



SCHOLARSHIPS FOR GRADUATE STUDIES FOR FACULTY AND STAFF DEVELOPMENT RE-ENTRY PLAN

NAME OF APPLICANT	Jimmy O. Pogosa
Degree Program	Doctor of Agricultural Science (Forest and Environmental Resources Sciences)
Name and Address of SHEI	Visayas State University, Visca, Baybay City, 6521 Leyte
Type of Grant Applied For	<input type="checkbox"/> Master's <input checked="" type="checkbox"/> Doctorate <input type="checkbox"/> Thesis or Dissertation Grant
Name and Address of Prospective DHEI	Graduate School of Bioagricultural Sciences (GSBS), Nagoya University (NU) Furo-cho, Chikusa-ku, Nagoya 464-8601

Time frame	October, 2023 – September, 2026
Designation/Status	Instructor I / Permanent
Context	<p>The Institute of Tropical Ecology and Environmental Management (ITEEM) of Visayas State University (VSU) currently offers two programs. These are the Master of Science in Tropical Ecology (MSTREC) and the Bachelor of Science in Environmental Management (BSEM), now the Bachelor of Science in Environmental Science (BSES), per BOR Resolution No. 85, Series of 2018, dated July 5, 2018. The MSTREC program commences in the first semester of the academic year 2004–2005, while the BSEM program begins in the first semester of the academic year 2009–2010. The transition from BSEM to BSES became effective during the first semester of the academic year 2018–2019. In fact, ITEEM started the MSTREC program, in which affiliated faculty from other VSU departments teach all major subjects. In 2009, the ITEEM has two core faculty members during the offering of BSEM. Now, there are only five core faculty members at ITEEM to teach the major courses for the two programs. Two of the five core faculty members hold doctoral degrees, while three hold master's degrees.</p> <p>The Accrediting Agency for Chartered Colleges and Universities in the Philippines (AACCUP) evaluated the two programs from 2015 (Level I accreditation) until 2022 (Level III, Phase 2). The evaluator's major findings are, ITEEM needs more faculty to teach the major courses of the two programs and was mandated to develop a comprehensive faculty recruitment and development plan for 2023–2027 that should be approved by the University</p>

