

SOCIALIST REPUBLIC OF VIETNAM
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**SUMMARY INFORMATION OF DOCTOR DISSERTATION IN
MARINE SCIENCE**

Dissertation title: **STUDY ON ENVIRONMENTAL POLLUTION CONTROL IN
TRANSPORTATION OF DANGEROUS GOODS ON INLAND WATERWAYS**

Major:	Marine Science
Code:	9840106
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Academic year:	2021
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1. Research purpose of the topic

1.1. Theoretical objectives

- Analyze and provide a deeper understanding of the theory and practice concerning dangerous goods (DG), the transportation of DG on inland waterways (IWW); environmental pollution (ENPO) control efforts resulting from DG transportation.

- Analyze and assess the current state of inland waterway infrastructure; management activities ensuring the safety of inland waterway transportation; risks, incidents of environmental pollution resulting from these activities; the development process, current status of environmental pollution control efforts in DG transportation on inland waterways. Thereby, the dissertation will identify challenges and problems that need to be addressed regarding these activities.

- Propose directions and suggest fundamental measures feasibly aimed at controlling environmental pollution resulting from DG transportation activities on inland waterways.

1.2. Practical objectives

The dissertation focuses on researching and proposing solutions in three main areas:

(1) Development of a general handbook covering topics related to the transportation of DG: classification, packaging, storage, transportation, pollution

control, and incidents response procedures for DG during transportation on inland waterways.

(2) Training and capacity building for stakeholders involved in DG transportation activities: boat crew and personnel working at ports and terminals directly involved in packaging, storage, and transportation of DG; managerial staff.

(3) Enhancing awareness and increasing resources for controlling environmental pollution resulting from DG transportation.

2. Subject and scope of research

2.1. Research subjects

Researching theoretical and practical issues regarding the control of environmental pollution resulting from the transportation DG on inland waterways.

2.2. Research scope

To ensure feasibility and avoid spreading out, the dissertation is expected to focus solely on researching environmental pollution control measures related to the transportation of DG on inland waterways in Vietnam as follows:

a) Spatial scope

The dissertation focuses on researching environmental pollution control measures stemming from the transportation of DG on inland waterways, specifically concerning inland waterway vessels and ships operating on inland waterways in Vietnam.

The study specifically selects a sample route, which is an inland water transport route with a relatively large volume and density of DG transportation (located in the northern region). This route runs from Hải Phòng to Việt Trì via the Đuống River.

b) Time range

The research period for this dissertation is from 2018 to 2021. Some content will be updated with data from previous years to provide a more objective and comprehensive analysis, ensuring a more thorough understanding of the trends.

3. New finding of the dissertation

- Analyze and systematize theoretical issues related to hazardous goods (DG) and transportation of DG on IWW.

- Analyze and evaluate the current status of activities related to DG transportation on IWW in Vietnam, and control of environmental pollution arising from DG transportation.

- Summarize lessons in controlling environmental pollution through river transportation of some countries. Thereby, The PhD student have drawn lessons for Vietnam.

- Formulate recommendations for improving environmental pollution control during DG transportation on IWW:

- + Hand out a manual on DG transportation on IWW to control environmental pollution.

- + Enhancing awareness and increasing resources to control environmental pollution from DG transportation.

- + Educate and training personnel and workers related to DG transportation.

4. Scientific and practical significance

4.1. On scientific significance

Laying the foundation for researching and systematizing theoretical issues related to hazardous goods (DG) and DG transportation on inland waterways.

Providing an overview of the current status of activities concerning DG transportation on inland waterways in Viet Nam and the measures for controlling environmental pollution resulting from HNS transportation.

4.2. On practical significance

- Provide recommendations, procedures, and practices related to the transportation of hazardous goods on inland waterways (IWW) with the aim of controlling environmental pollution resulting from this activity; thereby preventing and minimizing accidents and incidents arising from DG transportation on IWW.

- The safety handbook for transporting DG on inland waterways serves as an important information channel for state management agencies overseeing IWW to research, review, and improve legislation as well as management procedures for this activity.

- Enhance awareness among stakeholders involved in DG transportation activities on inland waterways, thereby fostering habits and ensuring standard legal conduct during the process of DG transportation on inland waterways.

5. Layout of the thesis

The dissertation consists of the following sections:

Introduction

Chapter 1. OVERVIEW AND THEORETICAL FOUNDATIONS OF DG
TRANSPORTATION ON INLAND WATERWAYS

Chapter 2. DG TRANSPORTATION ACTIVITIES ON INLAND
WATERWAYS AND ASSOCIATED RISKS AND INCIDENTS

Chapter 3. ANALYSIS AND EVALUATION OF THE CURRENT STATUS
OF ENVIRONMENTAL POLLUTION CONTROL RESULTING FROM DG
TRANSPORTATION ACTIVITIES ON INLAND WATERWAYS

Chapter 4. PROPOSED SOLUTIONS FOR CONTROLLING
ENVIRONMENTAL POLLUTION RESULTING FROM DG TRANSPORTATION
ACTIVITIES ON INLAND WATERWAYS

General Conclusion and Development Directions.

Ho Chi Minh City, May 2024

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