavista	10.58	Tablas Straight	Dry	Agricultural waste, solid waste, quarrying. Caingin

B. Identification of LGU to be prioritized for ICM Mainstreaming

Considering the criteria for prioritization to identify the Local Government Unit (LGU) for ICM mainstreaming, it was identified that the Municipality of Boac will be the target LGU for C.Y 2024 technical assistance. The said municipality is currently updating their Comprehensive Land Use Plan (CLUP). Though this LGU haven't updated its ICM plan unlike with other LGUs, They are actively involved and engaged on the priority programs and environmental management interventions launched by the PENRO Marinduque. (See matrix containing the names of the LGUs with corresponding scores based on the criteria provided by the BMB Technical Bulletin No. 2022-02.) However, other LGUs were scheduled as shown in the roadmap of ICM mainstreaming activity.



Table 2. Status of LGU's Plans

Name of the LGU	Plans	Status	Remarks
Gasán	CLUP	Updating (Already endorsed by Provincial Land Use Committee to Sangguniang Panlalawigan)	No ICM activities integrated/ incorporated to the plan
	CDP	Adopted	Plan approved covering 2022-2028
	ICM	Draft	Undated (2017-2020)
Buénavista	CLUP	Adopted	Approved thru M.O No. 227 series of 2020
	CDP	None	
	ICM	Updating	
Torrijos	CLUP	Adopted	Plan approved covering 2019-2028
	CDP		-
	ICM		-
Boac	ICM	No ICM plan	CRM training tentatively scheduled on April, 2023/
	CLUP	Updating	-
	CDP	-	-
Mogpog	CLUP	Updating (Already endorsed by Provincial Land Use Committee to Sangguniang Panlalawigan)	No ICM activities integrated/ incorporated to the plan
	ICM	No ICM	No ICM Plan
	CDP	-	-
Sta. Cruz	CLUP	Updating	Updating
	CDP	-	-
	ICM	No ICM	No ICM Plan



Republic of the Philippines
Department of Environment and Natural Resources
PENRO MARINDUQUE

Table 3. Prioritization of LGU in the ICM mainstreaming in the province of Marinduque

Identified LGUs	Status of CLUP (30%)	Status of ICM Plan (15%)	No. of River Systems (30%)	Database (10%)	LGU Partnership (15%)	Total Score
	Outdated (0.3%)	Adopted ICM Plan (.15%)	>5-4 (0.3%)	Updated annually (10%)	7-10 engaging (.15%)	
	Updating (0.2%)	Drafted ICM Plan (.10%)	3(0.2%)	Updated every 5 years (.05%)	4-6 engaging (.10%)	
	Updated (0.1%)	No ICM Plan (0%)	0-2 (0.1%)	No database (0%)	1-3 engaging (.05%)	
Boac	0.2	0.1	0.3	0.05	0.15	80%
Gasán	0.1	0.1	0.3	0.05	0.15	70%
Buenavista	0.1	0.1	0.2	0.05	0.15	60%
Torrijos	0.1	0.1	0.2	0.05	0.15	60%
Sta. Cruz	0.2	0.1	0.2	0.05	0.15	70%
Mogpog	0.1	0.1	0.3	0.05	0.15	70%
* Highlighted is the LGU to be prioritized for ICM mainstreaming for CY 2024						

Table 4. Schedule of the LGU

ROADMAP ON THE PRIORITIZATION OF LGUs IN MAINSTREAMING ICM INTO CLUP IN THE PROVINCE OF MARINDUQUE						
Target year	2024	2025	2026	2027	2028	2029
Target LGUs	Boac	Gasán	Mogpog	Sta. Cruz	Buenavista	Torrijos

Attached are the photos of rivers and creeks validated/ground thruthed and other activities such as coordination with the concerns LGUs and filled up LGU ENR profiles.

For information and records.


BRIAN INIGO F. LEANO
FT I


JOHN ANDREW M. MAGCULANG
FT I


OLIVER R. MINAY
FT II



Matuvatuva Creek



Kay Buhay Creek



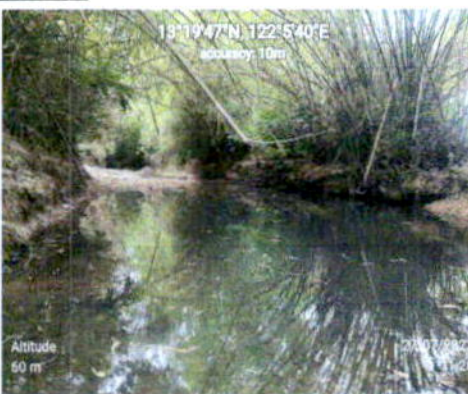
Marlangga Creek



Wood U Creek



Silangan Creek



Silangan Creek



Bonliw Creek

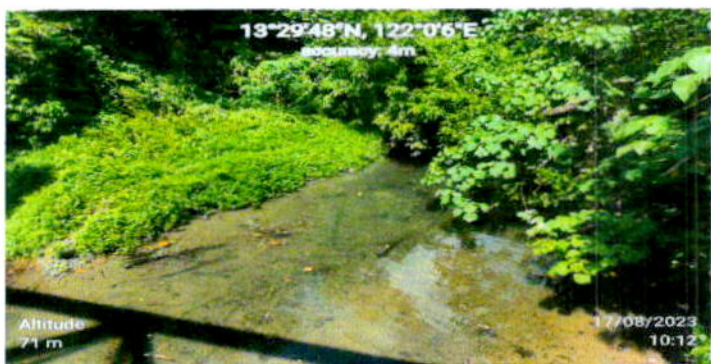
Geo-tagged photos of rivers/creeks during ground validation/thruthing within municipality of Torrijos, Marinduque.



Magapua Creek



Nangka Creek

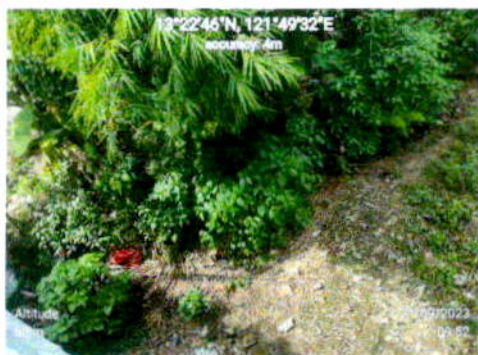


Savao River



Mogpog River

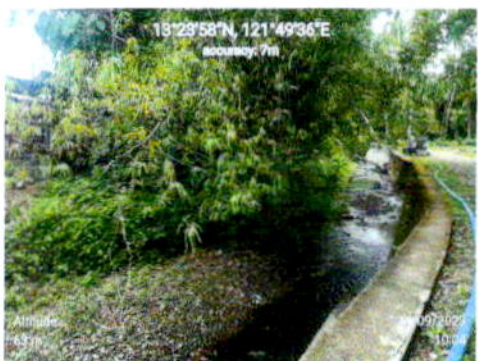
Geo-tagged photos of rivers/creeks during ground validation/thruthing within municipality of Mogpog, Marinduque.



