**Information on Doctoral thesis of Fellows Hoang Thi Thanh Nhan**

1. Full name: Hoang Thi Thanh Nhan

2. Sex: Female

3. Date of birth: 01/10/1973

4. Place of birth: Nghe An province, Viet Nam

5. Admission decision Number 3678/QĐ-SĐH, dated 28 October 2009 by President of Vietnam National University, Hanoi

6. Changes in academic process: Appoint Dr. Vo Thanh Son the second supervisor according to Document number 1891/ĐHQGHN-ĐT dated 04 June 2013 by President of Vietnam National University, Hanoi.

7. Official thesis title: Research in development of biodiversity indicators for coastal wetlands in Vietnam - Case study in Xuan Thuy National Park, Nam Dinh Province

8. Major: Environment and Sustainable Development

9. Code: Pilot education program

10. Supervisors: 1. Prof. Dr. Le Xuan Cảnh; 2. Dr. Vo Thanh Son

11. Summary of new findings of the thesis:

Pressure - State-Benefit - Response analysis framework and procedure were identified for biodiversity indicator development at protected area level with criteria for selection of biodiversity indicators which include 3 main criteria, 11 sub-criteria and weighting method.

Data on biodiversity in Xuan Thuy National Park (including secondary data and data from surveys in 2012, 2013) were updated which included 7 wetland ecosystems, species check list of 1616 species of plant, plankton, algae-seaweed, aquatic invertebrates, insect, reptile-amphibian, bird and mammal, of which 955 species were found in our surveys in 2012, 2013.

Factors on Pressure – State – Benefit - Respond were identified as a scientific base for designing its biodiversity indicators the Xuan Thuy National Park.

24 biodiversity indicators for Xuan Thuy National Park, including 6 state indicators, 6 pressure indicators, 5 benefit indicators, 7 response indicators were developed for monitoring management effectiveness of Xuan Thuy National Park.

12. Practical applicability:

Set of proposed biodiversity indicators can be applied for monitoring management effectiveness of Xuan Thuy National Park.

13. Further research directions:

Continue research on possibility to apply identified methodology for development of biodiversity indicators in other protected areas.

Further research on proposed indicator and parameters (fragmentation, NDVI (Normalized Difference Vegetation Index) and mangrove biomass).

14. Thesis-related publications:

- Hoang Thi Thanh Nhan, Vu Minh Hoa (2010), "Guidance of Convention on Biological Diversity on development of biodiversity indicators and recommendations for application in Vietnam", *Proceeding of the second national workshop on environment and sustainable development*, Agricultural Public House, Hanoi, pp. 25-29.

- Hoang Thi Thanh Nhan, Ho Thanh Hai (2013), "Development of biodiversity indicators to monitor wetland ecosystems in Xuan Thuy National Park, Nam Dinh province", *Scientific Reports, The fifth national science workshop*, Agricultural Public House, Hanoi, pp. 1498-1505.

- Hoang Thi Thanh Nhan, Ho Thanh Hai, Le Xuan Canh (2013), "Biodiversity of Xuan Thuy National Park, Nam Dinh province", *Scientific Reports, The fifth national science workshop*, Agricultural Public House, Hanoi, pp. 587-594.

- Hoang Thi Thanh Nhan (2013), "Constructing a set of indicators for wetland's biodiversity", *ASEAN biodiversity, Recognizing the value of wetlands*, Vol 12 (1), pp. 25-27.

- Nguyen Dinh Tao, Hoang Thi Thanh Nhan (2013), "Fish biodiversity in Ba Lat estuary and Xuan Thuy National Park, Nam Dinh province", *Scientific Reports, The fifth national science workshop*, Agricultural Public House, Hanoi, pp. 678- 681.