International Journal of Computing Sciences Research (ISSN print: 2546-0552; ISSN online: 2546-115X)
Vol. 6, pp. 741-762
doi: 10.25147/ijcsr.2017.001.1.70
https://stepacademic.net

**Long Paper**

# Reintroducing the GeoNames that features the land and water near the Montufar and Bingay Points in Prieto Diaz, Sorsogon, Philippines

Ana Marie R. Abante
Bicol University, Philippines
anamarie.abante@bicol-u.edu.ph
(corresponding author)

*Date received*: April 4, 2021
*Date received in revised form*: May 27, 2021; June 6, 2021
*Date accepted*: July 1, 2021

Recommended citation:

Abante, A. M. R. (2022). Reintroducing the GeoNames that feature the land and water near the Montufar and Bingay Points in Prieto Diaz, Sorsogon, Philippines. *International Journal of Computing Sciences Research*, 6, 741-762. doi:10.25147/ijcsr.2017.001.1.70

**Abstract**

*Purpose* – The paper aims to generate analytical data to reintroduce the geographic naming based on the existing coastwise feature names as part of contextualizing the ecosystem relative to risk reality phenomena that are based on the actual land and water uses in the study area.

*Method* – ArcGIS platform was used to assess the following: (i) coastwise feature names based on the Special Report of the United States Board of Geographic Names Relating to the Geographic Names in the Philippine Island, (ii) Topographical features and feature names, (iii) politico-administrative and planning subdivisions, (iv) income classification of the study area, (v) natural and physical map features of the study area, (vi) disaster risk reality phenomenon, (vii) The Agta IPs environmental and Disaster Risk Reduction Practices relative to the ecosystem and actual uses of land and water in the study area

*Results* – Coastwise feature naming describes the physical environment that features the mountain, river, historical, cultural, or events being named, etc. The Coastwise feature names are essential in improving and promoting eco-tourism activities on the coast of Prieto Diaz as the home of the indigenous people who traditionally settle and move to another settlement merely remaining speaking their mother tongue "Agta Tabangnon and Bicol Sorsogon". Although the income classification of Prieto Diaz is low, during the

COVID-19 lockdown the locally produced food supply was sufficient to feed Prieto Diaznon. This implies that the coping capacity during pandemic somehow hinted that the land and water utilization remain stable municipal wide. It generally implies the friendliness of Prieto Diaznon which resembles the indigenous people's friendliness to the environment before the Spaniards colonization. The natural resources are generally conserved and protected although some built-up areas were impacted by the calamities and natural hazards. But in terms of disaster risk reality was calculated to be 92% which means the study area is somewhat resilient to resilient municipalities. The remaining 8% are areas mostly located in low-lying and coastal areas.

*Conclusion* – The coastwise feature names relating to the geographic names in the Philippine Islands remain in use for coastal directions, research to monitor sedimentation significant in assessing the general development of a regional understanding of the vegetation and climate dynamics, and weather forecasts. This study concludes that the coastwise feature names or geographic names are significant to characterize the risk or resiliency realities of the old barrios up to the present barangays. Furthermore, the coastwise feature names relating to the geographic names in the Philippine Islands remain useful to attract more tourists and researchers to visit a place virtually or on-site during and after the COVID-19 pandemic.

*Recommendations* – Reintroduction of the geographic names by way of contextualization risk or resilience reality theory of Abante (2021a;2020a) and incorporating the of the Popper (1978)theory on *"world of contents of thought",* Meiring (1993) theory on 'place names', and Quine (1953) cited the Strawson's logical theory of reference on backing the naming with descriptions can also reintroduce a place starting from the 'VisitangDaan' myth up to the present barangays via internet especially during the new normal after COVID-19 pandemic to strengthen linkages and trading.

*Keywords* – GeoName, *Agta Tabangnon,* resiliency reality*, risk reality, land use*

## INTRODUCTION

Prieto Diaz is a 5th class municipality of Sorsogon province. It is situated in Sorsogon Province, Region 5, Philippines. Its geographical coordinates are 13° 2' 30" North, 124° 11' 38" East. It is situated 387 km southeast of Manila, 50.9 km southeast of Legazpi City, 31.4 km east of Sorsogon City. It is part of the southernmost tip of the Bicol Peninsula and Luzon Island. The municipality is characterized by the topography with the highest elevation of not more than 300 meters mountain ranges on the west and sloping uplands, alluvial plain and beautiful seascapes, seagrass bed and mangrove forest eastern part of the central low-lying areas of the municipality surrounded by Rapu-Rapu strait and the Pacific Ocean.

***Related Literature***

The story of 'VisitangDaan' (now Prieto Diaz) resembles the movement of a nomadic hobo (part of a tribe or group that moves from place to place without a fixed pattern of movement). The people of "VisitangDaan' ' composed of 32 families named their barrio after an Aeta 'commissario' named Juan Bantugan. According to Grey (2015), ethnic Filipinos (Agta or Aeta) move from place to place without a fixed pattern of movement. He said that males went to the mountains where they would hunt wild animals while females gathered wild fruits, root crops, and vegetables for their food. He also said that they were rich in their indigenous knowledge and practices that sustained their communities long before the coming of the Spaniards. As a result of their nomadic life as said by the author, they live in houses built out of grass and tree branches to easily vacate upon scarcity of surrounding food. They do not have social rules and live according to their ancient customs, which are most evidently shown in the way they dress (Grey, 2015). According to the Abante (2019) concept model for exposure-happenstance, it hinted at roads(originally horse trails) regardless of whether it traverses a vulnerable landscape it links the traders to abaca farms with the presence of indigenous people who lived in Bikol (which means river) and trading centers in the old barrios or villages as shown in Table 3which eventually formed the present urban centers.

In 1572, according to Fr. Jose Castaño, a missionary, described the early Bicolanos as a race of impetuosity and valor fond of social dealings, more intelligent and vigorous, more active, industrious and warlike, and adjusted to living in compact villages (Barrio). From 1493 to 1803, Cano (2008) cite the authors Blair(1904) who said that the explorations of the Philippine Islands by early navigators, descriptions of the islands and their peoples, their history, and records of the Catholic missions described in contemporaneous books and manuscripts showed the political, economic, commercial and religious conditions of those islands from their earliest relations with European nations to the beginning of the nineteenth century. The Jesuit Colin, one of the pioneers in the Philippine missions, described the Bicolanos as "being devoted to the cultivation of their lands, harvested *palay* (rice grains) with farm tools they had made to till the soil. They were further described as having instruments for fishing and household utensils made of bamboo and wood. Colin said that they wore clothing and did not go around naked; rather, they wore collarless robes which were well-made, the length of which reaches the ankle. They were always reserved and careful in covering their persons with extreme diligence, circumspection, and modesty at which point they exceed all nations. Antonio de Morga observed that the Bicolanos were of medium height with a complexion like stewed quinces, and both men and women are well-featured. They have very black hair, and thin beards, and are very clever at anything that they undertake; keen and passionate, and of great resolution.