Matuyatua Creek



Ihatub Creek



Amiongong Creek



Bunganav Creek

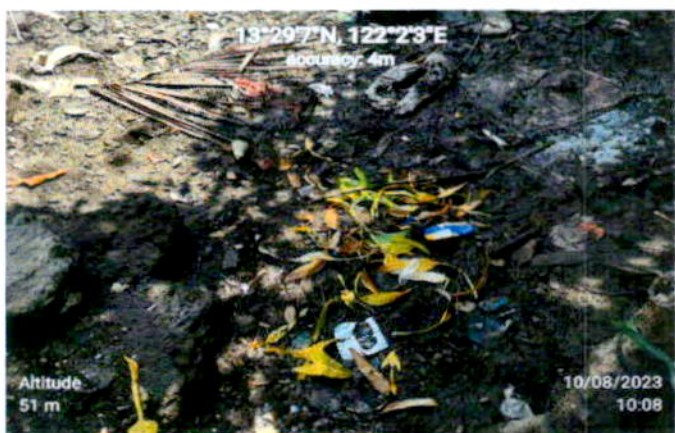


Boac River

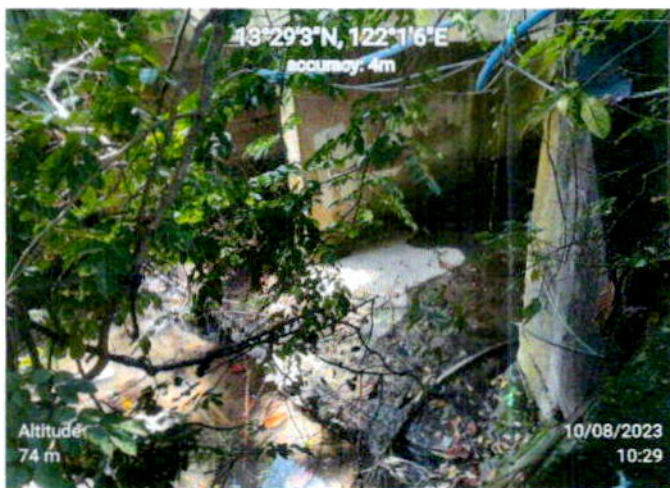
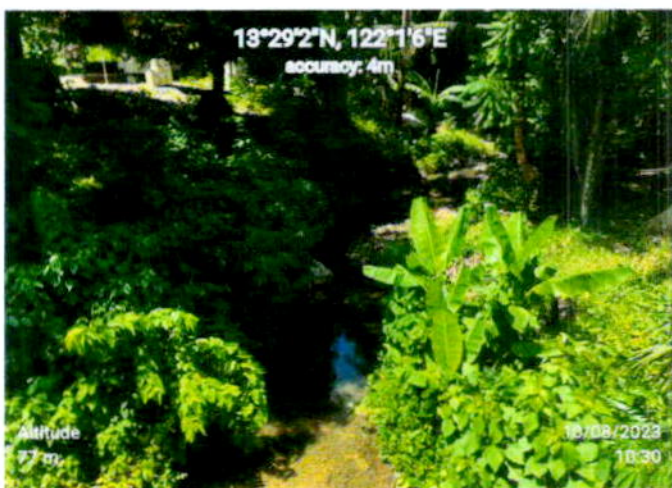
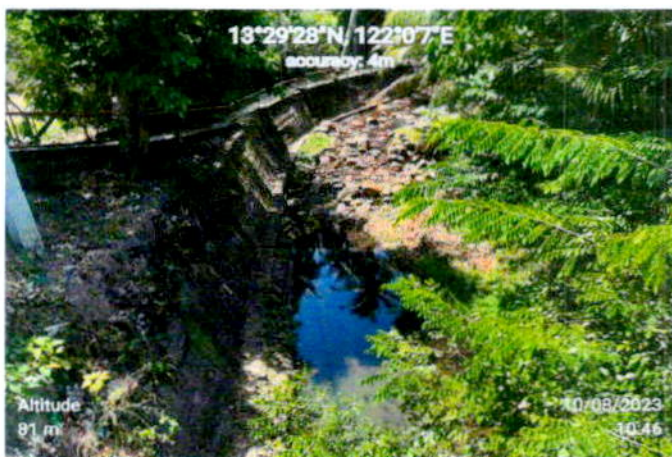


Geo-tagged photos of rivers/creeks during ground validation/thruthing within municipality of Boac, Marinduque.





PHOTOS TAKEN DURING GROUND VALIDATION/TRUTHING WITHIN THE VICINITY OF STA CRUZ. MUNICIPALITY



PHOTOS TAKEN DURING GROUND VALIDATION/TRUTHING WITHIN THE VICINITY OF STA CRUZ. MUNICIPALITY



PHOTOS TAKEN DURING GROUND VALIDATION/TRUTHING WITHIN THE VICINITY OF STA CRUZ. MUNICIPALITY

Annex 2 • CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

Name of Municipality/City: **MUNICIPALITY OF BOAC**

ENR Parameters	Data Requirements	Map Requirements	Status (Present/Absent)
Geography	Total Land area, area by barangay No. of barangays and sitios Relative Location Absolute location Number of barangays and sitios Boundaries with respect to the province	Topographic Map, Cadastral maps, tax maps Provincial map Administrative Map	PRESENT
Geology and Geomorphology	Major geologic structures Land formation Slope stability Landslide potential Hazard potential Areas within fault lines	Geologic Map Geomorphic or Landform Map	PRESENT
Topography, Slope Aspect and Elevation	General topography of the area Slope Slope Aspect Elevation	Topographic Map Slope Map Slope Aspect Map Elevation Map	PRESENT
Soils	Type of soils Soil type characteristics Area coverage of soil type Land capability classes Characteristics of land capability Classes Area coverage of land capability Classes basis for capability classification soil erosion	Soil Map Land Capability Map Soil Suitability Map Soil Erosion Map	PRESENT
Drainage, tributary patters and catchment areas	Types of drainage pattern Drainage Density Name and location of drainage Basins	Drainage Map	PRESENT
Land Classification and Regulatory Status	Types of land classification and Regulatory status Total land area of: Certified A & D land Unclassified forestland Classified forestland as Established forest reservation Established timberland National parks Reservations covered by Proclamations, DENR projects, other protected areas	Land Classification and Regulatory Map Legal Status Map	PRESENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

	<p>Games refuge & bird sanctuary</p> <p>Protected Areas</p> <p>Military & Naval reservation</p>		
	<p>Civil reservations</p> <p>Fishpond</p> <p>Number, location and land area of the ff:</p> <p>Timber license agreements</p> <p>Pasture permits and leases</p> <p>Industrial tree plantations</p> <p>Tree farm lease</p> <p>Agroforestry fann lease</p> <p>Stewardship contracts</p> <p>Other licenses, permits and leases</p>		ABSENT
Land Use/Cover	<p>Existing land use and extent of coverage</p> <p>Agriculture:</p> <p>highly restricted conditionally restricted for conversion areas</p> <p>marginal to agriculture</p> <p>Areas suitable to agricultural expansion and the recommended crops or activities for each area</p> <p>Forest:</p> <p>old growth forest</p> <p>secondary forest</p> <p>mossy</p> <p>agroforestry</p> <p>reforestation</p> <p>Protected areas</p> <p>Tourism areas</p> <p>Residential</p> <p>Commercial</p> <p>Institutional</p> <p>Industrial</p> <p>Utilities</p> <p>Infrastructure</p>	<p>Land Use Map (general and urban)</p> <p>Vegetation Cover Map</p> <p>Protected Areas for Agriculture Map</p> <p>Key Production Areas Map</p>	PRESENT
Land Ownership Pattern	<p>Average area of landholding by type of land use</p> <p>List landowners with landholdings 10 hectares and above</p>	Location map of large landholdings	PRESENT
Mineral Resource and Reserves	<p>Type and location of deposits</p> <p>Type and location of mining sites</p> <p>Mineral resources surveys</p>	Mineral Location Map	ABSENT
Natural Disasters	<p>Occurrences of earthquake</p> <p>Occurrences of landslides</p> <p>Occurrences of volcanic</p>	<p>Typhoon Prone Areas Map</p> <p>Flood prone Areas Map</p> <p>Fault lines</p>	PRESENT

CHECKLIST OF DATA AND MAP REQuincMEN's FoR ENR PROFILE

	eruptions Occurrences of floods Occurrences of droughts Flood prone areas		
Location and Extent of Surface Freshwater Bodies	Type, location & extent of the following	Water Resources Map	
	Lakes and rivers	Hydrologic Map	PRESENT
	Reservoirs	Map Showing River	
	Main irrigation canals	Map Showing Actual Stream	PRESENT
	Wetlands	Quality	
Location and Extent/Size of Marine and Coastal Resources	Location & extent of the following	Fishpond Resources Map	
	Marine and coastal resources	Coastal Resources Map	
	Wetlands		PRESENT
	Seagrass		
	Coral reefs		
	Fishpond resources		
General Groundwater Information	Water Table Location of wells and springs Aquifer recharge & discharge rates Groundwater yield Groundwater quality	Groundwater Map Groundwater Well Logs	ABSENT
Water Use and Regulation	Water usage of springs and surface water by the population		ABSENT
Watershed Importance	Important uses of the watersheds		ABSENT
Surface Water/Stream Conditions	Water quality Sedimentation Surface water runoff rate Streamflow variations		ABSENT
Prevailing Tidal Fluctuations	Tidal fluctuations Tide gauging stations		ABSENT
General Climate Type	General climate type Rainfall Air temperature Wind velocity Wind patterns Relative humidity Soil & water evaporation rates		ABSENT
Air Quality	Sulfur dioxide content of the atmosphere Carbon dioxide content of the Atmosphere		

