

**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
in Partial Fulfillment of the Requirements
for the Degree of

**BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE
(Environmental Biology)**

JUNE 2019

ACCEPTANCE SHEET

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ACKNOWLEDGMENT

The author would like to express her earnest gratitude to all those people who made this thesis proposal possible.

First and foremost, she would like to thank God Almighty for giving her the strength, knowledge, ability and opportunity to undertake this research study and to persevere and complete it satisfactorily. Without his blessings, this achievement would not have been possible.

To her adviser, Dr. Annie Melinda Paz-Alberto, for always helping the researcher to finish this thesis and for all the time and effort she gave. Without her able guidance, this thesis would not have been possible and she eternally be grateful to her for her assistance.

To her critic. Shirly C. Serrano, M. Sc, for insightful comments for the success of her study and for the development of this work.

To Ms, Diane Shiela C. Castillo, M. Sc, for the words of encouragement and guidance, for inspiring her to finished her study and to keep going no matter what especially in her darkest moment of her life.

To the Department of Environmental Science, especially Dr. Cesar V. Ortinero, Dr. Luzviminda S. Quitos and Criselda P. Francisco, M. Sc for helping and guiding her despite of all her failures and for always keeping her motivated.

To the CHED DARE TO project titled “Bio-physical Assessment, Socio economic Assessment, Carrying Capacity and Economic Evaluation” funded by CHED under the

supervision of her adviser, Dr. Annie Melinda Paz-Alberto for the assistance in the conduct of field studies and identification of the marine organisms.

To Research Assistants of CHED DARE TO project, especially Daryl A. Juganas, Hanna Mae T. Carganilla, Kathrina M. Mapanao, Joshua Capones and Josel Dalusong for helping her to complete her thesis study and for the all unforgettable moments with them.

To her parents, Mr. Arturo D. Abalos and Mrs. Gloria B. Abalos for all the love and sacrifices, for the moral, spiritual and financial support without any question and hesitation, she wants to say sorry for all the disappointments and pain she gave to them. To her siblings Arthur Allan B. Abalos, Mark B. Abalos and Janelle B. Abalos for helping, understanding and encouraging her to study harder. To her auntie, Zenaida B. Bautista for supporting her financially and emotionally. To her ninang, Hen Antolin for moral support and encouraging her to keep going.

To her friends, especially Anna Dominique, Camille Joy, Kathleen, Jeff, Florence, Kristine, , Rochel and Mercedes for the friendships and for supporting her even though she almost gave up but they were there to cheer up and believed that she can.

To her dear, Alvin E. Sandoval who's always there to support her and for the positivity he has given in the darkest hours, he never fail to love, motivate and believe in her. She couldn't have done it without you.

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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**

Adviser: ANNIE MELINDA PAZ-ALBERTO, Ph.D.

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 speciosus* 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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