According to Gannett (1901), the Special Report of the United States Board of Geographic Names Relating to the Geographic Names in the Philippine Islands consist of a

list showing the approved spelling of about 4,000 coastwise feature names in the Philippine Archipelago. The names of the coastwise features in the Philippines Islands were charted by the Hydrographic Office upon the acquisition of the Philippine Islands by the United States of America in 1898 to map the features and sailing directions of the possession of the Philippines by the US because the existing charts, books, maps, and publications were available in Spanish Names or Malay Names written according to Spanish methods. On English charts, the spelling of some Malay names had been altered to conform to English and American methods of writing native names. In doing this according to the report, errors and confusion had arisen. According to the author, the Hydrographic Office followed the advice by the board that the Spanish official maps and charts should be followed. In relation of the United States Board on Geographic Names to the names in the Coast Survey atlas the on February 20, 1901, it stated that the Coast and Geodetic Survey is about to issue an atlas of the Philippine Islands composed of maps made by the Manila Observatory under the direction of Rev. Father Algue, S. J. The report contains the list of geographic names aggregating about 6,000 names whose spelling has been carefully revised by Father Algue. Baumgartner (1990) in his work entitled "Essays on Bicol History 1565-1860", the original Bicolanos were indigenous people who roamed the southern portion of the Luzon peninsula. He said they have their own culture and economy emphasizing the Agta cultural practices were friendlier to the environment even if they practice the traditional slash and burn agriculture. He also mentioned that one of the elements of their slash and burn practices is to leave the land for a while for it to recover. The author stressed that the Agta IPs transfer to another area contrary to the western historians that the Philippines was discovered by Spaniards.

Meiring (1993) cited the philosopher Popper (1978) on the three kinds of worlds, namely: the *physical* world, the *mental world*, and the *world of contents of thought*. He said name objects are part of the genetic make-up of man where people can use language correctly, name places, people, and objects, even though they do not have a set of syntactic or semantic rules on hand. According to Meiring (1993), how man names rivers, mountains, valleys, towns, and other environmental entities reflects how he thinks and lives and what his psychological disposition and subconscious mind produces in his daily contact with universal semantic domains like entities, events, abstract concepts, and the relations between these domains. As said by Meiring (1993) the study of place names, based on etymological, historical, and geographical information are words used to indicate, denote, or identify a geographic locality such as a town, river, or mountain. His study defines the term toponymy which means place names categorized as habitation names and feature names. He said a habitation name denotes a locality that is people or inhabited, such as a homestead, village, or town, and usually dates from the locality's inception. Feature names refer to natural or physical features of the landscape and are subdivided into hydronyms (water features), oronyms (relief features), and places of natural vegetation growth. He said a name like Happy Valley is a compound expressing the relation between an abstract state and a geographical feature of the land, denoting a place. He stressed that most geographical names are compounds with a stem and generic

component functioning as a semantic unit whether written as one or two words, which are language-specific writing patterns. He said, these concepts correlate with the semantic domains mentioned above which could fall under more than one category, but that is not the point. He highlighted the importance of knowing that each geographical name has at least one, be it explicit or not, semantic pattern as its internal structure. According to him, to be able to use a geographical name or understand statements in which it is used in other contexts than referring to a place, river, or mountain, knowledge of conventional and associative meanings connected with the place is valuable. He cited the Strawson (1953) logical theory of reference on backing the naming with descriptions. He also cited Donnellan (1960) who said that a name is worthless without the backing of descriptions that can be produced on demand to explain the application. Meiring (1993) said that this descriptive backing amounts to the collective content of all conventional beliefs and connotations attached to a name. It stands to reason that this descriptive backing also has subjective content as it is based on individual experience and knowledge about a place, person, or object bearing this name.

According to Ahlers (2013), gazetteers are the basis of many geospatial applications and serve an important role to collect and make available knowledge about the physical world such as place names and their coordinates. He said that GeoNames is one of the largest and most often used gazetteers and it is generally assumed to be of sufficient quality. His study examined the quality and accuracy of the data in more detail, triggered by some anomalies encountered during its use. It presented a classification of inaccuracies ranging from grid patterns, imprecise coordinates, overlaps, and repetitions as well as misclassifications and visualized these for a range of countries. The result gave an outlook into potential corrections.

***The 'World of contents of thought' context model***

The "World of contents of thought" contextual model is designed to measure the present land and water use, risk hotspot level of significance (Abante (2021) and incorporate in geospatial data modeling the 'World of contents of thought' theory of Popper (1978) as well as the placenames theory of Meiring (1993), and the logical theory of reference on backing the naming with descriptions theory of Strawson (1953). Figure 1 shows the hierarchical relationships of geographic feature names and location, risk assessment, 'world of contents of thought' in terms of physical world measurements. The physical world is also Popper's (1978) theory that will be used to analyze the landscape and seascape of Prieto Diaz. The mental world theory of Popper (1978) is not covered in this article although it is reflected in the schematic diagram below.

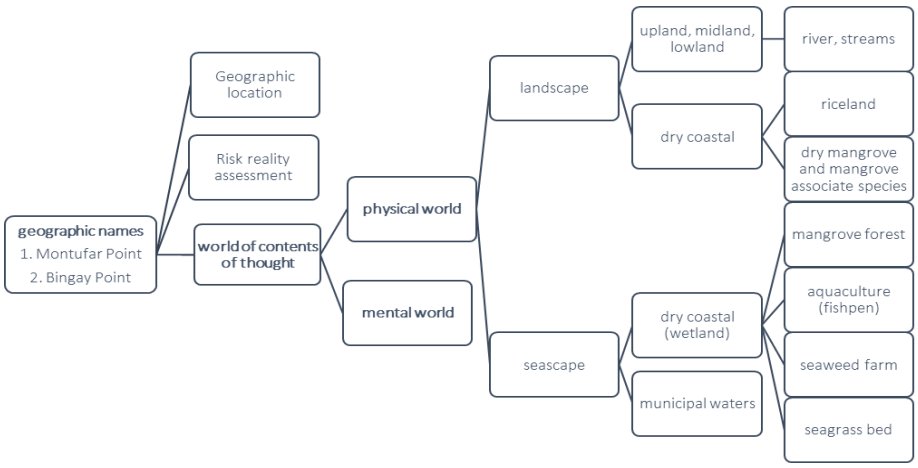


*Figure 1.* "World of contents of thought" contextual model

The paper aims to reintroduce the coastwise feature or geographic naming in contextualizing the ecosystem relative to disaster risks and actual land and water use contextualization using the ArcGIS platform.

## METHODOLOGY

The researcher assessed the coastwise feature names and graphical information that presents the topography and coastal information to contextualize the land and water utilization relative to the risk reality phenomenon and natural features in the study area, politico-administrative and planning subdivision, and the environmental and disaster risk reduction practices of indigenous people using ArcGIS platform.(Abante, A.M.R., 2021a,b, 2020a,b, 2019, 2018; Ksibi, 2019; Abante & Abante, 2019a,b; Abante &Balilo, 2018)

### *Coastwise Feature Names Assessment*

The municipality sits in Montufar and Bingay Points located eastern part of the country, 400 km southeast of Manila. The coastwise feature names about Bingay and Montufar Points followed the Spanish designation of feature names. Table 1 shows the convenient translation of the given coastwise feature names describing the location of VisitangDaan or Barrio Bantugan or Barrio Montufar or Prieto Diaz, Sorsogon Province.

### *Hydrographic/Topographic Graphical Features Assessment*

The 1950s Topographic Map of Prieto Diaz was used to analyze the coastwise feature names and graphical symbols. Figures 2 and 3 disclose where the coastwise feature names appear in topographic/hydrographic maps made in 1901 and Google Earth.