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

Biodiversity/Vegetation/Flora of the following ecosystems: Forest Grassland Cropland/agricultural Urban Lakes & rivers Coastal	Species composition as to endemic species, introduced species, endangered species medical species and species of aesthetic species Population densities and species distribution Species diversity Distribution of vegetation types Standing crop Rate of biomass production Ecological species indicators Commercially valued species	Vegetation Cover Map Aerial Photographs	ABSENT
Biodiversity/Fauna of the following ecosystems: Forest Grassland Cropland/agricultural Urban Lakes & rivers Coastal	Species composition as to endemic species, introduced species, endangered species: migratory species of scientific and aesthetic interest Population densities and Distribution Species diversity Biomass production/ productivity Ecological/species indicators Commercially valued species		ABSENT
Bacteria and Fungi	Beneficial bacteria and fungi Harmful bacteria and fungi		ABSENT
Dumpsites & Sewerage Systems	No. and location of dumpsites Rate of solid waste generation Type of solid waste mgt. system Type, no. and location of sewerage and waste disposal systems	Location Map of dumpsites Sewerage Layout	PRESENT PRESENT
ENR Cooperatives and NGOs	Type, name, address & type of services of cooperatives Name, address and services of NGOs		PRESENT
Ancestral Domain	Location of and classification of tribal group residing in ancestral domain Conflicting landclaims land uses and issue over ancestral domain	Ancestral Domain Map	PRESENT
Legal Institutional Jurisdiction of Natural Resources	Institutional jurisdiction of government agencies over natural resources		

CHECKLIST OF DAI A AND MAP REQUIREMENTS FOR ENR PROFILE

Legislation on ENR planning, development and management	National, provincial and municipal legislations on environment and natural resources relevant to the LGU		ABSENT
Plans, programs and projects	City/provincial and municipal LGU development and management plans and program/project profile*.		ABSENT

Annex 2. CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

Name of Municipality/City: **MUNICIPALITY OF MOGPOG**

ENR Parameters	Data Requirements	Map Requirements	Status (Present/Absent)
Geography	Total Land area, area by barangay No. of barangays and sitios Relative Location Absolute location Number of barangays and sitios Boundaries with respect to the province	Topographic Map, Cadastral maps, tax maps Provincial map Administrative Map	PRESENT
Geology and Geomorphology	Major geologic structures Land formation Slope stability Landslide potential Hazard potential Areas within fault lines	Geologic Map Geomorphic or Landform Map	PRESENT
Topography, Slope Aspect and Elevation	General topography of the area Slope Slope Aspect Elevation	Topographic Map Slope Map Slope Aspect Map Elevation Map	PRESENT
Soils	Type of soils Soil type characteristics Area coverage of soil type Land capability classes Characteristics of land capability Classes Area coverage of land capability Classes basis for capability classification soil erosion	Soil Map Land Capability Map Soil Suitability Map Soil Erosion Map	PRESENT
Drainage, tributary patterns and catchment areas	Types of drainage pattern Drainage Density Name and location of drainage Basins	Drainage Map	PRESENT
Land Classification and Regulatory Status	Types of land classification and Regulatory status Total land area of: Certified A & D land Unclassified forestland Classified forestland as Established forest reservation Established timberland National parks Reservations covered by Proclamations, DENR projects, other protected areas	Land Classification and Regulatory Map Legal Status Map	ABSENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

	<p>Games refuge & bird sanctuary</p> <p>Protected Areas</p> <p>Military & Naval reservation</p>		
	<p>Civil reservations</p> <p>Fishpond</p> <p>Number, location and land area of the ff:</p> <p>Timber license agreements</p> <p>Pasture permits and leases</p> <p>Industrial tree plantations</p> <p>Tree farm lease</p> <p>Agroforestry farm lease</p> <p>Stewardship contracts</p> <p>Other licenses, permits and leases</p>		ABSENT
Land Use/Cover	<p>Existing land use and extent of coverage</p> <p>Agriculture:</p> <p>highly restricted conditionally restricted for conversion areas</p> <p>marginal to agriculture</p> <p>Areas suitable to agricultural expansion and the recommended crops or activities for each area</p> <p>Forest:</p> <p>old growth forest</p> <p>secondary forest</p> <p>mossy</p> <p>agroforestry</p> <p>reforestation</p> <p>Protected areas</p> <p>Tourism areas</p> <p>Residential</p> <p>Commercial</p> <p>Institutional</p> <p>Industrial</p> <p>Utilities</p> <p>Infrastructure</p>	<p>Land Use Map (general and urban)</p> <p>Vegetation Cover Map</p> <p>Protected Areas for Agriculture Map</p> <p>Key Production Areas Map</p>	PRESENT
Land Ownership Pattern	<p>Average area of landholding by type of land use</p> <p>List landowners with landholdings 10 hectares and above</p>	Location map of large landholdings	PRESENT
Mineral Resource and Reserves	<p>Type and location of deposits</p> <p>Type and location of mining sites</p> <p>Mineral resources surveys</p>	Mineral Location Map	PRESENT
Natural Disasters	<p>Occurrences of earthquake</p> <p>Occurrences of landslides</p> <p>Occurrences of volcanic</p>	<p>Typhoon Prone Areas Map</p> <p>Flood prone Areas Map</p> <p>Fault lines</p>	PRESENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

	eruptions Occurrences of floods Occurrences of droughts Flood prone areas		
Location and Extent of Surface Freshwater Bodies	Type, location & extent of the following Lakes and rivers Reservoirs Main irrigation canals Wetlands	Water Resources Map Hydrologic Map Map Showing River Map Showing Actual Stream Quality	PRESENT ABSENT
Location and Extent/Size of Marine and Coastal Resources	Location & extent of the following Marine and coastal resources Wetlands Seagrass Coral reefs Fishpond resources	Fishpond Resources Map Coastal Resources Map	PRESENT
General Groundwater Information	Water Table Location of wells and springs Aquifer recharge & discharge rates Groundwater yield Groundwater quality	Groundwater Map Groundwater Well Logs	ABSENT
Water Use and Regulation	Water usage of springs and surface water by the population		ABSENT
Watershed Importance	Important uses of the watersheds		ABSENT
Surface Water/Stream Conditions	Water quality Sedimentation Surface water runoff rate Streamflow variations		ABSENT
Prevailing Tidal Fluctuations	Tidal fluctuations Tide gauging stations		ABSENT
General Climate Type	General climate type Rainfall Air temperature Wind velocity Wind patterns Relative humidity Soil & water evaporation rates		ABSENT
Air Quality	Sulfur dioxide content of the atmosphere Carbon dioxide content of the Atmosphere		ABSENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

<p>Biodiversity/Vegetation/Flora of the following ecosystems:</p> <p>Forest</p> <p>Grassland</p> <p>Cropland/agricultural</p> <p>Urban</p> <p>Lakes & rivers</p> <p>Coastal</p>	<p>Species composition as to endemic species, introduced species, endangered species</p> <p>medical species and species of aesthetic species</p> <p>Population densities and species distribution</p> <p>Species diversity</p> <p>Distribution of vegetation types</p> <p>Standing crop</p> <p>Rate of biomass production</p> <p>Ecological species indicators</p> <p>Commercially valued species</p>	<p>Vegetation Cover Map</p> <p>Aerial Photographs</p>	<p>ABSENT</p>
<p>Biodiversity/Fauna of the following ecosystems:</p> <p>Forest</p> <p>Grassland</p> <p>Cropland/agricultural</p> <p>Urban</p> <p>Lakes & rivers</p> <p>Coastal</p>	<p>Species composition as to endemic species, introduced: species, endangered species: migratory species of scientific and aesthetic interest</p> <p>Population densities and Distribution</p> <p>Species diversity</p> <p>Biomass production/ productivity</p> <p>Ecological/species indicators</p> <p>Commercially valued species</p>		<p>ABSENT</p>
<p>Bacteria and Fungi</p>	<p>Beneficial bacteria and fungi</p> <p>Harmful bacteria and fungi</p>		<p>ABSENT</p>
<p>Dumpsites & Sewerage Systems</p>	<p>No. and location of dumpsites</p>	<p>Location Map of dumpsites</p>	<p>PRESENT</p>
	<p>Rate of solid waste generation</p> <p>Type of solid waste mgt. system</p> <p>Type, no. and location of sewerage and waste disposal systems</p>	<p>Sewerage Layout</p>	<p>ABSENT</p>
<p>ENR Cooperatives and NGOs</p>	<p>Type, name, address & type of services of cooperatives</p> <p>Name, address and services of NGOs</p>		<p>ABSENT</p>
<p>Ancestral Domain</p>	<p>Location of and classification of tribal group residing in ancestral domain</p> <p>Conflicting landclaims land uses and issue over ancestral domain</p>	<p>Ancestral Domain Map</p>	<p>ABSENT</p>
<p>Legal Institutional Jurisdiction of Natural Resources</p>	<p>Institutional jurisdiction of government agencies over natural resources</p>		<p>ABSENT</p>

