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Beach Forest Characterisation in two Coastal Barangays in Socorro, Bucas Grande Island, Surigao del Norte, Philippines

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Abstract

Coastal ecosystems, including beach forest, serve as barrier to the increasing effects of climate change such as sea level rise, increased temperatures, and shifts in rainfall patterns. Despite being the greenbelts bestowing protection on coastal communities, beach forests are less studied in the Philippines and access to studies on its disappearing vegetation is limited. Understanding the plant composition of any beach forest is deemed important since this vegetation plays an important role in coastal protection, reducing the vulnerability of coastal communities to the effects of climate change and other coastal hazards. Eastern Mindanao, particularly Surigaodel Norte, is one of the most vulnerable regions of the Philippines to high storm surges because of its gently sloping coasts, shallow bays and is also frequented by typhoons due to its geographical location. So the aim of this study is to determine the biological characteristics of the two selected coastal barangays with beach forest in Socorro, Surigaodel Norte; Barangay Pamosaingan and Barangay Sta. Cruz, in terms of plant species composition. In each site, plant species composition, stem size, and abundance were measured using transect-quadrat method. Three (3) 100 meter transect lines were established in each site with five 10x10m quadrats in each transect. A total of 57 plant species were recorded in both areas (excluding grasses). Forty one (41) plant species where found in Barangay Pamosaingan, comprising 47% "Tolo-tolo" saplings, and 40 plant species in Barangay Sta. In Cruz 13% of the population is dominated by *Nypafruticans*. Diversity indices such as Shannon (2.311 and 3.274), Simpson (0.7577 and 0.9493), evenness of distribution (0.246 and 0.6603), and species richness revealed that Barangay Pamosaingan is more diverse than Barangay Sta. Cruz, respectively. Moreover, since some parts of both coastal forests are privately owned, *Cocos nucifera* is most dominant. Seedlings and saplings of introduced species *Terminalia catappa* were also observed, planted under the National Greening Program of the government. These results provide useful baseline information to managers and local governments in crafting appropriate guidelines for coastal resource planning and management.

Keywords: Plant species composition, Shoreline vegetation, Coastal greenbelts, Coastal resource

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