

NEW CONTRIBUTIONS INFORMATION PAGE

ABOUT ACADEMY, THEORETICAL OF THE DOCTORAL THESIS

1. Dissertation thesis: Research on West Lake ecosystem in the context of climate change.
- Major: Climate change
- Code: 9440221
2. PHD Candidate: Nguyen Tram Anh
Supervisors: 1. Assoc.Prof. Dr. Trinh Thi Thanh
2. Assoc.Prof. Dr. Doan Huong Mai
Institution: Viet Nam Institute of Meteorology, Hydrology and Climate Change.
3. Dissertation Introduction:

According to many intentional studies, climatic change has been recognized as an important factor capable of influencing the lake ecosystems. Increased temperature and CO₂ concentration, extreme weather events will lead to change physical and chemical properties of the water and affect water quality and the life of creatures in the lake.

West Lake is the largest urban lake of Hanoi capital, has important ecological, historical and cultural significance. However, the rapid urbanization of West Lake has resulted in the deterioration of surface water quality, affecting the ecosystem in the lake. West Lake has been considered as one of the most sensitive and vulnerable ecosystems under the impact of climate change. Up to now, several studies have shown that there is a scientific basis for the impact of climate change on the West Lake ecosystem. However, the specific trends that climate change will affect the lake ecosystem have not been analyzed.

The dissertation "**Research on West Lake ecosystem in the context of climate change**" has been conducted to (i) Assessment of the impact of climate change on the West Lake ecosystem through the impact of climate change on phytoplankton and (ii) Propose solutions to mitigate the impact of climate change to sustainably develop the West Lake ecosystem.

In addition to the introduction, conclusion and recommendations, the content of the dissertation includes the following four chapters:

Chapter 1. Literature review on the impact of climate change on lake ecosystem.

Chapter 2. Research subject and methodology

Chapter 3. Research result on the impact of climate change on the West Lake ecosystem.

Chapter 4. Propose solutions to mitigate climate change impacts to West Lake ecosystem.

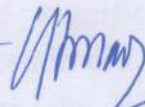
4. New contributions of the dissertation

Firstly: Analyze and determine the correlation between increased temperature and algae density, in which some nutritional parameters change leads to increased algae density, pH, and cyanobacteria with the predominant density in the phytoplankton population of the West Lake.

Secondly: Develop a method to assess the impact of climate change on aquatic ecosystems through assessing the correlation between temperature and algae growth, water quality criteria (pH, DO, nutrient index), the level of eutrophication, determining the correlations between climate and environmental parameters to assess the impact of climate change and forecast the impact of climate change on the ecosystem.

Supervisors

PHD Candidate



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