CHECKLIST OF DAI A AND MAP REQUIREMENTS FOR ENR PROFILE

Legislation on ENR planning, development and management	National, provincial and municipal legislations on environment and natural resources relevant to the LGU		ABSENT
Plans, programs and projects	City/provincial and municipal LGU development and management plans and program/project profile*.		ABSENT

Annex 2. CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

Name of Municipality/City: **MUNICIPALITY OF TORRILLOS**

ENR Parameters	Data Requirements	Map Requirements	Status (Present/Absent)
Geography	Total Land area, area by barangay No. of barangays and sitios Relative Location Absolute location Number of barangays and sitios Boundaries with respect to the province	Topographic Map, Cadastral maps, tax maps Provincial map Administrative Map	PRESENT
Geology and Geomorphology	Major geologic structures Land formation Slope stability Landslide potential Hazard potential Areas within fault lines	Geologic Map Geomorphic or Landform Map	PRESENT
Topography, Slope Aspect and Elevation	General topography of the area Slope Slope Aspect Elevation	Topographic Map Slope Map Slope Aspect Map Elevation Map	PRESENT
Soils	Type of soils Soil type characteristics Area coverage of soil type Land capability classes Characteristics of land capability Classes Area coverage of land capability Classes basis for capability classification soil erosion	Soil Map Land Capability Map Soil Suitability Map Soil Erosion Map	PRESENT
Drainage, tributary patterns and catchment areas	Types of drainage pattern Drainage Density Name and location of drainage Basins	Drainage Map	PRESENT
Land Classification and Regulatory Status	Types of land classification and Regulatory status Total land area of: Certified A & D land Unclassified forestland Classified forestland as Established forest reservation Established timberland National parks Reservations covered by Proclamations, DENR projects, other protected areas	Land Classification and Regulatory Map Legal Status Map	PRESENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

	<p>Games refuge & bird sanctuary</p> <p>Protected Areas</p> <p>Military & Naval reservation</p>		
	<p>Civil reservations</p> <p>Fishpond</p> <p>Number, location and land area of the ff:</p> <p>Timber license agreements</p> <p>Pasture permits and leases</p> <p>Industrial tree plantations</p> <p>Tree farm lease</p> <p>Agroforestry farm lease</p> <p>Stewardship contracts</p> <p>Other licenses, permits and leases</p>		PRESENT
Land Use/Cover	<p>Existing land use and extent of coverage</p> <p>Agriculture:</p> <p>highly restricted conditionally restricted for conversion areas</p> <p>marginal to agriculture</p> <p>Areas suitable to agricultural expansion and the recommended crops or activities for each area</p> <p>Forest:</p> <p>old growth forest</p> <p>secondary forest</p> <p>mossy</p> <p>agroforestry</p> <p>reforestation</p> <p>Protected areas</p> <p>Tourism areas</p> <p>Residential</p> <p>Commercial</p> <p>Institutional</p> <p>Industrial</p> <p>Utilities</p> <p>Infrastructure</p>	<p>Land Use Map (general and urban)</p> <p>Vegetation Cover Map</p> <p>Protected Areas for Agriculture Map</p> <p>Key Production Areas Map</p>	PRESENT
Land Ownership Pattern	<p>Average area of landholding by type of land use</p> <p>List landowners with landholdings 10 hectares and above</p>	<p>Location map of large landholdings</p>	PRESENT
Mineral Resource and Reserves	<p>Type and location of deposits</p> <p>Type and location of mining sites</p> <p>Mineral resources surveys</p>	<p>Mineral Location Map</p>	ABSENT
Natural Disasters	<p>Occurrences of earthquake</p> <p>Occurrences of landslides</p> <p>Occurrences of volcanic</p>	<p>Typhoon Prone Areas Map</p> <p>Flood prone Areas Map</p> <p>Fault lines</p>	PRESENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

	eruptions Occurrences of floods Occurrences of droughts Flood prone areas	
Location and Extent of Surface Freshwater Bodies	Type, location & extent of the following Lakes and rivers Reservoirs Main irrigation canals Wetlands	Water Resources Map PRESENT Hydrologic Map Map Showing River Map Showing Actual Stream Quality
Location and Extent/Size of Marine and Coastal Resources	Location & extent of the following Marine and coastal resources Wetlands Seagrass Coral reefs Fishpond resources	Fishpond Resources Map PRESENT Coastal Resources Map
General Groundwater Information	Water Table Location of wells and springs Aquifer recharge & discharge rates Groundwater yield Groundwater quality	Groundwater Map Groundwater Well Logs PRESENT
Water Use and Regulation	Water usage of springs and surface water by the population	ABSENT
Watershed Importance	Important uses of the watersheds	
Surface Water/Stream Conditions	Water quality Sedimentation Surface water runoff rate Streamflow variations	PRESENT
Prevailing Tidal Fluctuations	Tidal fluctuations Tide gauging stations	
General Climate Type	General climate type Rainfall Air temperature Wind velocity Wind patterns Relative humidity Soil & water evaporation rates	ABSENT
Air Quality	Sulfur dioxide content of the atmosphere Carbon dioxide content of the Atmosphere	ABSENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

<p>Biodiversity/Vegetation/Flora of the following ecosystems:</p> <p>Forest</p> <p>Grassland</p> <p>Cropland/agricultural</p> <p>Urban</p> <p>Lakes & rivers</p> <p>Coastal</p>	<p>Species composition as to endemic species, introduced species, endangered species</p> <p>medical species and species of aesthetic species</p> <p>Population densities and species distribution</p> <p>Species diversity</p> <p>Distribution of vegetation types</p> <p>Standing crop</p> <p>Rate of biomass production</p> <p>Ecological species indicators</p> <p>Commercially valued species</p>	<p>Vegetation Cover Map</p> <p>Aerial Photographs</p>	<p>ABSENT</p>
<p>Biodiversity/Fauna of the following ecosystems:</p> <p>Forest</p> <p>Grassland</p> <p>Cropland/agricultural</p> <p>Urban</p> <p>Lakes & rivers</p> <p>Coastal</p>	<p>Species composition as to endemic species, introduced: species, endangered species: migratory species of scientific and aesthetic interest</p> <p>Population densities and Distribution</p> <p>Species diversity</p> <p>Biomass production/ productivity</p> <p>Ecological/species indicators</p> <p>Commercially valued species</p>		<p>ABSENT</p> <p>ABSENT</p>
<p>Bacteria and Fungi</p>	<p>Beneficial bacteria and fungi</p> <p>Harmful bacteria and fungi</p>		<p>ABSENT</p>
<p>Dumpsites & Sewerage Systems</p>	<p>No. and location of dumpsites</p> <p>Rate of solid waste generation</p> <p>Type of solid waste mgt. system</p> <p>Type, no. and location of sewerage and waste disposal systems</p>	<p>Location Map of dumpsites</p>	<p>PRESENT</p>
<p>ENR Cooperatives and NGOs</p>	<p>Type, name, address & type of services of cooperatives</p> <p>Name, address and services of NGOs</p>		<p>PRESENT</p>
<p>Ancestral Domain</p>	<p>Location of and classification of tribal group residing in ancestral domain</p> <p>Conflicting landclaims land uses and issue over ancestral domain</p>	<p>Ancestral Domain Map</p>	<p>ABSENT</p> <p>ABSENT</p>
<p>Legal Institutional Jurisdiction of Natural Resources</p>	<p>Institutional jurisdiction of government agencies over natural resources</p>		<p>PRESENT</p>

CHECKLIST OF DAI A AND MAP REQUIREMENTS FOR ENR PROFILE

Legislation on ENR planning, development and management	National, provincial and municipal legislations on environment and natural resources relevant to the LGU		PRESENT
Plans, programs and projects	City/provincial and municipal LGU development and management plans and program/project profile*.		PRESENT