Table 1. Coastwise names in Prieto Diaz, Sorsogon

| coastwise feature names | Spanish | English | Remarks |
|---|---|---|---|
| Bingay | punta | Tip | The Bingay Point indicates the tip of the coast of Montufar (now Prieto Diaz) |
| Montufar | Pueblo or barrio, Y punta | town, and tip | The Montufar Point describes the Barrio Bantugan(VistangDaan) which was changed to Barrio Montufar in 1903 |


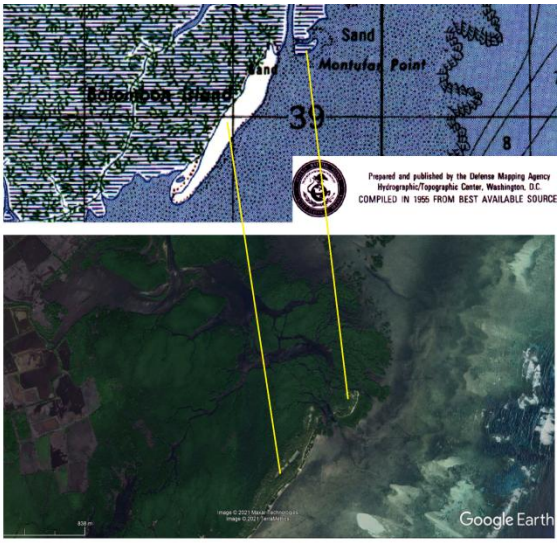


Figure 2. GeoName: Bingay Point Figure 3. GeoName: Montufar Point

***Politico-Administrative and Planning Subdivision of Prieto Diaz Assessment***

Some historians believe that before the arrival of the Spaniards in 1569, Bornean *datus* (local chieftains) and their followers settled in Albay (Ibalong) in the 13th and 14th centuries. However, according to Baumgartner (1990), the original Bicolanos were indigenous people in the southern portion of the Luzon peninsula. Historians said that in 1572 there were already 41 settlements including the Barrio Bantugan in Sorsogon (before it was separated from Albay in 1894) before the Spaniards arrived in Sorsogon in 1569. In 1881, the Barrio Bantugan (VisitangDaan) became an independent parish, almost 50 years after the first petition to have it separated from its mother parish, the Our Lady of Annunciation of Bacon (now a district of Sorsogon City) when it was organized as a separate parish in 1833.In 1902, Dr. Bernardino Monreal, the first gobernadorcillo of

Sorsogon province changed the name of "Barrio Bantugan" to "Barrio Montufar". Prieto Diaz's name was changed again combining the surnames of two of the 15 martyrs of the Bicol Region who were executed in Luneta from these 15 martyrs two were greatly renowned - these are Rev. Frs. Gabriel Prieto and Severino Diaz. Thus, the name of the municipality transformed to Prieto Diaz in honor of these two revered priests. The Act No. 940, enacted on October 12, 1903, otherwise known as An Act Declaring the Barrios of Montufar and Manlabong, now a part of the Municipality of Bacon, and the Barrio of Calao, now a part of the Municipality of Gubat, all of the Province of Sorsogon, assigned all these areas into a New Municipality under the name of Prieto Diaz. The act by authority of the United States enacted by the Philippine Commission states that: (i) the barrios of Montufar and Manlabong (formerly part of the municipality of Bacon, Sorsogon now a district of Sorsogon City), and the barrio of Calao (formerly part of the municipality of Gubat, Sorsogon) established the municipality under the name of Prieto Diaz. Montufar Point is located near the "VisitangDaan" village (now Barangay San Isidro) while Bingay Point (formerly part of Barrio Manlabong) is presently located in Barangay Lupi. The old church and Escuela Pia (old school located adjacent to old church ruins), and old burial grounds (Barangay Tupaz) are part of the old Poblacion located between Montufar and Bingay Points.

On June 19, 1960, under the Republic Act No. 2923, an Act Changing the Names of Certain Barrios in the Municipality of Prieto-Diaz, Province of Sorsogon. He names the following barrios in the Municipality of Prieto-Diaz, Province of Sorsogon, are changed as follows: (i) Barrio Cayo to Barrio Santa Lourdes, (ii) Barrio Manao to Barrio San Fernando, (iii) Barrio VisitangDaan to Barrio San Isidro, (iv) Barrio Cagbulalacao to Barrio San Ramon, (v) Barrio Binuntulan to Barrio Santo Domingo, and (vi) Barrio Pigbanua to Barrio San Rafael. The topographic/hydrographic map features the location of the Montufar Point relative to the Poblacion area of the Prieto Diaz town and VisitangDaan (now Barangay San Isidro) and VisitangDaan Bridge named after VisitangDaan Creek. The creek's mouth or estuary is relatively near the Montufar Point (coastwise feature name given by the US hydrographers and surveyors in 1898 to map the features and sailing directions of the possession of the Philippines by the US).

***Income classification Assessment***

The municipality has an average annual income of one million pesos or more but less than three million pesos realized from regular sources of the local general and infrastructure funds including the internal revenue and specific tax allotments. The agriculture and fisheries industries have a significant impact on the environment where the farmers and fishermen live and work to produce food. However, development is not just about sustaining it. It reflects stability, land use sensitivity described by Abante & Abante (2018), preparedness as defined by Abante (2021), adaptation to the bearable risk described by Abante, coping capacity described by Abante, competency described by Abante, landscape, or seascape vulnerability or land and water condition measurement by Abante, exposure happenstance as result of a decision of choosing to be situated in

danger zone based on the interpretation of Abante and hazard events impacting the people, properties, and socioeconomic support facilities. (Abante, A.M.R., 2021a,b, 2020a,b, 2019, 2018; Ksibi, 2019; Abante & Abante, 2019a,b; Abante &Balilo, 2018) A near 0-risk goal, as well as nil exposure goal, 0-house in stilt, danger and no-build-zone policy, directs all the risk reduction actions not only to advanced preparedness but also realizing a stable and sustainable development. (Abante, A.M.R., 2021a,b, 2020a,b, 2019, 2018; Ksibi, 2019; Abante & Abante, 2019a,b; Abante &Balilo, 2018)Insufficient, Insignificant, and advanced preparedness measurements are all-encompassing sensitive land and water utilization according to adaptive capacity from household to barangay and municipal level governance. (Abante, A.M.R., 2021a,b, 2020a,b, 2019, 2018; Ksibi, 2019; Abante & Abante, 2019a,b; Abante &Balilo, 2018)The adaptive capacity of Prieto Diaz is incomparable to cities or first-class municipalities in terms of coping capacity as Prieto Diaz is sensitive to risk factors such as exposure, preparedness-insufficiency, and low adaptive capacity with the effects of hazard events. (Abante, A.M.R., 2021a,b, 2020a,b, 2019, 2018; Ksibi, 2019; Abante & Abante, 2019a,b; Abante &Balilo, 2018)All calamities and natural hazards recurring and affecting the municipality is a natural feature of risk as shown in Figure 5.