	<p>Academic Council (UAC) and the Board of Regents (BOR). Likewise, the ITEEM should specify graduate-level faculty members' specific track/specialization.</p> <p>In addition to the AACUP evaluation, the ITEEM specifically requires faculty to teach major courses related to environmental studies, management, and monitoring fields for the BSES program. Similarly, the MSTREC program needs a faculty to teach major courses in ecosystem analysis, and natural resource management and conservation.</p> <p>In this connection, the ITEEM personnel committee endorsed and recommended to the VSU Scholarship Committee that I pursue a doctorate degree. This doctoral program is significant for meeting the teaching requirements of ITEEM's MSTREC and BSES programs and achieving AACUP Level III accreditation.</p> <p>On the other hand, VSU, through ITEEM, implemented in 2021 the "Ecological Assessment and Conservation of <i>Aquilaria malaccensis</i> through Sustainable Agarwood Production in Leyte Island, Philippines" (ECo-SAP) project, funded under the VSU internationalization program. It was conceived to conserve and protect the threatened <i>Aquilaria</i> species in their natural habitat on Leyte Island's lowland tropical evergreen rainforest. According to ECo-SAP's initial findings, the <i>Aquilaria</i> was threatened in Leyte due to indiscriminate cutting, unsustainable harvesting of mother trees, and the massive collection of wildlings and fruits in their natural habitat. In implementing the ECo-SAP project for more than two years, the following knowledge gaps were identified and must be addressed:</p> <ol style="list-style-type: none"> 1. Species density and distribution and population dynamics of <i>Aquilaria</i> in Leyte; 2. The limited knowledge regarding the reproductive ecology, leaf traits, and associated insect pollinators of Philippine <i>Aquilaria</i> to support local conservation initiatives; and 3. The limited data and published literature on clonal propagation of <i>Aquilaria</i> as an alternative approach to providing the increasing demand for planting materials in Leyte and the country. <p>Hence, my Ph.D. program is in connection with meeting the ITEEM's teaching requirement and AACUP's recommendation. Moreover, my proposed study is consistent with the findings of the ECo-SAP, that aims to support the</p>
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	<p>conservation and protection of the <i>Aquilaria</i> species in their natural habitat as well as sustainable agarwood production on Leyte Island.</p> <p>In connection with my research proposal that was submitted to and evaluated by the DOST-SEI last April this year, the council concluded that it was relevant to PCAARRD's banner programs or the Harmonized National Research and Development Agenda (HNDRA) for the Agriculture, Aquatic, and Natural Resources (AANR) sector. In addition, the council recommends collaborating with the UP Los Baños-College of Forestry and Natural Resources' <i>Aquilaria</i> project team currently being headed by Dr. Lerma SJ. Maldia in order to complement my proposal's intended outcomes.</p> <p>In relation to ECo-SAP's results, the project has already established the taxonomic identification of the <i>Aquilaria</i> species documented in the natural habitat at the study sites on Leyte Island. However, the taxonomic identification of species would be more comprehensive if molecular techniques will be utilized. Maldia et al. (2023) revealed that molecular characterization for genetic diversity assessment is required for short-term ecological adaptation and long-term evolutionary change in a population.</p> <p>Consequently, molecular characterization is a knowledge gap that comes outside of the scope of my proposal and may be addressed by the UPLB team. According to Dr. Maldia, the UPLB team had limited samples of <i>Aquilaria</i> growing from the natural habitat that needed to be investigated for molecular characterization. In addition to the PCAARRD's feedback on my proposal, the molecular analysis will support the Key Informant Interview (KII) and focus group discussions (FGD) in selecting and identifying <i>Aquilaria</i> species that will produce high-quality agarwood. Therefore, this topic could be one of the collaborative initiatives undertaken by my proposed study in collaboration with the UPLB team led by Dr. Maldia.</p>
Objectives	<p>My desired doctoral program has been accepted on July 19, 2023, at the Graduate School of Bioagricultural Sciences (GSBS), Nagoya University (NU), Japan with the degree of Agricultural Science in the field of Forest and Environmental Resources Sciences. The program is expected to be completed within three years.</p> <p>The program's proposed research is entitled "Population Dynamics, Phenological Characteristics, and Clonal Propagation of the Philippine <i>Aquilaria</i> to Support Local Conservation and Livelihood Initiatives in Leyte,</p>

	<p>Philippines. Likewise, the program requires to publish three scientific papers to be completed. Specifically, the papers are related to the following studies:</p> <ul style="list-style-type: none"> • Study 1: Species Distribution and Population Dynamics of Philippine <i>Aquilaria</i> in the Tropical Lowland Evergreen Rainforest in Leyte, Philippines • Study 2: Phenological Characteristics, Leaf Traits, and Associated Insect Pollinators of Philippine <i>Aquilaria</i> • Study 3: Clonal Propagation of <i>Aquilaria</i> to Support Sustainable Agarwood Production and Conservation of Endangered Philippine <i>Aquilaria</i> Species <p>As mentioned in the context, my proposed study needs to be collaborated and complemented with the UPLB <i>Aquilaria</i> project team, as PCAARRD has advised. Based on our initial communication with the UPLB team, they will address the genetic variability gap of <i>Aquilaria</i> species found on Leyte Island's study sites using molecular techniques. Moreover, it will be the first topic for publication in partnership with the UPLB team.</p> <p>In addition, one of my goals is to develop a project proposal that will be implemented over the next three years after I completed the Ph.D. program. If approved, the proposed project will serve as the flagship project of VSU and continue the program of conserving and preserving <i>Aquilaria</i> as well as sustaining agarwood production.</p>
Outcomes	<ul style="list-style-type: none"> • Completed the Ph.D. program within three years that will significantly contribute to meeting the ITEEM's teaching requirement and AACCUP's recommendation; • Published at least three scholarly research papers related to the studies as mentioned above in peer-reviewed, internationally-indexed professional journals. Likewise, a paper related to the assessment of genetic variations using molecular method will be published in partnership with the UPLB team. • A draft/approved project proposal addressing the conservation and preservation of <i>Aquilaria</i> in its natural habitat and sustainable agarwood production in plantations on Leyte Island.

Signature of Applicant

Date

*I hereby certify that the above information is true and correct, and that the VISAYAS STATE UNIVERSITY has committed to the above re-entry plan for Jimmy O. Pogosa
(Name of Faculty)*

BEATRIZ S. BELONIAS
Vice President for Instruction

EDGARDO E. TULIN
President