Annex 2. CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

Name of Municipality/City: **MUNICIPALITY OF CASAN**

ENR Parameters	Data Requirements	Map Requirements	Status (Present/Absent)
Geography	Total Land area, area by barangay No. of barangays and sitios Relative Location Absolute location Number of barangays and sitios Boundaries with respect to the province	Topographic Map, Cadastral maps, tax maps Provincial map Administrative Map	PRESENT
Geology and Geomorphology	Major geologic structures Land formation Slope stability Landslide potential Hazard potential Areas within fault lines	Geologic Map Geomorphic or Landform Map	PRESENT
Topography, Slope Aspect and Elevation	General topography of the area Slope Slope Aspect Elevation	Topographic Map Slope Map Slope Aspect Map Elevation Map	PRESENT
Soils	Type of soils Soil type characteristics Area coverage of soil type Land capability classes Characteristics of land capability Classes Area coverage of land capability Classes basis for capability classification soil erosion	Soil Map Land Capability Map Soil Suitability Map Soil Erosion Map	PRESENT
Drainage, tributary patters and catchment areas	Types of drainage pattern Drainage Density Name and location of drainage Basins	Drainage Map	PRESENT
Land Classification and Regulatory Status	Types of land classification and Regulatory status Total land area of: Certified A & D land Unclassified forestland Classified forestland as Established forest reservation Established timberland National parks Reservations covered by Proclamations, DENR projects, other protected areas	Land Classification and Regulatory Map Legal Status Map	PRESENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

	<p>Games refuge & bird sanctuary</p> <p>Protected Areas</p> <p>Military & Naval reservation</p>		
	<p>Civil reservations</p> <p>Fishpond</p> <p>Number, location and land area of the ff:</p> <p>Timber license agreements</p> <p>Pasture permits and leases</p> <p>Industrial tree plantations</p> <p>Tree farm lease</p> <p>Agroforestry fann lease</p> <p>Stewardship contracts</p> <p>Other licenses, permits and leases</p>		ABSENT
Land Use/Cover	<p>Existing land use and extent of coverage</p> <p>Agriculture:</p> <p>highly restricted conditionally restricted for conversion areas</p> <p>marginal to agriculture</p> <p>Areas suitable to agricultural expansion and the recommended crops or activities for each area</p> <p>Forest:</p> <p>old growth forest</p> <p>secondary forest</p> <p>mossy</p> <p>agroforestry</p> <p>reforestation</p> <p>Protected areas</p> <p>Tourism areas</p> <p>Residential</p> <p>Commercial</p> <p>Institutional</p> <p>Industrial</p> <p>Utilities</p> <p>Infrastructure</p>	<p>Land Use Map (general and urban)</p> <p>Vegetation Cover Map</p> <p>Protected Areas for Agriculture Map</p> <p>Key Production Areas Map</p>	PRESENT
Land Ownership Pattern	<p>Average area of landholding by type of land use</p> <p>List landowners with landholdings 10 hectares and above</p>	<p>Location map of large landholdings</p>	ABSENT
Mineral Resource and Reserves	<p>Type and location of deposits</p> <p>Type and location of mining sites</p> <p>Mineral resources surveys</p>	<p>Mineral Location Map</p>	ABSENT
Natural Disasters	<p>Occurrences of earthquake</p> <p>Occurrences of landslides</p> <p>Occurrences of volcanic</p>	<p>Typhoon Prone Areas Map</p> <p>Flood prone Areas Map</p> <p>Fault lines</p>	PRESENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

	eruptions Occurrences of floods Occurrences of droughts Flood prone areas		
Location and Extent of Surface Freshwater Bodies	Type, location & extent of the following Lakes and rivers Reservoirs Main irrigation canals	Water Resources Map Hydrologic Map Map Showing River Map Showing Actual Stream Quality	PRESENT PRESENT
Location and Extent/Size of Marine and Coastal Resources	Wetlands Location & extent of the following Marine and coastal resources Wetlands Seagrass Coral reefs Fishpond resources	Fishpond Resources Map Coastal Resources Map	ABSENT
General Groundwater Information	Water Table Location of wells and springs Aquifer recharge & discharge rates Groundwater yield Groundwater quality	Groundwater Map Groundwater Well Logs	ABSENT
Water Use and Regulation	Water usage of springs and surface water by the population		ABSENT
Watershed Importance	Important uses of the watersheds		ABSENT
Surface Water/Stream Conditions	Water quality Sedimentation Surface water runoff rate Streamflow variations		PRESENT
Prevailing Tidal Fluctuations	Tidal fluctuations Tide gauging stations		ABSENT
General Climate Type	General climate type Rainfall Air temperature Wind velocity Wind patterns Relative humidity Soil & water evaporation rates		ABSENT
Air Quality	Sulfur dioxide content of the atmosphere Carbon dioxide content of the Atmosphere		ABSENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

Biodiversity/Vegetation/Flora of the following ecosystems: Forest Grassland Cropland/agricultural Urban Lakes & rivers Coastal	Species composition as to endemic species, introduced species, endangered species medical species and species of aesthetic species Population densities and species distribution Species diversity Distribution of vegetation types Standing crop Rate of biomass production Ecological species indicators Commercially valued species	Vegetation Cover Map Aerial Photographs	ABSENT
Biodiversity/Fauna of the following ecosystems: Forest Grassland Cropland/agricultural Urban Lakes & rivers Coastal	Species composition as to endemic species, introduced: species, endangered species: migratory species of scientific and aesthetic interest Population densities and Distribution Species diversity Biomass production/ productivity Ecological/species indicators Commercially valued species		ABSENT
Bacteria and Fungi	Beneficial bacteria and fungi Harmful bacteria and fungi		ABSENT
Dumpsites & Sewerage Systems	No. and location of dumpsites Rate of solid waste generation Type of solid waste mgt. system Type, no. and location of sewerage and waste disposal systems	Location Map of dumpsites Sewerage Layout	 PRESENT PRESENT
ENR Cooperatives and NGOs	Type, name, address & type of services of cooperatives Name, address and services of NGOs		ABSENT
Ancestral Domain	Location of and classification of tribal group residing in ancestral domain Conflicting landclaims land uses and issue over ancestral domain	Ancestral Domain Map	 ABSENT
Legal Institutional Jurisdiction of Natural Resources	Institutional jurisdiction of government agencies over natural resources		

CHECKLIST OF DAI A AND MAP REQUIREMENTS FOR ENR PROFILE

Legislation on ENR planning, development and management	National, provincial and municipal legislations on environment and natural resources relevant to the LGU		ABSENT
Plans, programs and projects	City/provincial and municipal LGU development and management plans and program/project profile*.		ABSENT

Annex 2.

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

Name of Municipality/City: **MUNICIPALITY OF BUENAVISTA**

ENR Parameters	Data Requirements	Map Requirements	Status (Present/ Absent)
Geography	Total Land area, area by barangay No. of barangays and sitios Relative Location Absolute location Number of barangays and sitios Boundaries with respect to the province	Topographic Map, Cadastral maps, tax maps Provincial map Administrative Map	P R E S E N T
Geology and Geomorphology	Major geologic structures Land formation Slope stability Landslide potential Hazard potential Areas within fault lines	Geologic Map Geomorphic or Landform Map	P R E S E N T
Topography, Slope Aspect and Elevation	General topography of the area Slope Slope Aspect Elevation	Topographic Map Slope Map Slope Aspect Map Elevation Map	P R E S E N T
Soils	Type of soils Soil type characteristics Area coverage of soil type Land capability classes Characteristics of land capability Classes Area coverage of land capability Classes basis for capability classification soil erosion	Soil Map Land Capability Map Soil Suitability Map Soil Erosion Map	P R E S E N T
Drainage, tributary patters and catchment areas	Types of drainage pattern Drainage Density Name and location of drainage Basins	Drainage Map	P R E S E N T
Land Classification and Regulatory Status	Types of land classification and Regulatory status Total land area of: Certified A & D land Unclassified forestland Classified forestland as Established forest reservation Established timberland National parks Reservations covered by Proclamations, DENR projects, other protected areas	Land Classification and Regulatory Map Legal Status Map	P R E S E N T

