BIODIVERSITY ASSESSMENT OF MANGROVE ECOSYSTEMS IN SELECTED COASTAL MUNICIPALITIES IN ZAMBALES, PHILIPPINES

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An Undergraduate Thesis Submitted to the Faculty of the Department of Environmental Science, College of Arts and Sciences. Central Luzon State University, Science City of Muñoz. Nueva Ecija, Philippines
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BIOGRAPHICAL SKETCH

The author is Glydeline B. Abalos was born on May 6, 1996 at Cabanatuan City Nueva Ecija. Her parents are Mr. & Mrs. Arturo D. Abalos who live at Zone I, Barangay Tabulac, San Jose City, Nueva Ecija. She graduated her elementary education at Tabulac Elementary School in 2008 and her secondary education at formerly Constancio Padilla National High School now San Jose City High School located at Cadhit street San Jose City, Nueva Ecija, Philippines in the year 2012. The author is currently studying at Central Luzon State University taking up Bachelor of Science in Environmental Science major in Environmental Biology.

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ABSTRACT

ABALOS, GLYDELINE B., Department of Environmental Science, College of Arts and Sciences, Central Luzon State University, Science City of Muñoz, Nueva Ecija, Philippines, **June 2019, BIODIVERSITY ASSESSMENT OF MANGROVE ECOSYSTEMS IN SELECTED COASTAL MUNICIPALITIES IN ZAMBALES, PHILIPPINES**

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Mangroves are considered as the most important components of the coastal ecosystem and among the most productive and biologically complex ecosystems on the planet. Mangrove ecosystems in the world has been decreasing in an alarming rate that poses a big threat to destruction of the marine ecosystem. Assessment of mangrove species plays a critical role in the conservation and protection of the mangroves forest. Hence, this study was conducted to assess the biodiversity of mangrove ecosystem in selected municipalities in Zambales, Philippines. Specifically, it aimed to (1) collect, describe, classify and identify the different mangrove trees, associated plants, vertebrate species and fishes in the mangrove ecosystems (2) determine the endemic mangrove species and economic importance of these marine organisms as well as the keystone species present in the mangrove ecosystems (3) determine the environmental and ecological parameters of the collected and identified mangrove, associated plants, fishes and vertebrate species (4) generate diversity map of mangrove, associated plants, fishes and vertebrate species present in the study area and (5) determine the environmental problems and threats that could affect the diversity and habitat of these marine organisms. A total of five (5) species of mangrove, one (1) associated plant and eight (8) species of vertebrates were present and identified in the municipality of Palauig and Masinloc, Zambales. The mangroves

identified were: *Rhizophora mucronata* Lamk., *Rhizophora apiculata* Bl., *Sonneratia alba* J. Sm, *Osbornia octodonta* (Lam.) Roem., *Rhizophora stylosa* Griff., while the associated plant was *Gmelina arborea* Roxb. The vertebrates observed were: *Chanos chanos, Gnathanodon speciousus* Forsskal, *Valamugil buchanani, Hemiramphus sp., Oreochromis niloticus. Anthus hodgsoni, Bubulcus ibis, Nycticorax nycticorax, Periophthalmus kalolo.* Dynamite fishing posed major impact in the mangrove ecosystem in Zambales. Other threats such as solid waste, toxic chemical hazard, tourism spot, poachers, sedimentation/siltation and mine tailing got moderate impacts which could affect the mangrove ecosystem and its biodiversity. Hence, protection and conservation of mangrove ecosystem is very important to prevent biodiversity loss and economic loss.

Keywords: mangrove; keystone species; vertebrate species; associated plants

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