ENVIRONMENTAL PROFILE

Guimaras province is an island ecosystem composed of five coastal municipalities which covers a land area of 60,547 hectares. The topography of Guimaras Island varies from level to steeply sloping with land elevation ranging from 0 to nearly 300 meters above sea level. Mt. Dinalman, located in Millan, Sibunag, has the highest elevation of 267 meters above mean sea level.

A simplified topographic contour map indicates that the great part of islands land area is above 100 masl. By comparing the topographic features from the 1956 topographic maps with the present situation, it could be concluded that the island topography has not been altered much by man-made activities.

The island's topography shows quite steep slopes on the western side of island with plateaus and peaks above 200 m in the central portion. A large part or 69% of the total land area is within the 0-18% slope, 19.73% is above 18-30% slope, 9.42% is above 30-50% slope and 1.74 percent is above 50% slope.

Figure 1. Slope Map of Guimaras

Based on the preliminary Karst subsidence susceptibility mapping of MGB, in the Municipality of Buenavista there are 89 sinkholes (all types) and 85 cave openings while there are 457 sinkholes (all types) and 282 cave openings in the Municipality of Jordan.
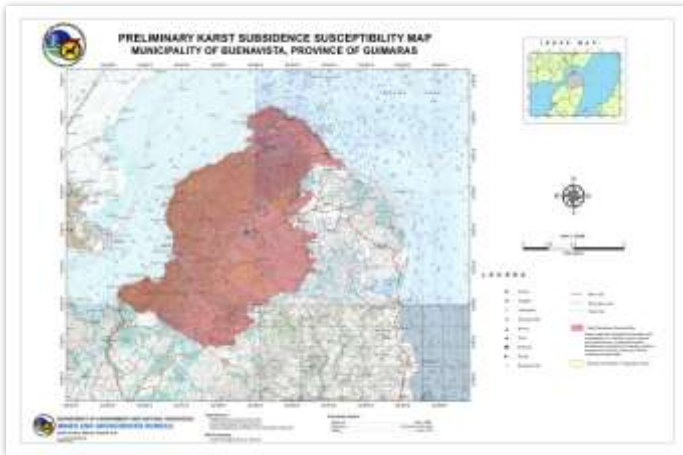
Figure 2. Preliminary Karst Subsidence Susceptibility Map of Buenavista   **Figure 3. Preliminary Karst Subsidence Susceptibility Map of Jordan**

The estimated overall coastline length is 470 kms, 300 kms of which comprise the coastal perimeter of mainland Guimaras while 170 kms cover the islands and islets. The municipal waters of Guimaras have a total area of 160,202.68 hectares (NAMRIA). The estimated foreshore area is 212.5515 km in total length and an area of 960.3221 hectares.

There are two principal watersheds in the island, the Eastern watershed covering 387 sq.km. or 65 percent of the total area, and the Western watershed covering 209 sq. km. or 35 percent of the total area including the inhabited islands (e.g., Inampologan, Guiwanon, Panobolon) with surface watersources (Figure 2). The remaining 9 sq.km. are small-inhabited islands. In the Eastern watershed, there are 29 river basins, of which Cabano (85.4 sq.km.), Sibunag (109.5 sq.km.) and Mantangingi River (59 sq.km.) are considered perennial, indicating that the base flow is supported by aquifer drainage. In the Western watershed, on the other hand, there are 10 individual river basins where Igang River is considered perennial (Figure 4).

Figure 2. Watershed and drainage map of Guimaras

5,459.40 hectares or 9.09% of the total area of Guimaras is considered Forest and Forestland (FFL). FFL is categorized into upland, fishpond, mangrove and unclassified Islands and Islets. In terms of FFL area, Sibunag has the largest upland and unclassified forestland, while Nueva Valencia has the largest fispond and mangrove areas as shown in the Table 1.

Table 1. Area of FFL Per Municipality

Municipality	FFL Classification (has)				Total
	FL (Upland)	FL (Fishpond)	FL (Mangrove)	Unclassified	
Buenavista	432.39	57.43	10.96	13.09	513.87
Jordan	1,090.46	15.29	36.22	12.73	1,154.70
Nueva Valencia	0.65	455.04	143.47	599.86	1,199.01
San Lorenzo	460.14	110.91	3.49	68.77	643.31
Sibunag	232.13	495.21	66.88	1,154.30	1948.51
Total	2,215.77	1,133.88	261.02	1,848.75	5,459.40

Source: Land Classification Map

The vegetative cover of the FFL area are classified and shown in Table 2. The mixed plantation occupies the biggest area (2,083.26 has.) followed by fishpond areas (891.69 has.), woody shrubs (628.27 has.), mangrove forest (563.48 has.), coconut plantation (394.16 has.), brushland/grassland (361.49 has.), rice paddies (252.25 has.), open cultivated (93.03 has.), non-plantable area (87.99 has.), built-up area (67.59 has.), and the smallest area is water bodies (36.20 has.).

Table 2. Vegetative cover of Guimaras Province in hectares (2017).