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

	<p>Games refuge & bird sanctuary</p> <p>Protected Areas</p> <p>Military & Naval reservation</p>		
	<p>Civil reservations</p> <p>Fishpond</p> <p>Number, location and land area of the ff:</p> <p>Timber license agreements</p> <p>Pasture permits and leases</p> <p>Industrial tree plantations</p> <p>Tree farm lease</p> <p>Agroforestry farm lease</p> <p>Stewardship contracts</p> <p>Other licenses, permits and leases</p>		ABSENT
Land Use/Cover	<p>Existing land use and extent of coverage</p> <p>Agriculture:</p> <p>highly restricted conditionally restricted for conversion areas</p> <p>marginal to agriculture</p> <p>Areas suitable to agricultural expansion and the recommended crops or activities for each area</p> <p>Forest:</p> <p>old growth forest</p> <p>secondary forest</p> <p>mossy</p> <p>agroforestry</p> <p>reforestation</p> <p>Protected areas</p> <p>Tourism areas</p> <p>Residential</p> <p>Commercial</p> <p>Institutional</p> <p>Industrial</p> <p>Utilities</p> <p>Infrastructure</p>	<p>Land Use Map (general and urban)</p> <p>Vegetation Cover Map</p> <p>Protected Areas for Agriculture Map</p> <p>Key Production Areas Map</p>	PRESENT
Land Ownership Pattern	<p>Average area of landholding by type of land use</p> <p>List landowners with landholdings 10 hectares and above</p>	<p>Location map of large landholdings</p>	PRESENT
Mineral Resource and Reserves	<p>Type and location of deposits</p> <p>Type and location of mining sites</p> <p>Mineral resources surveys</p>	<p>Mineral Location Map</p>	ABSENT
Natural Disasters	<p>Occurrences of earthquake</p> <p>Occurrences of landslides</p> <p>Occurrences of volcanic</p>	<p>Typhoon Prone Areas Map</p> <p>Flood prone Areas Map</p> <p>Fault lines</p>	PRESENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

	eruptions Occurrences of floods Occurrences of droughts Flood prone areas		
Location and Extent of Surface Freshwater Bodies	Type, location & extent of the following Lakes and rivers Reservoirs Main irrigation canals Wetlands	Water Resources Map Hydrologic Map Map Showing River Map Showing Actual Stream Quality	PRESENT PRESENT
Location and Extent/Size of Marine and Coastal Resources	Location & extent of the following Marine and coastal resources Wetlands Seagrass Coral reefs Fishpond resources	Fishpond Resources Map Coastal Resources Map	PRESENT
General Groundwater Information	Water Table Location of wells and springs Aquifer recharge & discharge rates Groundwater yield Groundwater quality	Groundwater Map Groundwater Well Logs	PRESENT
Water Use and Regulation	Water usage of springs and surface water by the population		PRESENT
Watershed Importance	Important uses of the watersheds		
Surface Water/Stream Conditions	Water quality Sedimentation Surface water runoff rate Streamflow variations		PRESENT
Prevailing Tidal Fluctuations	Tidal fluctuations Tide gauging stations		ABSENT
General Climate Type	General climate type Rainfall Air temperature Wind velocity Wind patterns Relative humidity		ABSENT
Air Quality	Soil & water evaporation rates Sulfur dioxide content of the atmosphere Carbon dioxide content of the Atmosphere		ABSENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

<p>Biodiversity/Vegetation/Flora of the following ecosystems:</p> <p>Forest Grassland Cropland/agricultural Urban Lakes & rivers Coastal</p>	<p>Species composition as to endemic species, introduced species, endangered species medical species and species of aesthetic species Population densities and species distribution Species diversity Distribution of vegetation types Standing crop Rate of biomass production Ecological species indicators Commercially valued species</p>	<p>Vegetation Cover Map Aerial Photographs</p>	<p>ABSENT</p>
<p>Biodiversity/Fauna of the following ecosystems:</p> <p>Forest Grassland Cropland/agricultural Urban Lakes & rivers Coastal</p>	<p>Species composition as to endemic species, introduced: species, endangered species: migratory species of scientific and aesthetic interest Population densities and Distribution Species diversity Biomass production/ productivity Ecological/species indicators Commercially valued species</p>		<p>PRESENT</p>
<p>Bacteria and Fungi</p>	<p>Beneficial bacteria and fungi Harmful bacteria and fungi</p>		<p>ABSENT</p>
<p>Dumpsites & Sewerage Systems</p>	<p>No. and location of dumpsites Rate of solid waste generation Type of solid waste mgt. system Type, no. and location of sewerage and waste disposal systems</p>	<p>Location Map of dumpsites Sewerage Layout</p>	<p>PRESENT</p>
<p>ENR Cooperatives and NGOs</p>	<p>Type, name, address & type of services of cooperatives Name, address and services of NGOs</p>		<p>ABSENT</p>
<p>Ancestral Domain</p>	<p>Location of and classification of tribal group residing in ancestral domain Conflicting landclaims land uses and issue over ancestral domain</p>	<p>Ancestral Domain Map</p>	<p>ABSENT</p>
<p>Legal Institutional Jurisdiction of Natural Resources</p>	<p>Institutional jurisdiction of government agencies over natural resources</p>		<p>PRESENT</p>

CHECKLIST OF DAI A AND MAP REQUIREMENTS FOR ENR PROFILE

Legislation on ENR planning, development and management	National, provincial and municipal legislations on environment and natural resources relevant to the LGU		PRESENT
Plans, programs and projects	City/provincial and municipal LGU development and management plans and program/project profile*.		PRESENT

Annex 2. CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

Name of Municipality/City: **MUNICIPALITY OF STA. CRUZ**

ENR Parameters	Data Requirements	Map Requirements	Status (Present/Absent)
Geography	Total Land area, area by barangay No. of barangays and sitios Relative Location Absolute location Number of barangays and sitios Boundaries with respect to the province	Topographic Map, Cadastral maps, tax maps Provincial map Administrative Map	PRESENT
Geology and Geomorphology	Major geologic structures Land formation Slope stability Landslide potential Hazard potential Areas within fault lines	Geologic Map Geomorphic or Landform Map	PRESENT
Topography, Slope Aspect and Elevation	General topography of the area Slope Slope Aspect Elevation	Topographic Map Slope Map Slope Aspect Map Elevation Map	PRESENT
Soils	Type of soils Soil type characteristics Area coverage of soil type Land capability classes Characteristics of land capability Classes Area coverage of land capability Classes basis for capability classification soil erosion	Soil Map Land Capability Map Soil Suitability Map Soil Erosion Map	PRESENT
Drainage, tributary patterns and catchment areas	Types of drainage pattern Drainage Density Name and location of drainage Basins	Drainage Map	ABSENT
Land Classification and Regulatory Status	Types of land classification and Regulatory status Total land area of: Certified A & D land Unclassified forestland Classified forestland as Established forest reservation Established timberland National parks Reservations covered by Proclamations, DENR projects, other protected areas	Land Classification and Regulatory Map Legal Status Map	ABSENT


CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

	<p>Games refuge & bird sanctuary</p> <p>Protected Areas</p> <p>Military & Naval reservation</p>		
	<p>Civil reservations</p> <p>Fishpond</p> <p>Number, location and land area of the ff:</p> <p>Timber license agreements</p> <p>Pasture permits and leases</p> <p>Industrial tree plantations</p> <p>Tree farm lease</p> <p>Agroforestry farm lease</p> <p>Stewardship contracts</p> <p>Other licenses, permits and leases</p>		ABSENT
Land Use/Cover	<p>Existing land use and extent of coverage</p> <p>Agriculture:</p> <p>highly restricted conditionally restricted for conversion areas marginal to agriculture</p> <p>Areas suitable to agricultural expansion and the recommended crops or activities for each area</p> <p>Forest:</p> <p>old growth forest</p> <p>secondary forest</p> <p>mossy</p> <p>agroforestry</p> <p>reforestation</p> <p>Protected areas</p> <p>Tourism areas</p> <p>Residential</p> <p>Commercial</p> <p>Institutional</p> <p>Industrial</p> <p>Utilities</p> <p>Infrastructure</p>	<p>Land Use Map (general and urban)</p> <p>Vegetation Cover Map</p> <p>Protected Areas for Agriculture Map</p> <p>Key Production Areas Map</p>	ABSENT
Land Ownership Pattern	<p>Average area of landholding by type of land use</p> <p>List landowners with landholdings 10 hectares and above</p>	<p>Location map of large landholdings</p>	PRESENT
Mineral Resource and Reserves	<p>Type and location of deposits</p> <p>Type and location of mining sites</p> <p>Mineral resources surveys</p>	<p>Mineral Location Map</p>	PRESENT
Natural Disasters	<p>Occurrences of earthquake</p> <p>Occurrences of landslides</p> <p>Occurrences of volcanic</p>	<p>Typhoon Prone Areas Map</p> <p>Flood prone Areas Map</p> <p>Fault lines</p>	PRESENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