***Natural and Physical Map Features Assessment***

Figure 4 shows the natural and physical features of the landscapes and seascapes of Prieto Diaz by subdividing the water features (hydronyms), elevation features (oronyms), and places of natural vegetation growth such as Riceland, seagrass beds and coral reefs, mangrove, and mangrove associated species such as coconut, rimas and so on. The ecosystem boundaries show the metes and bounds to capture the key roles that influence the service environment. The ecosystem map features the following: upland, midland, lowland, dryland, and wetland in the coastal barangays of Prieto Diaz that interconnect the type of value they exchange. The upland is characterized by elevation above 200 m that is reckoned from mean sea level. Only the barangay San Rafael is situated in the upland ecosystem. The midland and lowland are characterized by elevation above 100 m to 200 m and 10 m to 100 m respectively. These areas are mostly vegetated with coconuts. The Ibingan dam is situated within the lowland ecosystem as shown in Figure 6. The coastal barangays of Prieto Diaz comprise the dryland that is adjacent to the submerged land and seagrass bed from the shoreline at high tide to include mangrove forest reserve, sandy beaches of Totin in San Ramon, Lebanon in Lupi and Sabang in Diamante, brackish water, nipa swamps, estuarine rivers of Ibingan and Manlabong, underwater rivers, fishponds and other areas within a seaward to include coral reefs of Taros, Paludpuran, Madiklom, Lagbac, Rawis, Kalig-an, Malipot and Pagol, HalabangLapiz Sandbar, seaweed farm, and the islets of Bigaho, Bingay, Balonbon, Montufar Islet (small Balonbon). The dryland in the coastal barangays is characterized by floodplains with 0 to 10 m elevation which includes the alluvial flats and intertidal or old tidal flats that are presently vegetated with rice paddies or sometimes vegetated with dry mangroves and mangrove associated species as shown in Table 4. Similarly, Table 4 disclosed the surface rivers and foreshore areas in Sabang beach in Diamante, San Ramon

beach and Lebanon beach bars in Lupi, and the Bigaho Islet utilized for ecotourism. Table 4 also presents the coastal resources in the coastal barangays that characterize the different wetland habitats such as wet mangroves, seagrass beds, intertidal mudflats, and aquaculture areas within the mangrove forest reserve areas, coral reefs, Halabang Lapis sand bars, and other marine areas no deeper than 6 m at low tide. Bingay Island, Bingay Point, Montufar Point, Balonbon Islet, and the islet where the BFAR bird watchtower is located are all situated in the wetland.

Prieto Diaz is a coastal municipality facing the Pacific Ocean in the east and located south of the Island Municipality of Rapu-Rapu, Albay. The coast of Sabang in Barangay Diamante is known for its beautiful mangrove forest sceneries and ecotourism activities within the mangrove shady canals and tunnels with thick and impenetrable roots that are ideal for kayaking ecotour. The aesthetic value of the seascapes contributes to the art and a person's spiritual, psychological, and physical well-being. This significant interaction of man and water provide opportunities for public enjoyment through recreation, tourism, and other economic activities in Prieto Diaz.

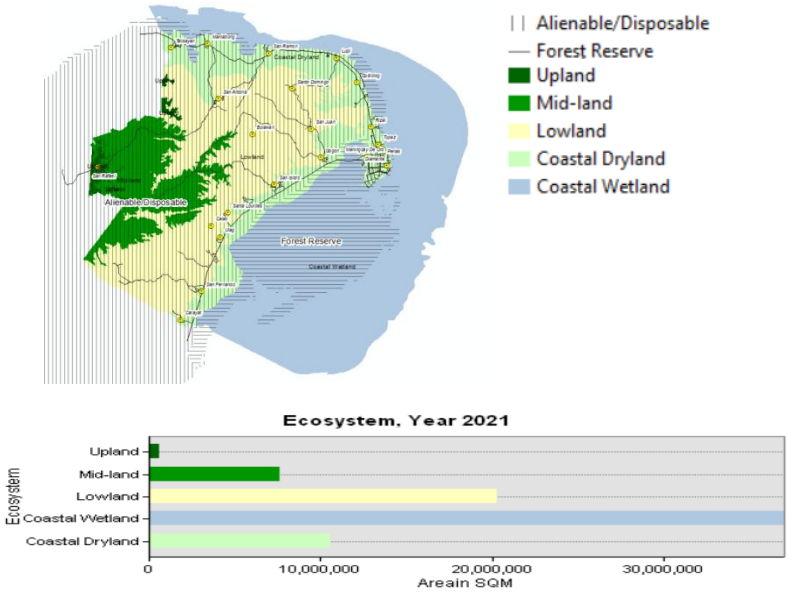


*Figure 4*. Ecosystem by land classification overlay analysis

The municipality landscape and seascape measure 5,286.0409 ha based on DENR land survey records. The upland and midland landscape of Prieto Diaz is hilly and rolling terrains while the lowland and dry land coastal area is characterized by alluvial flat to gently undulating topography with deranged surface waters and drainage systems. There are three (3) surface rivers in the municipality namely the Ibingan River, Guma River, and Bangui River. Guma River is a source of potable water and irrigation in Barangay Calao. IbinganRiver could also be a source of irrigation and potable water in the municipality while the Bangui River is used only for irrigation. There are also ten (10) creeks in the

municipality. Coastal waters that extend from Barangay Carayat to Barangay Talisayan are used for fishing, swimming, and other recreational activities.

***Disaster Risk Reality Assessment***

There is no greater advantage in life than to be able to know what and where will happen before it happens! The people must visualize where the hotspots and coldspots are to foresee hazard events before they happen again and again. A hazard is a natural feature of risk and exposure is a dependent variable (disaster risk reality element). If Prieto Diaz should ignore the complexities of risk hotspot information and/or no-build zones, Prieto Diaznon may regret it forever. For the sake of the communities living in the stilt environment or no-build zones, this plan shall guide local developments to push through the uncertainties by eliminating the exposure as the independent variable of disaster risk before it is too late. Exposure is a dependent variable (risk element) regarded as the unchanging location of a site (space for a dwelling) or structures that are attributable to a danger zone (vulnerable to geomorphological changes relative to extreme weather phenomena in Sorsogon and Bicol Region). (Abante, A.M.R., 2021a,b, 2020a,b, 2019, 2018; Ksibi, 2019; Abante & Abante, 2019a,b; Abante &Balilo, 2018)

***Disaster Risk Reality Assessment***

There is no greater advantage in life than to be able to know what and where will happen before it happens! The people must visualize where the hotspots and coldspots are to foresee hazard events before they happen again and again. A hazard is a natural feature of risk and exposure is a dependent variable (disaster risk reality element). If Prieto Diaz should ignore the complexities of risk hotspot information and/or no-build zones, Prieto Diaznon may regret it forever. For the sake of the communities living in the stilt environment or no-build zones, this plan shall guide local developments to push through the uncertainties by eliminating the exposure as the independent variable of disaster risk before it is too late. Exposure is a dependent variable (risk element) regarded as the unchanging location of a site (space for a dwelling) or structures that are attributable to a danger zone (vulnerable to geomorphological changes relative to extreme weather phenomena in Sorsogon and Bicol Region). (Abante, A.M.R., 2021a,b, 2020a,b, 2019, 2018; Ksibi, 2019; Abante & Abante, 2019a,b; Abante &Balilo, 2018).

Mainstreaming risk hotspot information could change the life of Prieto Diaznon to build their homes in a no-build zone or stilt environment by avoiding any potential disasters. Instead of managing disaster with 180° turn development directions, risk reduction actions and decisions can prevent disaster and save the lives of the people Prieto Diaz. Aiming to achieve stability through proper land use development instead of randomly applying risk reduction can use the risk hotspots and coldspots information to change the risk reality to become a resilient coastal municipality. Table 2 shows the significance of the risk reality (hotspot) information whichcandefusepotentialdisasterby rejecting exposure (element of risk) that is inherent to the landscape and seascape of the

municipality to achieve stable and sustainable local development. All the barangay centers in the municipality are in new and disposable land. However, there were undesired developments within the mangrove forest reserve areas. All the barangays in the municipality are in new and disposable land. However, the 19 coastal barangays, namely Carayat, San Fernando, Ulag, Calao, Santa Lourdes, San Isidro, Gogon, Manincay de Oro, Diamante, Perlas, Brillante, Tupaz, Rizal, Quidolog, Lupi, San Ramon, Manlabong, and Talisayan are mostly at risk as shown in the disaster risk model. Although San Rafael is situated in the upland it is greatly at risk because its environment is prone to earthquake-induced landslides according to the geohazard map of MGB-DENR. Among the 23 barangays in the municipality, San Antonio, Sto. Domingo and Bulawan are somewhat located in a resilient environment. However, San Antonio is presently facing danger if the southern landscape of the barangay will be altered as a borrow area for filtering sand and gravel to be used to complete the construction of the Ibingan dam. (Abante, A.M.R., 2021a,b, 2020a,b, 2019, 2018; Ksibi, 2019; Abante & Abante, 2019a,b; Abante &Balilo, 2018).

