

INFORMATION ON DOCTORAL THESIS

1. Full name: Nguyen Thi Phuong Loan
2. Sex: Female
3. Date of birth: 27 June 1959
4. Place of birth: Ha Noi
5. Admission decision of Director of Vietnam National University, number 144/SĐH, dated 06/07/2005
6. Changes in academic process: Decision of Director of Center for Natural Resources and Environmental studies on thesis title change, number 230/TNMT, dated 12/12/2006
7. Official thesis title: Research in integrating the human ecology approach into evaluation of the sustainability of the brackish-water shrimp aquaculture in coastal area of Nghia Hung district, Nam Dinh province.
8. Major: Environment and Sustainable Development
9. Code: pilot training
10. Supervisors: 1. Prof. Dr. Le Trong Cuc
2. Assoc.Prof. Dr. Nguyen Chu Hoi

11. Summary of the new findings of the thesis:

[1] The first new finding of the PhD thesis is to clarify some theoretical issues of the human ecology, to systematize the general theory and its application in studying low rank of a human ecosystem. Application of the human ecology theory in the centrally shrimp farm research in coastal area of Nghia Hung district, Nam Dinh province pointed out main reasons of un-sustainable development within system, including a lack of strong institutional framework to control the system, especially provides a basic for the community-based management; lack of aquaculture skills and not yet calculated the extended benefit-cost analysis.

[2] The second, is to assess the system sustainability through measure of well-being based on separated evaluation for natural ecosystem and social system in which the calculated special well-being index and general one have been tested initially in Viet Nam for the human ecosystem in Nghia Hung district.

12. Practical application

- Provides input information for the training and education of human ecology as a subject in BSc and MSc graduation courses of environmental sciences.

- Basically, the well-being index maybe applied in sustainable development assessment in Viet Nam. The assessment of this WI in different areas in the country not only considers as a tool to compare the status of sustainable development between localities and countries, but also contributes to the database establishment for sustainable development assessment following international criteria. Apart from this, Aquaculture Sustainability Index (ASI) should be modified to have more sensitivity in the system changes evaluation.

- Studying in human ecology and sustainable development assessment through these indices easily recognize limits in sustainable development and line obstacles, challenges to propose the suitable and effective measures in addressing these problems.

13. Further research directions

- Study in restructuring aquaculture farm system in service of supporting in establishment of community institution in ecological, environmental and social management of the system process.

- Study in the detailed threats from climate change to receive the model to ensure aqua culturist safety and higher quality

- The extended cost-benefit analysis in shrimp aquaculture activities should be studied more detail, especially for the priority issues.

- Continue to update the database for the priority issues to apply well the WI

14. Thesis-related publications

- Nguyen Thi Phuong Loan, Tran Xuan Viet (2007), "Discuss about System of principles sustainable development and sustainable development assessment", Proceedings of the National Science Conference *The problems of environmental and Sustainable Development of the Northeast under the impact of economic and social development period of industrialization and modernization*, Thai Nguyen University and The Institute of Social Sciences of Vietnam, Thai Nguyen, pp. 479-492.

- Nguyen Thi Phuong Loan, Dinh Van Huy, Tran Xuan Viet (2007), "Some Study Results of assessing the sustainable use of biological resources and sustainable development using Eco-Footprint tools and Barometer of Sustainability (BS)", Proceedings of the National Science Conference *Biodiversity and Well-being*, Center for National Resources and Environment Studies, Vietnam National University, Hanoi, Publisher of Science and Techniques, Ha Noi, pp. 117-129.

- Nguyen Thi Phuong Loan (2011), "Preliminarily Initial Pilot Mangrove Valuation and Expanded Cost Benefit analysis of Improved Extensive Tiger Shrimp Farming in Nghia Hung District, Nam Dinh Province", Proceedings of the National Science Conference *Wetland and Climate Change*, Center for National Resources and Environment Studies, Vietnam National University, Hanoi, Publisher of Science and Techniques, Ha noi, pp. 231-254.

- Ngo Thi Thu Hien, Hoang Xuan Co, Nguyen Thi Phuong Loan (2011), "Preliminarily calculate the Environmental Sustainable Index (ESI) for some cities and provinces of Viet Nam", *VNU J. Sci.* 27 (5S), pp. 96-103.
- Nguyen Thi Phuong Loan (2011), "The initial result of testing method of wellbeing index of Prescott-Allen to evaluate local sustainable development, applying for Nghia Hung district, Nam Dinh province", *VNU J. Sci.* 27(5S), pp. 182-190.
- Nguyen Thi Phuong Loan (2011), "Control of water and bottom sediment quality in the shrimp farms in coastal aquaculture of Nghia Hung district, Nam Dinh province in 2008", *VNU J. Sci.* 27(5S), pp. 191-195.