



TROPICAL SEMESTER

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TROPICAL RESOURCES AND ENVIRONMENTS

Module Number: 1

3 credits

Lecturer(s): **Le Anh Tuan & Nguyen Huu Chiem**

Course Introduction

This module introduces the students to the natural resources such as soil, water and biodiversity in relation to social and environmental conditions in the Mekong delta.

Course Objectives

To provide information and knowledge on natural resources and environmental conditions to students. How to manage and use natural resources sustainable way under changing of environment.

Lectures:

Chapter 1: The Mekong River Basin (MRB)'s physical figures

- 1.1. Location
- 1.2. Basin area
- 1.3. River system
- 1.4. The Mekong's potential development – An overview
- 1.5. Mekong River Commission (MRC) – An introduction
- 1.6. The Mekong River Delta – A physical basic data

Chapter 2: Hydro-meteorological conditions of the Mekong River Delta (MD)

- 2.1. Seasons
- 2.2. Temperature
- 2.3. Wind
- 2.4. Humidity
- 2.5. Sunshine
- 2.6. Rainfall
- 2.7. Evaporation

- 2.8. Water flow
- 2.9. Tides
- 2.10. Natural disasters

Chapter 3: Water Environmental Problems in the MD

- 3.1. Flood
- 3.2. Drought
- 3.3. Acid water
- 3.4. Saline water
- 3.5. Polluted water

Chapter 4: Geo-pedology of the Mekong Delta

- 4.1. Introduction
- 4.2. Landform division
- 4.3. General description of landform unit
- 4.4. Characteristics of landform and soil properties of recent Holocene sediments.
- 4.5. History of formation of the recent Holocene sediments and their stratigraphy
- 4.6. Summary and conclusion

Chapter 5: Former and present cropping patterns in the delta

- 5.1. Introduction
- 5.2. Former cropping patterns
 - 5.2.1. Outline of traditional of local rice cultivation
 - 5.2.2. Floating rice
 - 5.2.3. Traditional double transplanting method
 - 5.2.4. Traditional single transplanting method
- 5.3. Present cropping patterns
 - 5.3.1. Cropping patterns in the deep floodplain
 - 5.3.2. Cropping patterns in the tide-affected floodplain
 - 5.3.3. Cropping patterns in the coastal complex
 - 5.3.4. Cropping pattern in the broad depression

Chapter 6: History of settlement and reclamation in the Mekong Delta

- 6.1. Introduction
- 6.2. Former settlements and their disappearance
- 6.3. Process of settlement of ethnic minorities in the delta
- 6.4. Process of settlement and reclamation by Vietnamese
 - 6.4.1. Social economic conditions before and at the beginning of settlement
 - 6.4.2. Reclamation of wetland and formation of villages
 - 6.4.3. Canal excavation
 - 6.4.4. Dam construction

Chapter 7: Air, soil and solid waste pollution

- 7.1. Air pollution in the urban and industrial areas
- 7.2. Acid sulphate soils and pollution
- 7.3. Solid waste pollution in the rural and urban areas

Chapter 8: Fauna and flora resources

- 8.1. Flora resources
- 8.2. Fauna resources

Chapter 9: Thinking about future sustainable development in the delta

- 9.1. The Mekong delta in relation to the neighboring nations
- 9.2. Future development in the delta.

Field Trips

The students will have two-day field trip: First day - visiting floating market and An Binh village. Second day - visiting Sam Mountain in Chau Doc, An Giang. The students will learn geomorphology, landform, water management, biodiversity and history of land-use in the villages where they visit. Students will contact directly to farmers in order to understand their livelihood and social economic conditions.

Suggested Readings

No.	DOCUMENTs and REPORTs	AUTHOURS	YR	CONTENTS
1	MASTER PLAN FOR THE MEKONG DELTA IN VIETNAM	Nedeco	1994	This document focuses on land and water resources and hence is essentially concerned with the primary sector: agriculture, fisheries and forestry
2	MEKONG ARTICLES: MEKONG REGION	Fiona Miller	2000	Some speaks on water environmental threats of the MD. Giving some suggestions on water resources project management
3	TRANSBOUNDARY CAUSE-EFFECTS OF UPSTREAM DEVELOPMENT TO ENVIRONMENT AND LIVELIHOODS IN THE MEKONG DELTA, VIETNAM	Le Quang Minh	2001	Discussion on the effects of trans-boundary water-flow to the downstream of the Mekong River Delta
4	STATE OF THE BASIN REPORT - EXECUTIVE SUMMARY 2003	Mekong River Commission	2003	Reports on fisheries, agriculture, forestry, hydropower, trade and transport, domestic water and sanitation, floods and cooperation in the Mekong Delta
5	AN OVERVIEW OF THE DRINKING WATER SUPPLY SITUATION IN THE MEKONG RIVER	Le Anh Tuan	2003	Water supply situation, solution and recommendation in the Mekong Delta

	DELTA, VIETNAM			
6	WATER QUALITY MANAGEMENT FOR IRRIGATION IN THE MEKONG RIVER, VIETNAM	Le Anh Tuan Guido Wyseure Le Hoang Viet Peter Haest	2004	Reports on water quality analysis for irrigation purposes in the MD and water monitoring and management
7	GEO-PEDOLOGICAL STUDY OF THE MEKONG DELTA	Nguyen Huu Chiem	1993	Research on history of soil formation in the Mekong Delta
8	FORMER AND PRESENT CROPPING PATTERNS IN THE MEKONG DELTA	Nguyen Huu Chiem	1994	Report of former and present land-use in relation to landform in the Mekong Delta
9	Towards Holistic and Sustainable Community Development Fish Conservation and Organic Farming in An Binh Village, Vietnam	Nguyen Huu Chiem et al.	2005	Case study on community-based livelihood development and fish sanctuary establishment

Web link:

- <http://www.mekong.net/>
- <http://www.mrcmekong.org/>
- http://www.thewaterpage.com/mekong_river.htm
- <http://www.mekonginfo.org/>
- <http://www.mekongriver.org/>
- <http://www.mekongwetlands.org/>
- <http://www.mekong-protected-areas.org/index.htm>