

**DOCTORAL THESIS INFORMATION WITH NEW SCIENTIFIC
CONTRIBUTION, THEORETICAL STUDY**

1. Dissertation title: Study to assess the impact of land use/land cover changes and climate change on the flow of the Ca river basin

Code: 9440221

Major: Climate change

2. PhD Candidate: Nguyen Thanh Bang

Advisors: Assoc.Prof. Doan Ha Phong & Assoc.Prof. Bui Tien Dieu

Training Institution: Viet Nam Institute of Meteorology, Hydrology, and Climate Change.

3. Introduction to the Dissertation:

Dissertation aims to:

Simulating LULC changes and projecting the future Ca river basin LULC scenarios by Markov chain analysis and Cellular Automata principles;


Quantitative assessment of the simultaneous impacts of LULC changes and climate change on future flows in the Ca river basin.

4. New contributions of Dissertation:

- The dissertation has identified the factors, constraints and successfully built the transformation rule suitable for the conditions of the Ca river basin to simulate the change of LULC and project the future LULC of the Ca river basin with 05 classes: Forest, Agriculture, Built-up, Water, Bare area.

- The dissertation has quantitatively assessed the change in the flow of the Ca river basin under the simultaneous impact of climate change and with or without changes in LULC.

Representative of Advisors



Doan Ha Phong

PhD Candidate



Nguyen Thanh Bang