	<ul style="list-style-type: none"> eruptions Occurrences of floods Occurrences of droughts Flood prone areas 		
Location and Extent of Surface Freshwater Bodies	<ul style="list-style-type: none"> Type, location & extent of the following Lakes and rivers Reservoirs Main irrigation canals Wetlands 	<ul style="list-style-type: none"> Water Resources Map Hydrologic Map Map Showing River Map Showing Actual Stream Quality 	<ul style="list-style-type: none"> PRESENT PRESENT
Location and Extent/Size of Marine and Coastal Resources	<ul style="list-style-type: none"> Location & extent of the following Marine and coastal resources Wetlands Seagrass Coral reefs Fishpond resources 	<ul style="list-style-type: none"> Fishpond Resources Map Coastal Resources Map 	<ul style="list-style-type: none"> ABSENT
General Groundwater Information	<ul style="list-style-type: none"> Water Table Location of wells and springs Aquifer recharge & discharge rates Groundwater yield Groundwater quality 	<ul style="list-style-type: none"> Groundwater Map Groundwater Well Logs 	<ul style="list-style-type: none"> ABSENT
Water Use and Regulation	<ul style="list-style-type: none"> Water usage of springs and surface water by the population 		<ul style="list-style-type: none"> ABSENT
Watershed Importance	<ul style="list-style-type: none"> Important uses of the watersheds 		<ul style="list-style-type: none"> ABSENT
Surface Water/Stream Conditions	<ul style="list-style-type: none"> Water quality Sedimentation Surface water runoff rate Streamflow variations 		<ul style="list-style-type: none"> ABSENT
Prevailing Tidal Fluctuations	<ul style="list-style-type: none"> Tidal fluctuations Tide gauging stations 		<ul style="list-style-type: none"> ABSENT
General Climate Type	<ul style="list-style-type: none"> General climate type Rainfall Air temperature Wind velocity Wind patterns Relative humidity Soil & water evaporation rates 		<ul style="list-style-type: none"> ABSENT
Air Quality	<ul style="list-style-type: none"> Sulfur dioxide content of the atmosphere Carbon dioxide content of the Atmosphere 		<ul style="list-style-type: none"> ABSENT

CHECKLIST OF DATA AND MAP REQUIREMENTS FOR ENR PROFILE

<p>Biodiversity/Vegetation/Flora of the following ecosystems:</p> <p>Forest</p> <p>Grassland</p> <p>Cropland/agricultural</p> <p>Urban</p> <p>Lakes & rivers</p> <p>Coastal</p>	<p>Species composition as to endemic species, introduced species, endangered species</p> <p>medical species and species of aesthetic species</p> <p>Population densities and species distribution</p> <p>Species diversity</p> <p>Distribution of vegetation types</p> <p>Standing crop</p> <p>Rate of biomass production</p> <p>Ecological species indicators</p> <p>Commercially valued species</p>	<p>Vegetation Cover Map</p> <p>Aerial Photographs</p>	<p>ABSENT</p>
<p>Biodiversity/Fauna of the following ecosystems:</p> <p>Forest</p> <p>Grassland</p> <p>Cropland/agricultural</p> <p>Urban</p> <p>Lakes & rivers</p> <p>Coastal</p>	<p>Species composition as to endemic species, introduced: species, endangered species: migratory species of scientific and aesthetic interest</p> <p>Population densities and Distribution</p> <p>Species diversity</p> <p>Biomass production/ productivity</p> <p>Ecological/species indicators</p> <p>Commercially valued species</p>		<p>ABSENT</p>
<p>Bacteria and Fungi</p>	<p>Beneficial bacteria and fungi</p> <p>Harmful bacteria and fungi</p>		<p>ABSENT</p>
<p>Dumpsites & Sewerage Systems</p>	<p>No. and location of dumpsites</p> <p>Rate of solid waste generation</p> <p>Type of solid waste mgt. system</p> <p>Type, no. and location of sewerage and waste disposal systems</p>	<p>Location Map of dumpsites</p> <p>Sewerage Layout</p>	<p>PRESENT</p> <p>PRESENT</p>
<p>ENR Cooperatives and NGOs</p>	<p>Type, name, address & type of services of cooperatives</p> <p>Name, address and services of NGOs</p>		<p>ABSENT</p>
<p>Ancestral Domain</p> 	<p>Location of and classification of tribal group residing in ancestral domain</p> <p>Conflicting landclaims land uses and issue over ancestral domain</p>	<p>Ancestral Domain Map</p>	<p>ABSENT</p>
<p>Legal Institutional Jurisdiction of Natural Resources</p>	<p>Institutional jurisdiction of government agencies over natural resources</p>		

CHECKLIST OF DAI A AND MAP REQUIREMENTS FOR ENR PROFILE

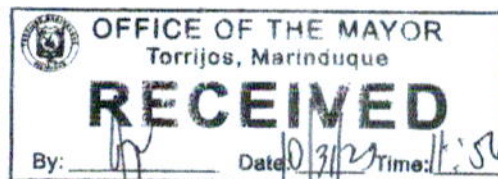
Legislation on ENR planning, development and management	National, provincial and municipal legislations on environment and natural resources relevant to the LGU		ABSENT
Plans, programs and projects	City/provincial and municipal LGU development and management plans and program/project profile*.		ABSENT



Republic of the Philippines
Department of Environment and Natural Resources
PENRO MARINDUQUE

October 26, 2023

HON. LORNA Q. VELASCO
Municipal Mayor
Torrijos, Marinduque



Dear **Mayor Velasco**,

Isang makakalikasang araw!

Relative to the mandates of the Department of Environment and Natural Resources (DENR) to conserve, manage, develop and properly use of the country's environment and natural resources, its Field Offices are extending Technical Assistance to LGUs within their area of jurisdiction in any concerns related to the environment. As such, one of the priority programs of DENR is the Coastal and Marine Ecosystem Management Program (CMEMP) which aims to address the drivers and threats of degradation of the coastal and marine ecosystems. This program uses the Integrated Coastal Management (ICM) approach to holistically manage the ecosystems by looking the interconnectivity of the activities from the ridge down to coastal areas.

In addition, the DENR through its Biodiversity Management Bureau which is the implementer of CMEMP, consulted the Department of the Interior and Local Government through its Bureau of Local Government and Development (DILG-BLGD) and the Department of Human Settlement and Urban Development (DSHUD) to discuss the mainstreaming of the ICM approach into the Comprehensive Land Use Plan (CLUP) as part of the rationalization of the planning system

In this regard, this office would like to commit our technical capabilities, available data and knowledge by being a member of the Technical Working Group on the development of your Comprehensive Land Use Plan. We are looking forward to receiving your invitation in the future TWG meetings.

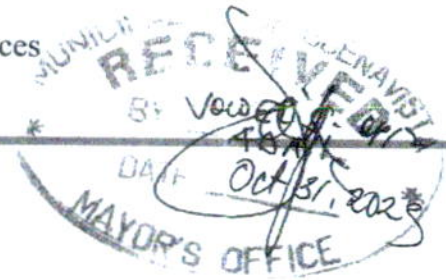
Attached is the matrix of criteria for LGU prioritization for ICM mainstreaming into CLUP including other documents such as river and creeks validation result and status of LGU plans for your reference.

Very truly yours,


IMELDA M. DIAZ
OIC PENR Officer



Republic of the Philippines
Department of Environment and Natural Resources
PENRO MARINDUQUE



October 26, 2023

HON. EDUARD L. SIENA

Municipal Mayor
Buenavista, Marinduque

Dear **Mayor SIENA**,

Isang makakalikasang araw!

Relative to the mandates of the Department of Environment and Natural Resources (DENR) to conserve, manage, develop and properly use of the country's environment and natural resources, its Field Offices are extending Technical Assistance to LGUs within their area of jurisdiction in any concerns related to the environment. As such, one of the priority programs of DENR is the Coastal and Marine Ecosystem Management Program (CMEMP) which aims to address the drivers and threats of degradation of the coastal and marine ecosystems. This program uses the Integrated Coastal Management (ICM) approach to holistically manage the ecosystems by looking the interconnectivity of the activities from the ridge down to coastal areas.