Table 2. Risk reality phenomenon level of significance

| Risk reality phenomenon level of significance | Area in Hectares | % Total Land Area | Remarks |
|---|---|---|---|
| 99% Coldspot | 187.9 | 2% | resilient location |
| 95% Coldspot | 1,857.30 | 23% | resilient location |
| 90% Coldspot | 1,012.80 | 13% | resilient location |
| Insignificant | 4,246.30 | 54% | random value |
| 90% hotspot | 40.6 | 1% | disaster risk is trending |
| 95% hotspot | 71.6 | 1% | disaster risk is trending |
| 99% hotspot | 501.8 | 6% | disaster risk is trending |

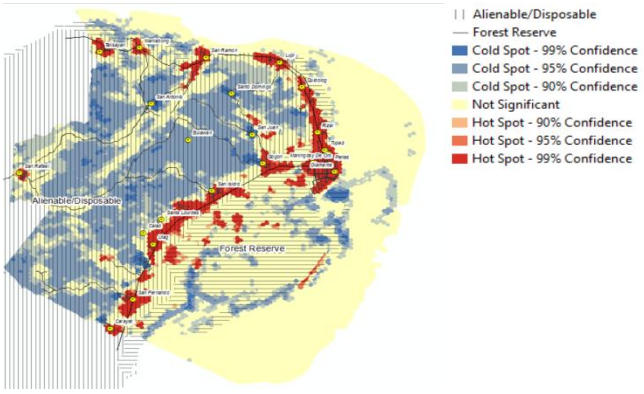


*Figure 5*. Risk reality by land classification overlay analysis

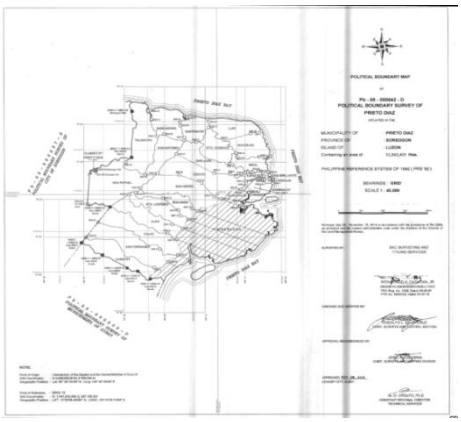

Figure 6. Politico-Administrative and Planning Subdivision of Prieto Diaz

According to Baumgartner (1990) the original Bicolanos were Agta IPs. Presently, they can be found in the Municipality of Tiwi located within Mount Malinao, and some Agta IPs are situated in the Islands of Rapu-Rapu in Albay. He also mentioned that one of the elements of their slash and burn practices is to leave the land for a while for it to recover. The author stressed that the Agta IPs transferred to another area contrary to the western historians that the Philippines was discovered by Spaniards, there were already Bicolanos or Agta IPs living near the Bicol river. Artifacts from several museums in the Bicol region of Albay (Ibalong which originally covers the Sorsogon province) can attest to this. The Agta IPs' cultural practices on slash and burn agriculture hinted at leaving the land for a while for it to recover. This further hinted at the original Prieto Diaznon (32 families who joined the VisitangDaan (could also mean to leave the land for a while for it to recover) who settled in the land discovered by Juan Bantugan (Aeta commissionaire). Historians said that in 1572 there were already 41 settlements including the Barrio Bantugan in Sorsogon (before it was separated from Albay in 1894) before the Spaniards arrived in Sorsogon in 1569. In 1881, the Barrio Bantugan (VisitangDaan) became an independent parish, almost 50 years after the first petition to have it separated from its mother parish, the Our Lady of Annunciation of Bacon (now a district of Sorsogon City) when it was organized as a separate parish in 1833.

## RESULTS AND DISCUSSIONS

### *Coastwise Feature Names Findings*

The first settler in Prieto Diaz was called the "VisitangDaan" changed the name of the place to "Barrio Bantugan" to honor the community leader who led the 32 families to move in a place now known as the Barangay San Isidro, Prieto Diaz, Sorsogon. The Montufar Point feature is a GeoName describing the geographical location of the VisitangDaan (Barrio Bantugan) as a barrio located at the tip of San Bernardino Strait. The GeoName (coastwise feature name) and geographical location of Montufar Points are significant to determine the sailing directions and charts. The American Hydrographers and Surveyors failed to completely rename the GeoNames in English Methods. Instead, the GeoNames in Spanish, Malay or local knowledge for example the VisitangDaan Creek, Balombon, Bingay Point (which means tip), San Isidro (once called the Bantugan or VisitangDaan), Talisayan, Manlabong, Lupi, Quidolog, Carayat, Calao, Ulag, Gogon, Bulawan, Maningcay De Oro, San Ramon(once called the Cagbulalacao), San Fernando (once called the Manao), Santa Lourdes (once called the Cayo), San Rafael (once called the Pigbanua), Santo Domingo (once called the Binuntulan), Poblacion, and so on were reflected in the 1950s topographic map series.

The researcher agrees with Meiring (1993) on geographical names having meanings that are attributed to features such as a mountain, river, historical, cultural, or events

being named, etc. In 1902, the first gobernadorcillo of Sorsogon province changed the name of "Barrio Bantugan" to "Barrio Montufar" to adopt the geographical feature name of Montufar point describing the place or pueblo or barrio, Y punta (town, and tip) based on the Special Report of the United States Board of Geographic Names Relating to the Geographic Names in the Philippine Islands. The list showed the approved spelling of about 4,000 coastwise which features the names in the Philippine Archipelago.

On October 12, 1903, under Act No. 940 by the authority of the United States enacted by the Philippine Commission the Barrio Montufar was changed to Prieto Diaz combining the surnames of 2 of the 15 martyrs of Bicol Region who were executed in Luneta - Rev. Frs. Gabriel Prieto and Severino Diaz. The GeoNameswere chartered upon the acquisition of the Philippine Islands by the United States of America in 1898. The charts and GeoNames were useful in sailing directions to avoid accidents just like what happened to the Norwegian ship HoeghSilvercrest accidentally ran aground (touching the ground under shallow water of Prieto Diaz) at Montufar Point, Sorsogon on January 9, 1939. The Philippine Magazine December 14 – January 12, 1939 news summaries taken in the Montufar Point and did not mention the Prieto Diaz as a reference for that incident.