Vegetative Cover/Land-use	Land Cassification				TOTAL
	FL (Upland)	FL (Fish Pond)	FL (Mangrove)	Unclassified	
Brushland/Grassland	308.92	20.825	4.887	26.856	361.49
Built-up Area	21.964	9.418	1.467	34.742	67.59
Coconut Plantation	40.884	1.793		351.52	394.16
Fishpond	12.919	775.637	49.936	53.201	891.69
Mangrove	4.631	122.426	142.723	293.702	563.48
Mixed Plantation	1039.561	64.011	39.174	940.512	2083.26
Non-plantable area	1.828	2.171	2.484	81.505	877.99
Open cultivated	79.926	5.273	0.457	7.37	93.03
Rice paddies	88.763	117.462	11.259	34.765	252.25
Water Bodies		4.562	7.07	24.57	36.20
Woody Shrubs	616.417	10.289	1.566		628.27
Total	2,215.77	1, 133.87	261.02	1,848.74	5459.41

Sources: Guimaras FLUP   *FL – Forest Land

Guimaras is classified as Corona's Type 1 climate, characterized by two pronounced seasons: the dry season usually between the months of November and April, and the rainy or wet season, which occurs during the rest of the year.

Rainfall during the northeast monsoon would most probably be due to conventional thunderstorms, a result of intense heating causing rapid evaporation, or to a lesser extent, typhoons which can occur in the region during

October-November. The probability of a typhoon hitting Guimaras is fortunately low. The island has a rare frequency passage of 0%-10% of the annual average of 19.8 typhoons.

The southwest monsoon (hanging habagat), which ushers in the wet season, starts in June and ends in September. It is characterized by moisture-laden maritime tropical (MT) winds prevailing from a southwesterly direction due to a high pressure system over the Australian Continent, from which diverging winds move towards a low pressure system over South and Southeast Asia including Mainland China.

Climate variations have been observed in Guimaras as manifested by conditions wherein it is raining in one area but just in another area it is dry. Micro-climatic conditions differ in areas of the island and require more detailed climatic measurements and advanced weather observation facilities. This is very significant considering that agriculture; fisheries and tourism are the primary drivers of the economy.

Guimaras has 98 barangays and 55 are coastal barangays. The population of the province has grown steadily for the past 45 years: from a total of 73,014 persons in 1970, the population has almost doubled to 141,450 in 2000 and increased to 162,943 in 2010 and finally reached 174,613 in 2015. The Municipality of Buenavista recorded the highest population growth for the past 15 years.

In 2015, the coastal population density in Guimaras was recorded at 1,533 persons per square kilometer of which Buenavista remained the most densely populated at 435 persons per square kilometer. Sibunag, on the other hand, was the least densely populated with only 193 persons per square kilometer (Table 3).

Table 3. Land area, number of coastal barangays, coastal population and coastal population density by municipality.

Municipality	Total Area (Sq. Km.)	Number of Barangays	Number of Coastal Barangays	Coastal Area (Sq. Km.)	Total Coastal Population (2015)	Coastal Population Density (Persons/Sq.Km)
Buenavista	128.26	36	17	49.33	21,482	435
Jordan	126.11	14	8	47.99	14,916	311
Nueva Valencia	137.12	22	17	96.89	28,431	293
San Lorenzo	93.04	14	7	48.42	14,554	301
Sibunag	120.04	12	6	59.00	11,373	193
Guimaras	*604.57*	*98*	*55*	*301.63*	*90,756*	*1533*

Source: 2ⁿᵈ State of the Coasts Report of Guimaras Province

The economy of Guimaras from 2000 to 2017 was dominated by the Services Sector, which included (from highest to lowest share) other services, wholesale and retail, transportation, storage and communication services. This happened as a consequence of the booming tourism industry and tourism support services. The increase in the number of visitors, commuters and the population has fuelled the corresponding increase in demand for goods and services. Agriculture, fishery and forestry sector ranked second which was boosted by palay, mango, cashew, livestock and poultry, and fishery production. The industry sector, comprising of manufacturing, construction, mining and quarrying, particularly of limestone which abound in the island was the least contributor to the economy.

The Provincial Product Account/Gross Domestic Product (PPA/GDP) for 2002-2004 has reflected this likelihood as can be seen in the growth rates in the construction, and services sector particularly in transport, communication and storage, trade, finance and private services. Varied tourism attractions and potentials like beaches/resorts/islets, festivals, religious sites and activities, nature, historical and agri/farm sites support the

growing tourism industry in the province. Visitor arrivals exhibited an increasing trend from 2000-2005 with an average annual growth rate of 25 percent. Tourism has generated significant economic activities and employment in the province, which contributed to an annual average of PhP 170 million pesos in tourism receipts to the Guimaras economy.

Major development changes in the province included the improvement of the 500 km local road network that facilitated efficient transfer of people and goods to many parts of the island. The 129 km long national road network is completely paved and there is an on-going road widening and drainage system construction. Meanwhile, the 121 km provincial roads with 24 road sections leading to tourism sites were also improved.

In 2014, Philippine Investment Management, Inc. (PHINMA) Energy Corporation started the operation of the 27 wind turbines of the 54 MW San Lorenzo Wind Farm. The Wind Farm was established for the primary purpose of utilizing renewable energy and pursuing clean and energy efficient projects. The province benefitted from its share of the revenues from the taxes generated through the Municipality of San Lorenzo.

References:

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2nd State of the Coasts Report of Guimaras Province
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