In addition, the DENR through its Biodiversity Management Bureau which is the implementer of CMEMP, consulted the Department of the Interior and Local Government through its Bureau of Local Government and Development (DILG-BLGD) and the Department of Human Settlement and Urban Development (DSHUD) to discuss the mainstreaming of the ICM approach into the Comprehensive Land Use Plan (CLUP) as part of the rationalization of the planning system

In this regard, this office would like to commit our technical capabilities, available data and knowledge by being a member of the Technical Working Group on the development of your Comprehensive Land Use Plan. We are looking forward to receiving your invitation in the future TWG meetings.

Attached is the matrix of criteria for LGU prioritization for ICM mainstreaming into CLUP including other documents such as river and creeks validation result and status of LGU plans for your reference.

Very truly yours,


IMELDA M. DIAZ
OIC PENR Officer



Republic of the Philippines
Department of Environment and Natural Resources
PENRO MARINDUQUE

October 26, 2023

HON. ROLANDO O. TOLENTINO

Municipal Mayor
Gasán, Marinduque

Dear **Mayor Tolentino**,

Isang makakalikasang araw!

Relative to the mandates of the Department of Environment and Natural Resources (DENR) to conserve, manage, develop and properly use of the country's environment and natural resources, its Field Offices are extending Technical Assistance to LGUs within their area of jurisdiction in any concerns related to the environment. As such, one of the priority programs of DENR is the Coastal and Marine Ecosystem Management Program (CMEMP) which aims to address the drivers and threats of degradation of the coastal and marine ecosystems. This program uses the Integrated Coastal Management (ICM) approach to holistically manage the ecosystems by looking the interconnectivity of the activities from the ridge down to coastal areas.

In addition, the DENR through its Biodiversity Management Bureau which is the implementer of CMEMP, consulted the Department of the Interior and Local Government through its Bureau of Local Government and Development (DILG-BLGD) and the Department of Human Settlement and Urban Development (DSHUD) to discuss the mainstreaming of the ICM approach into the Comprehensive Land Use Plan (CLUP) as part of the rationalization of the planning system

In this regard, this office would like to commit our technical capabilities, available data and knowledge by being a member of the Technical Working Group on the development of your Comprehensive Land Use Plan. We are looking forward to receiving your invitation in the future TWG meetings.

Attached is the matrix of criteria for LGU prioritization for ICM mainstreaming into CLUP including other documents such as river and creeks validation result and status of LGU plans for your reference.

Very truly yours,


IMELDA M. DIAZ
OIC PENR Officer

Office of the Mayor
Gasán, Marinduque
RECEIVED

Date 31 -10- 2023

By CA



Republic of the Philippines
Department of Environment and Natural Resources
PENRO MARINDUQUE

October 26, 2023

HON. MARRISA RED-MARTINEZ

Municipal Mayor
Sta. Cruz, Marinduque



OFFICE OF THE MAYOR
MUNICIPALITY OF
SANTA CRUZ, MARINDUQUE

RECEIVED

By: *Marianne Carrez*
Date: *10-27, 2023* Time: *11:16*

Dear **Mayor Martinez**,

Isang makakalikasang araw!

Relative to the mandates of the Department of Environment and Natural Resources (DENR) to conserve, manage, develop and properly use of the country's environment and natural resources, its Field Offices are extending Technical Assistance to LGUs within their area of jurisdiction in any concerns related to the environment. As such, one of the priority programs of DENR is the Coastal and Marine Ecosystem Management Program (CMEMP) which aims to address the drivers and threats of degradation of the coastal and marine ecosystems. This program uses the Integrated Coastal Management (ICM) approach to holistically manage the ecosystems by looking the interconnectivity of the activities from the ridge down to coastal areas.

In addition, the DENR through its Biodiversity Management Bureau which is the implementer of CMEMP, consulted the Department of the Interior and Local Government through its Bureau of Local Government and Development (DILG-BLGD) and the Department of Human Settlement and Urban Development (DSHUD) to discuss the mainstreaming of the ICM approach into the Comprehensive Land Use Plan (CLUP) as part of the rationalization of the planning system

In this regard, this office would like to commit our technical capabilities, available data and knowledge by being a member of the Technical Working Group on the development of your Comprehensive Land Use Plan. We are looking forward to receiving your invitation in the future TWG meetings.

Attached is the matrix of criteria for LGU prioritization for ICM mainstreaming into CLUP including other documents such as river and creeks validation result and status of LGU plans for your reference.

Very truly yours,


IMELDA M. DIAZ
OIC PENR Officer



Republic of the Philippines
Department of Environment and Natural Resources
PENRO MARINDUQUE

October 26, 2023

HON. AUGUSTO LEO M. LIVELO

Municipal Mayor
Mogpog, Marinduque

Dear **Mayor Livelo**,

Isang makakalikasang araw!

Relative to the mandates of the Department of Environment and Natural Resources (DENR) to conserve, manage, develop and properly use of the country's environment and natural resources, its Field Offices are extending Technical Assistance to LGUs within their area of jurisdiction in any concerns related to the environment. As such, one of the priority programs of DENR is the Coastal and Marine Ecosystem Management Program (CMEMP) which aims to address the drivers and threats of degradation of the coastal and marine ecosystems. This program uses the Integrated Coastal Management (ICM) approach to holistically manage the ecosystems by looking the interconnectivity of the activities from the ridge down to coastal areas.

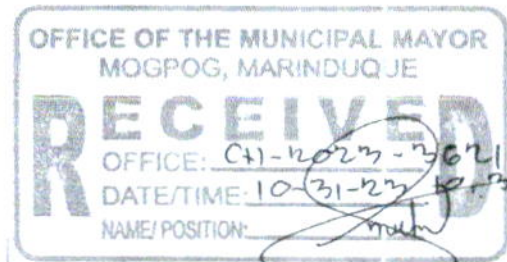
In addition, the DENR through its Biodiversity Management Bureau which is the implementer of CMEMP, consulted the Department of the Interior and Local Government through its Bureau of Local Government and Development (DILG-BLGD) and the Department of Human Settlement and Urban Development (DSHUD) to discuss the mainstreaming of the ICM approach into the Comprehensive Land Use Plan (CLUP) as part of the rationalization of the planning system

In this regard, this office would like to commit our technical capabilities, available data and knowledge by being a member of the Technical Working Group on the development of your Comprehensive Land Use Plan. We are looking forward to receiving your invitation in the future TWG meetings.

Attached is the matrix of criteria for LGU prioritization for ICM mainstreaming into CLUP including other documents such as river and creeks validation result and status of LGU plans for your reference.

Very truly yours,

IMELDA M. DIAZ
OIC PENR Officer





Republic of the Philippines
Department of Environment and Natural Resources
PENRO MARINDUQUE

OFFICE OF THE MAYOR
BOAC, MARINDUQUE
RECEIVED
By: 8/21/23
Date: 8/21 Time: 10:17

October 26, 2023

HON. ARMI DC. CARRION

Municipal Mayor
Boac, Marinduque

Dear **Mayor Carrion**,

Isang makakalikasang araw!

Relative to the mandates of the Department of Environment and Natural Resources (DENR) to conserve, manage, develop and properly use of the country's environment and natural resources, its Field Offices are extending Technical Assistance to LGUs within their area of jurisdiction in any concerns related to the environment. As such, one of the priority programs of DENR is the Coastal and Marine Ecosystem Management Program (CMEMP) which aims to address the drivers and threats of degradation of the coastal and marine ecosystems. This program uses the Integrated Coastal Management (ICM) approach to holistically manage the ecosystems by looking the interconnectivity of the activities from the ridge down to coastal areas.

In addition, the DENR through its Biodiversity Management Bureau which is the implementer of CMEMP, consulted the Department of the Interior and Local Government through its Bureau of Local Government and Development (DILG-BLGD) and the Department of Human Settlement and Urban Development (DSHUD) to discuss the mainstreaming of the ICM approach into the Comprehensive Land Use Plan (CLUP) as part of the rationalization of the planning system

In this regard, this office would like to commit our technical capabilities, available data and knowledge by being a member of the Technical Working Group on the development of your Comprehensive Land Use Plan. We are looking forward to receiving your invitation in the future TWG meetings.

Attached is the matrix of criteria for LGU prioritization for ICM mainstreaming into CLUP including other documents such as river and creeks validation result and status of LGU plans for your reference.

Very truly yours,


IMELDA M. DIAZ
OIC PENR Officer