***Hydrographic/Topographic Map vs Google Earth Findings***

The hilly to rolling upland down to the alluvial flat terrain occupies a total land area of 4,767 hectares based on RCMBS in 2014. The municipal fishing ground which measures 15 km from the coastlines have an approximate area of 31,754.5178 ha and 3,806.4403 ha. It has shallow waters where the coral reefs and HalabangLapiz, Montufar and Bingay Points (geographical names used for oceanographers), BFAR watchtower are located. This location information is also used for fish forecasting available on the internet. It is a modern technique to find out what kind of fishing will be in Montufar Point or Bingay Point in the case of Prieto Diaz. This prediction considers the weather, moon phase, water temperature, and seasonal activity of the fish. This geographical information is also essential in improving ecotourism activities on the coast of Prieto Diaz.

***Politico-Administrative and Planning Subdivision of Prieto Diaz Findings***

The Indigenous People's Development Plan (IPDP) For Sorsogon dated October 2004, disclosed the existence of Indigenous Cultural Communities and Indigenous Peoples (ICC/IPs) in six municipalities of Sorsogon IPs belonging to the Agta-Cimaron-Tabagnon cultural-minority group are known to reside. Based on the social assessment (SA) conducted in the Province the Agta IPs reside in six municipalities, these are: (i) Bulusanwith 755 Agta-Cimaron/Agta-Tabangnon, (ii) Donsol with 5,572 Agta-Cimaron/Agta-Tabangnon, (iii) Irosin with 1,277 Agta-Cimaron, (iv) Matnog with 369 Agta-Cimaron/Agta-Tabangnon, (v) Pilar with 1,190 Agta-Cimaron/Agta-Tabangnon, and (vi) Prieto Diaz with 2,964 Agta-Tabangnon Most Agta households in the province rely on farming, fishing, and gathering of forestry products. Households earn an average monthly income of P2,500.

The Prieto Diaznon' remain speaking their mother tongue "Agta Tabangnon and Bicol Sorsogon". According to DENR-LMS, the municipality covers a land area of 5,286. 0409 hectares based on Pb-05-000042-D Political Boundary Survey of Prieto Diaz in 2014 projected in the PRS-92 reference system under the provisions of RA 2259 as amended and the revised administrative code under the Director of LMB-DENR. Prieto Diaz is divided into 23 barangays of which 19 lie along the 36 km long coast of the municipality. 5 barangays are considered urban, all situated in the coastal area. Based on the list identifies ancestral domain areas in Bicol Region, the following barangays have pending CADC conversion applications: (i) Agta Tabangnon in Manlabong, San Rafael, and Talisayan filed by Wellington Bien of San Rafael, (ii) Agta Cimaron in Sta Lourdes filed by Majen Denna of Santa Lourdes.

***Income Classification Findings***

Although the municipality has a lower income compared to the neighboring municipalities and cities in Sorsogon, re-introducing the geographical information can be essential in improving ecotourism activities in the coast of Prieto Diaz as a 5th class municipality of Sorsogon province in addition to the agricultural and fisheries industries. However, development is not just about sustaining it. It reflects stability, sensitivity, preparedness, adaptation to the bearable risk, coping capacity, competency, landscape, or seascape vulnerability (land and water condition measurement), exposure happenstance (a result of a decision of choosing to be situated in a danger zone) and hazard events impacting the people, properties, and socioeconomic support facilities. A near 0-risk goal as well as nil exposure goal, 0-house in stilt, danger, and no-build-zone policy direct all the risk reduction actions not only to advanced preparedness but also realizing a stable and sustainable development. Insufficient, Insignificant, and advanced preparedness measurements are all-encompassing sensitive land and water utilization according to adaptive capacity from household to barangay and municipal level governance. (Abante, A.M.R., 2021a,b, 2020a,b, 2019, 2018; Ksibi, 2019; Abante & Abante, 2019a,b; Abante &Balilo, 2018).

***Natural Features of the Coast Discussions***

The News Summary, Philippine Magazine dated December 14 – January 12, 1939, confirmed that on January 9, 1939, the crew of the Norwegian ship HoeghSilvercrest, which ran aground (touching the ground under shallow water of Montufar Point, Sorsogon. The Barrio Montufar (now Prieto Diaz) as shown in Table 3,have two significant GeoNames: Montufar Point and Bingay Point both in the eastern part of the country, 400 km southeast of Manila. Table 4 presents the municipal coastal resources at barangay level.

Table 3. Old Barrio Names of Barangays in Prieto Diaz

| PSGC | Barangay Name (Present) | RA No.2923 s. 1960 (Barangay Name) | Act 490 s 1902 | Old Barrio Names | With Ancestral Domain Claims |
|---|---|---|---|---|---|
| 56214022 | Talisayan | | | | Agta Tabangnon |
| 56214008 | Manlabong | Manlabong | Barrio Manlabong | Barrio Manlabong as part of Bacon Town | Agta Tabangnon |
| 56214014 | San Antonio | | | | |
| 56214019 | San Ramon | San Ramon | | Barrio Cagbulalacao | |
| 56214007 | Lupi | | | | |
| 56214012 | Quidolog | | | | |
| 56214013 | Rizal | | | | |
| 56214017 | San Juan | | | | |
| 56214004 | Carayat | | | | |
| 56214015 | San Fernando | San Fernando | | Barrio Manao | |
| 56214003 | Calao | | Barrio Calao | Barrio Calao as part of Gubat Town | |
| 56214024 | Ulag | | | | |
| 56214020 | Santa Lourdes | Santa Lourdes | | Barrio Cayo | Agta Cimaron |
| 56214002 | Bulawan | | | | |
| 56214016 | San Isidro | San Isidro | Barrio Montufar | Barrio Bantugan as part of Bacon Town | |
| 56214006 | Gogon | | | | |
| 56214011 | Perlas | | | | |
| 56214005 | Diamante | | | | |
| 56214001 | Brillante (Pob.) | | | | |
| 56214023 | Tupaz | | | | |
| 56214010 | Maningcay De Oro | | | | |
| 56214018 | San Rafael | | | Barrio Pigbanua | Agta Tabangnon |
| 56214021 | Santo Domingo | | | Barrio Binuntulan | |

Table 4. Coastal Resources

| PSGC | | Barangay Name (Present) | Coastal Dryland resources | Coastal Resources in the Shallow Municipal Waters |
|---|---|---|---|---|
| 1 | 56214022 | Talisayan | Rice paddies, Mangrove associated Species | Mangrove forest reserve, aquaculture, Prieto Diaz Port, Bigaho Is. |
| 2 | 56214008 | Manlabong | Rice paddies, Mangrove associated Species | Mangrove forest reserve, foreshore, |
| 3 | 56214019 | San Ramon | Rice paddies, Mangrove associated Species | Mangrove forest reserve, foreshore, Salt marshes |
| 4 | 56214007 | Lupi | Rice paddies, Mangrove associated Species | Mangrove forest reserve, foreshore, Salt marshes, Bingay Is. |
| 5 | 56214012 | Quidolog | Rice paddies, Mangrove associated Species | Mangrove forest reserve, foreshore, Salt marshes |
| 6 | 56214013 | Rizal | Rice paddies, Mangrove associated Species | Mangrove forest reserve, foreshore, Salt marshes |
| 7 | 56214004 | Carayat | Rice paddies, Mangrove associated Species | Mangrove forest reserve, seagrass bed reserve, aquaculture |
| 8 | 56214015 | San Fernando | Rice paddies, Mangrove associated Species | Mangrove forest reserve, seagrass bed reserve, aquaculture |
| 9 | 56214003 | Calao | Rice paddies, Mangrove associated Species | Mangrove forest reserve, seagrass bed reserve, aquaculture |
| 10 | 56214024 | Ulag | Rice paddies, Mangrove associated Species | Mangrove forest reserve, seagrass bed reserve, aquaculture |
| 11 | 56214020 | Santa Lourdes | Rice paddies, Mangrove associated Species | Mangrove forest reserve, seagrass bed reserve, aquaculture |
| 12 | 56214002 | Bulawan | Rice paddies, Mangrove associated Species | Mangrove forest reserve, seagrass bed reserve, aquaculture, part of Balonbon Is. |
| 13 | 56214016 | San Isidro | Rice paddies, Mangrove associated Species | Mangrove forest reserve, seagrass bed reserve, aquaculture, Montufar Is. |
| 14 | 56214006 | Gogon | Rice paddies, Mangrove associated Species | Mangrove forest reserve, seagrass bed reserve, aquaculture, part of Balonbon Is. |
| 15 | 56214011 | Perlas | Urban and urban use areas, Mangrove associated Species | Mangrove gain |
| 16 | 56214005 | Diamante | Urban and urban use areas, Mangrove associated Species | Mangrove forest reserve, seagrass bed reserve, aquaculture |
| 17 | 56214001 | Brillante (Pob.) | Urban and urban use areas, Mangrove associated Species | Mangrove gain |
| 18 | 56214023 | Tupaz | Urban and urban use areas, Mangrove associated Species | Mangrove forest reserve, seagrass bed reserve, aquaculture |
| 19 | 56214010 | Maningcay De Oro | Urban and urban use areas, Mangrove associated Species | Mangrove forest reserve, seagrass bed reserve, aquaculture |

