

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

1. Dissertation title: Research on developing a scientific basis for zoning river water quality according to use purposes – Apply for Nhue river – Day river

Code: 9850101

Major: Natural Resources and Environment Management

2. PhD Candidate: Cai Anh Tu

Advisors:

1. Assoc. Prof. Dr. Duong Hong Son
2. Dr. Le Ngoc Cau

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

3. Introduction to the Dissertation:

Effective activities that are often used to manage water pollution are control of waste sources, planning of drainage and wastewater treatment systems, planning of water resources, etc. The above action should be based on the results of zoning water quality according to use purposes or in other words, the zoning of river water quality according to use purposes shall contribute to the effective implementation of the water environment management and protection activities.

However, at present, the zoning of river water quality according to use purposes has not yet been implemented comprehensively and systematically, based on a scientific and practical basis. This is partly reflected in the judgment made in the report "National environmental status, 2018" as "An important basis for implementing water protection in river basins is to determine the use purpose of the water source, which is still open.". The zoning has not been agreed in the same river basin as well as between river basins across the country, that making it difficult for water resources management activities in river basins. From the reason and practice mentioned above, the author implements the dissertation

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The objectives of the thesis are: (i) To identify and clarify the scientific basis for implementing the zoning of river water quality according to use purposes; (ii) To propose criteria, process, and content of the implementation for zoning river water quality according to use purposes; (iii) To study and apply the process for zoning river water quality according to use purposes for Nhue and Day rivers.

The thesis has four chapters, namely: Chapter 1. Overview of studies related to the scientific basis and implementation for zoning river water quality according to use purposes; Chapter 2. Object, scope, and research method; Chapter 3. Developing the scientific basis for zoning river water quality according to use purposes; Chapter 4. Applying the scientific basis for zoning river water quality according to use purposes for Nhue and Day rivers.

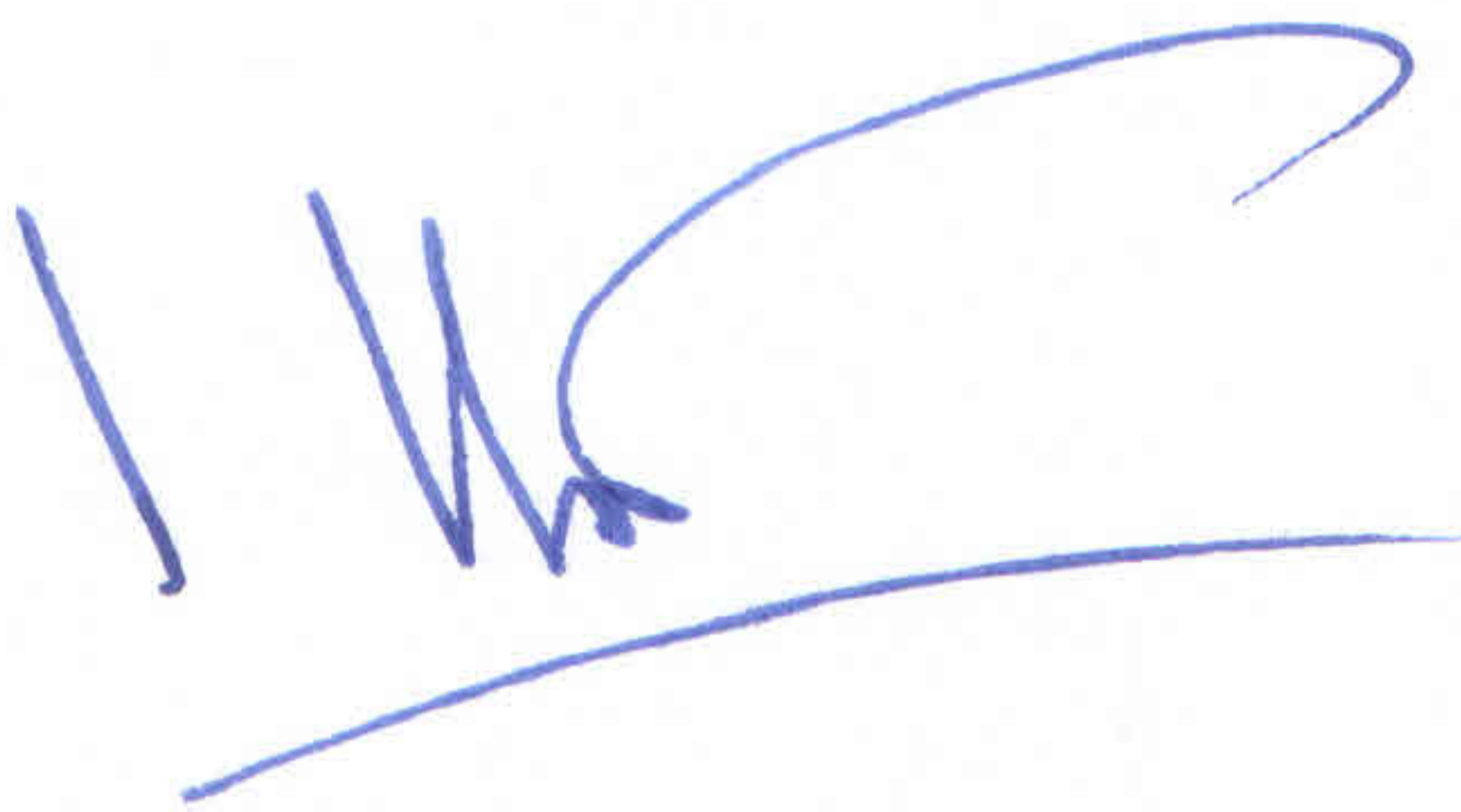
4. New contributions of Dissertation:

- Theoretical contributions: The thesis had developed a methodology for zoning river water quality according to use purposes. In which, the approach, criteria, process, and contents have been considered and implemented. On that basis, the thesis had proposed a set of criteria belonging to 3 groups of natural, social, and environmental characteristics and a process with 12 steps for zoning river water quality according to use purposes.

- Practical contributions: The zoning of river water quality according to use purposes was applied to Nhue river and Day river.

Advisors

PhD Candidate



Assoc. Prof. Dr. Duong Hong Son

Dr. Le Ngoc Cau

Cai Anh Tu