

INFORMATION ON DOCTORAL THESIS

1. Full name: Pham Thi Bich Ngoc
2. Sex: Female
3. Date of birth: December 12th, 1973
4. Place of birth: Thai Binh
5. Admission decision number 3844/QĐ-ĐT, dated 22/12/2011, issued by President of Vietnam National University, Hanoi
6. Change in academic process:
 - Decision number 13/QĐ-ĐHQGHN dated 16/01/2017 on release from the program due to time exceeding.
 - Document number 785/ĐHQGHN-ĐT dated 20/3/2019 on granting permission to extend the deadline for thesis submission.
7. Official thesis title: Climate Change Impact Assessment and Development of Solutions for Adaptive and Sustainable Livelihoods in Can Loc district, Ha Tinh province
8. Major: Environment in Sustainable Development
9. Code: Pilot Program
10. Supervisors:
 - Prof. Dr. Truong Quang Hoc – VNU Central Institute for Natural Resources and Environmental Studies
 - Dr. Nghiem Thi Phuong Tuyen– VNU Central Institute for Natural Resources and Environmental Studies
11. Summary of the new findings of the thesis:
 - The thesis presents the results of impact assessment of climate change (CC) on agriculture-based livelihoods in Can Loc district of Ha Tinh province. The assessment was conducted for the first time in the area.
 - The thesis has applied a combination of three indicators: i) Livelihood Vulnerability Index (LVI), ii) Livelihood Vulnerability Index according to IPCC (LVI-IPCC) and iii) Livelihood Effect Index (LEI) in quantitative assessment of agricultural livelihood vulnerability for three communes (Khanh Loc, Vuong Loc and Vinh Loc) in Can Loc District of Ha Tinh Province. Such a combination of indicators being used in livelihood vulnerability assessment was the first time employed in Vietnam.
 - The thesis has proposed sustainable livelihood models for three communes (Khanh Loc, Vuong Loc and Vinh Loc) of Can Loc District, Ha Tinh Province to adapt to CC.
12. Practical applicability:

- The thesis findings will support local authorities and local people in planning and implementing plans to cope with climate change and develop livelihoods to adapt to climate change.

13. Further research directions:

- There is a need to expand the scope of assessment for all the communes in Can Loc District, and/or all districts of Ha Tinh province to get an overview of livelihood vulnerability in the local area. This assessment can be maintained and updated annually to compare the level of livelihood security data, thereby making adjustments or orientations to develop a more realistic plan.
- An in-depth study is needed to examine the value of the weights for key and constituent factors when using different livelihood vulnerability index calculation methods and determining deviations which allow the variance between these weights.
- There is a need for more in-depth studies, including application of livelihood models, based on the consideration of livelihood vulnerability index and coordinate with climate change forecast / scenario to consider sustainability and adaptability of each model and see how they fit with specific conditions in specific ecological region.

14. Thesis-related publications:

- Phung Ngoc Truong, Le Anh Tuan, Pham Thi Bich Ngoc, Nguyen Xuan Thang (2019), “Applying assessment approach on livelihood vulnerability index, including mangroves in the context of climate change in Nga Son and Hau Loc districts, Thanh Hoa province”, *Journal of Water Resources & Environmental Engineering*, No. 66 – September 2019, p. 123-130.
- Pham Thi Bich Ngoc, Nguyen Hong Son, Ly Kim Chi (2019), “Study of Livelihood Vulnerability Assessment to Climate Change in Three Plain and Low-Lying Communes of Can Loc District, Ha Tinh Province”, *Journal of Climate Change Science*, Viet Nam Institute of Meteorology, Hydrology and Climate Change, No. 10 – June 2019, p. 55-64.
- Le Phuong Hoa, Pham Thi Bich Ngoc (2019), “Agricultural Development in Malaysia: Achievements and Issues”, *Journal of Southeast Asian Studies*, Institute for Southeast Asian Studies, No. 3 (228) 2019, p. 38-46.
- Pham Thi Bich Ngoc, Nguyen Hong Son (2018), “Agricultural Livelihoods Adaptation to Climate Change: A Case Study in Can Loc, Ha Tinh province”, *Journal of Climate Change Science*, Viet Nam Institute of Meteorology, Hydrology and Climate Change, No.8 – December 2018, p. 63-72.