***Risk Reality Phenomenon Assessment Result***

The prevailing settlements in the Philippines during the pre-Spanish period were usually located in the mouth of rivers and along the shore. VisitangDaan was then the name of the first settlement in present-day Prieto Diaz. It was originally located in Barrio Bantugan (now San Isidro) near the mouth of VisitangDaan Creek (as shown in the 190s topographic map series showing the relative distance between the Montufar Point and houses built in a sandy soil since in those times the major means of transportation was by boat through seas and rivers. The Bingay and Montufar Geographical point or coastwise features the information needed by the following: (i) oceanographers and hydrographers for coastal directions, (ii) researchers to monitor sedimentation significant in assessing the general development of a regional understanding of the vegetation and climate dynamics, and (iii) weather forecasters such as Asia/Manila to provide Morning Sunrise Evening Sunset, time zones, weather, sun, and moon information available on the internet. Figures 7 and 8 disclosed the present land and water utilization that are 95-99% at risk contextualized and attributed by GeoNames. Most of the rice paddies and coconut areas as shown in Figure 7 are overlapping with the mangrove forest reserve area. The potential risks in the built-up areas in the 19 coastal barangays and San Rafael where were influences of the calamities and natural hazards that are originating from climatological, hydrological, and geological phenomenon based on the hazard maps published by concerned government agencies. The mangrove forests that are at risk are those areas with non-conforming utilization of land water resources. The idle aquaculture areas are prone to encroachment or non-conforming uses. In contrast, some areas of the aquacultural areas are naturally or subjected to mangrove replantation projects. (Abante, A.M.R., 2021a,b, 2020a,b, 2019, 2018; Ksibi, 2019; Abante & Abante, 2019a,b; Abante &Balilo, 2018)

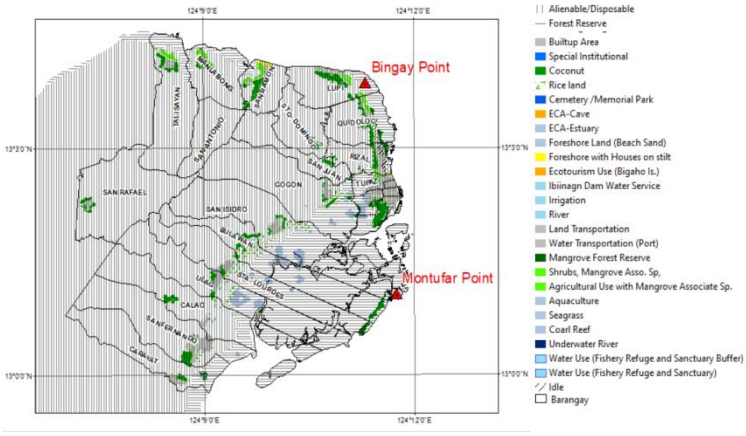


*Figure 7*. Present Land and Water Use with 95-99% Level Risk Significance, the Year 2021

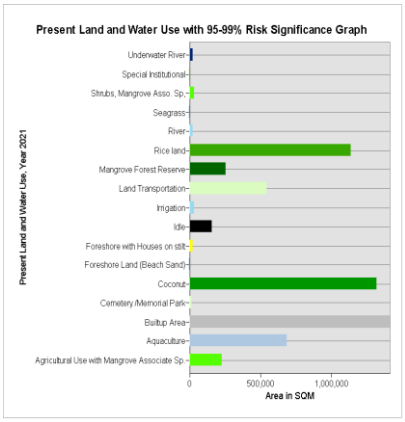


*Figure 8*. Present Land and Water Use with 95-99% Risk Significance Graph

***Risk Reality Phenomenon Assessment Result***

The prevailing settlements in the Philippines during the pre-Spanish period were usually located in the mouth of rivers and along the shore. VisitangDaan was then the name of the first settlement in present-day Prieto Diaz. It was originally located in Barrio Bantugan (now San Isidro) near the mouth of VisitangDaan Creek (as shown in the 190s topographic map series showing the relative distance between the Montufar Point and houses built in a sandy soil since in those times the major means of transportation was by boat through seas and rivers. The Bingay and Montufar Geographical point or coastwise features the information needed by the following: (i) oceanographers and hydrographers for coastal directions, (ii) researchers to monitor sedimentation significant in assessing the general development of a regional understanding of the vegetation and climate dynamics, and (iii) weather forecasters such as Asia/Manila to provide Morning Sunrise Evening Sunset, time zones, weather, sun, and moon information available on the internet. Figures 7 and 8 disclosed the present land and water utilization that are 95-99% at risk contextualized and attributed by GeoNames. Most of the rice paddies and coconut areas as shown in Figure 7 are overlapping with the mangrove forest reserve area. The potential risks in the built-up areas in the 19 coastal barangays and San Rafael where were influences of the calamities and natural hazards that are originating from climatological, hydrological, and geological phenomenon based on the hazard maps published by concerned government agencies. The mangrove forests that are at risk are those areas with non-conforming utilization of land water resources. The idle aquaculture areas are prone to encroachment or non-conforming uses. In contrast, some areas of the aquacultural areas are naturally or subjected to mangrove replantation projects.(Abante, A.M.R., 2021a,b, 2020a,b, 2019, 2018; Ksibi, 2019; Abante & Abante, 2019a,b; Abante &Balilo, 2018).

Reintroduction of the coastwise feature names relating to the GeoNames in the Philippine Islands by way of contextualization risk reality theory (Abante, 2020a, 2021a, 2021b) and incorporating the of the theory on '*world of contents of thought*' (Popper, 1978), placenames (Meiring, 1993) theory, and the logical theory of reference on backing the naming with descriptions (Strawson, 1953) can also reintroduce a place or local government units via internet especially during the new normal after COVID-19 pandemic. This study proved that the coastwise feature or geographic naming relative to the politico-administrative and planning subdivision is significant in tracing the Agta IP sociability and is friendly to their built environment. The practical implication of reintroducing the coastwise feature names relating to the GeoNames in the Philippine Islands is attracting researchers to virtually visit the ancestral domain during the pandemic or when a site visit is restricted by the Indigenous Peoples' Rights Act of 1997.Table 5 shows the locations or barangays at risk or resilient place.

Table 5. Risk/Resiliency Reality Findings

| Risk reality phenomenon level of significance | Locations/Barangays | Risk/Resiliency Assessment |
|---|---|---|
| 99% Coldspot | Random Locations from ridge to reefs. | 38% ridge-to-reef is generally resilient. |
| 95% Coldspot | Generally located in Talisayan, San Antonio (except the Ibingan dam site), Sto. Domingo, Quidolog, San Juan, Gogon, San Isidro ('VisitangDaan' ), Bulwan, Sana Lourdes, Ulag, Calao, San Fernando and Carayat; and random locations in other barangays | |
| 90% Coldspot | Random location in all barangays from ridge to reef. | |
| Insignificant | Mostly located in Coastal (dry and wetland) | 54% ridge-to-reef has insignificant values to meet the resiliency level, but mitigation actions are attainable in these areas |
| 90% hotspot | Random location in the 19 coastal barangays including the barangay center of San Rafael | Potential disaster risk with a 90 to 99% level of significance can affect the 19 coastal barangay centers including San Rafael barangay center in the upland and Balonbon Island (due to non-conforming use of land and water). |
| 95% hotspot | Random location in the 19 coastal barangays including the barangay center of San Rafael | |
| 99% hotspot | All the 19 coastal barangays including the barangay center of San Rafael | |

## CONCLUSION AND RECOMMENDATIONS

The coastwise feature names relating to the GeoNames in the Philippine Islands remain in use for coastal or navigational directions, research to monitor sedimentation

significant in assessing the general development of a regional understanding of the vegetation and climate dynamics, and weather forecasts. This study concludes that the coastwise feature names or GeoNames are significant to characterize the risk realities of the old barrios to the present barangays. Furthermore, the coastwise feature names relating to the GeoNames in the Philippine Islands are also useful to attract more tourists, investors, or researchers to visit a place virtually or on-site during and the new norm after the COVI-19 pandemic.

## ACKNOWLEDGEMENT

This paper acknowledges all the data downloaded from the source: National Mapping and Resource Information Authority at http://www.namria.gov.ph/use.htm; OpenStreetMap (OSM) at http://download.geofabrik.de/asia/philippines-latest-free.shp.zip; Geofabrik extended shapefiles in http://download.geofabrik.de/osm-data-in-gis-formats-free.pdf; PhilGIS through the UN-Spider Knowledge Portal offers Philippine GIS data at http://www.philgis.org/search/node/terms%20of%20use or http://www.un-spider.org/links-and-resources/data-sources/data; Project NOAH of the Department of Science and Technology's (DOST) on Geohazards Lidar, coastal Hazards and Storm Surge maps, and flood maps which were downloaded from http://noah.up.edu.ph/#/; and MGB Geoportal Data at https://www.gov.ph/data. I would like to acknowledge the technical working groups from the LGU-Prieto Diaz and faculty researchers coming from Bicol University who are presently conducting related research to complete the formulation of the land use plan and zoning ordinance of the said LGU. The article would not be realized without the research funding from the LGU under the leadership of Mayor Benito L. Doma, The Vice Mayor and the Sangguniang Bayan ng Prieto Diaz, and Dr. Arnulfo M. Mascariñas for allowing the BU team to practice a profession in formulating land use plan and drafting the zoning ordinance for the said municipality. I humbly offer this article to The Almighty God, the source of all that I have.

## REFERENCES

Abante, A.M.R. (2021b). Geophilosophical realness of risk: a case study in national housing authority resettlement sites in Albay, Philippines. *Springer NatureApplied Sciences 3*, 494.https://doi.org/10.1007/s42452-021-04442-6

Abante, A. M. R. (2021a). Risk Reality Geospatial Information Modeling: An Application in Lupi, Camarines Sur, Philippines. *International Journal of Computing Sciences Research*, 5(1), 613-628.

Abante, A. M. R. (2020b). Risk Hotspot Conceptual Space Characterized by Hexagonal Data Binning Technique: An Application in Albay, Philippines. *International Journal of Computing Sciences Research*, 5(1), 550-567.

Abante, A.M.R. (2020a). *Geophilosophical perspective on socio-spatial fuzzy reality phenomenon* (unpublished manuscript). Bicol University, Legazpi City Philippines.

Ksibi, M. (2019). Recent Advances in Environmental Science from the Euro-Mediterranean and Surrounding Regions: Proceedings of 2nd Euro-Mediterranean Conference for Environmental Integration (EMCEI-2), Tunisia 2019.

Abante, A. M. R. & Abante, C. G. R. (2019a). Topophilia-exposure central space concept model. *International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences, 12*(4/W19), 1–8.

Abante, A. M. R. & Abante, C. G. R. (2019b). *Agent-based assessment of naturalness of topophilia-exposure* (unpublished manuscript). Bicol University, Legazpi City Philippines.

Abante, A. M. R., &Balilo Jr, B. B. (2018). Resource Location-Intelligence Model Conceptualized for Mayon Volcano Danger Zones in Albay, Philippines. *International Journal of Computing Sciences Research, 2*(2), 55-67.doi: 10.25147/ijcsr.2017.001.1.24

Abante, A. M. R. (2018). Understanding Preparedness Insufficiency in the Context of DRRM: A Case Study in Malinao, Albay, Philippines. In *Recent Advances in GeoEnvironmentalEngineering, Geomechanics and Geotechnics, and Geohazards* (pp. 497-501).Switzerland:Springer, Cham.

Ahlers, D. (2013). Assessment of the accuracy of GeoNames gazetteer data. In *Proceedings of the 7th* workshop *on geographic information retrieval* (pp. 74-81).

Baumgartner, J. (1990).Ibalon under Storm and Siege: Essays on Bicol History 1565-1860. *Philippine Quarterly of Culture and Society, 18*(3), 222-224. Retrieved July 8, 2021, from http://www.jstor.org/stable/29792021.

Blair, E. H. (1904). The Philippine Islands, 1493-1803: Explorations by Early Navigators, Descriptions of the Islands and Their Peoples, Their History and Records of the Catholic Missions, as Related in Contemporaneous Books and Manuscripts, Showing the Political, Economic, Commercial and Religious Conditions of Those Islands from Their Earliest Relations with European Nations to the Beginning of the Nineteenth Century (Vol. 19). AH, Clark Company:United States. https://doi.org/10.1525/aa.1903.5.2.02a00140

Cano, G. (2008). Blair and Robertson" The Philippine Islands, 1493-1898": scholarship or imperialist propaganda?. *Philippine Studies*, 3-46.

Gannett, H. (1901). Special Report of the United States Board of Geographic Names Relating to the Geographic Names in the Philippine Islands (Vol. 228). US Government Printing Office.

Grey, E. J. (2015). Cultural beliefs and practices of ethnic Filipinos: An ethnographic study. *SDSSU Multidisciplinary Research Journal*, *3*, 31-36.

Meiring, B. A. (1993). *The syntax and semantics of geographical names*. Hattingh et al Pretoria: Department of Geography: University of Pretoria.

Owen, N. G. (1974). The principaliain Philippine history: Kabikolan, 1790-1898. *Philippine Studies*, 22(3/4), 297-324.

Quine, D. V. W. (1953). Mr. Strawson on logical theory. *Mind*, 62(248), 433-451.