



**The University Network for Wetland Ecology and Conservation Training in the Mekong Region**

**COURSE REPORT**

**The 5th Training Course on**

**WETLAND ECOLOGY AND MANAGEMENT IN THE LOWER MEKONG BASIN**

**Vietnam, May 20 - June 10, 2007**

**Sponsors**

John D. and Catherine T. MacArthur Foundation

International Crane Foundation (ICF)

World Wildlife Fund (WWF) Russel E. Train Fund

USGS-National Wetland Research Center

Cantho University (CTU)

**Host University**

Cantho University, Vietnam

## SUMMARY

The University Network for Wetland Ecology and Conservation Training in the Mekong Region held the 5th Training Course on “Wetland Ecology and Management in the Lower Mekong Basin” during 20 May – 10 June 2007 in Vietnam, hosted by the Cantho University, Vietnam. The course was financially sponsored by the John D. and Catherine T. MacArthur Foundation, World Wildlife Fund, USGS-National Wetland Research Center, International Crane Foundation and Cantho University. The course was attended by 21 participants selected from universities and government agencies of 4 countries: Cambodia, Lao PDR, Thailand and Vietnam. The course combined in-class lectures covering various topics of wetland ecology and management with field exercises which exposed participants to real-world wetland management issues and allowed participants to practice wetland research methods learned in class as well as to enhance their analytical and presentation skills. Throughout the training course, all participants have shown their great interest, enthusiasm, active participation, full energy and effort as well as willingness to work in wetland ecosystems. Upon the completion of this third training course, the University Network has offered basic wetland training for 121 lecturers and wetland practitioners of the Mekong region and hope that this training will contribute to improving the region's human resource in wetland education, research, training, and in wetland biodiversity conservation and management. As scheduled, the sixth wetland training course will be conducted in Thailand in 2008, hosted by Chulalongkorn University. An executive meeting of University Network will be held on 1<sup>st</sup> of November 2007 at Mahidol University, Thailand. Member universities of the network will extend the Network MoU and discuss further collaboration among universities and partner institutions.

## **I Introduction**

In May 2003, the University Network for Wetland Ecology and Conservation Training in the Mekong Region was officially established, consisting of 8 member universities: Royal University of Agriculture (Cambodia), Royal University of Phnom Penh (Cambodia), National University of Laos (Lao PDR), Chulalongkorn University (Thailand), Mahidol University (Thailand), Can Tho University (Vietnam), Nong Lam University (Vietnam), and University of Natural Sciences Ho Chi Minh City (Vietnam). In August 2005, at the opening day of the third training course held at the National University of Laos, the network announced three new members: Champasak University (Lao PDR), Mahasarakham University (Thailand) and An Giang University (Vietnam) (see map showing locations of the university members in the lower Mekong river basin-Figure 1, Appendix).

One of the main activities of the Network is to organize regional training on wetland ecology and management. University members of the Network agreed to take turns hosting the training course on a yearly basis. The overall goals are to build and enhance the capacity of university lecturers and researchers of the Mekong region for teaching wetland-related courses, conducting scientific research in wetland-related fields, and assisting wetland management practices. The Network also seeks to enhance the knowledge and understanding of wetland ecology and management for practitioners and staff of government organizations, NGOs and CBOs from the Mekong riparian countries and to improve their capacity in wetland conservation and management practices.

The first training course, entitled “Wetland Ecology and Management in the Lower Mekong Basin” was conducted during 1 – 26 June 2003 in Vietnam, attended by 25 trainees selected from teaching staff and researchers of member universities in the Network. The course was sponsored by the ASEAN Regional Center for Biodiversity Conservation with co-funding from the International Crane Foundation and the John D. and Catherine T. MacArthur Foundation. The University of Natural Sciences Ho Chi Minh City and Can Tho University of Vietnam co-hosted the first training course.

The second training course was conducted during 10 – 30 May 2004 in Thailand, hosted by Mahidol University. The course sponsors were the IUCN/UNDP/GEF Mekong Wetland Biodiversity Conservation Programme, the International Crane Foundation, the John D. and Catherine T. MacArthur Foundation, the Rockefeller Foundation, and Mahidol University. The course was attended by 24 participants, consisting of teaching staff and researchers selected from member universities of the Network and practitioners selected from central and provincial government agencies.

The third training course was held in Lao PDR during 3 - 24 August 2005, hosted by the National University of Laos (NUOL). The 3rd training course was sponsored by the IUCN/UNDP/GEF Mekong Wetland Biodiversity Conservation Programme, the Royal Netherlands Embassy in Vietnam, the WWF - Russell E. Train Education for Nature Program, the John D. and Catherine T. MacArthur Foundation, and the International Crane Foundation.

The 4th training course was held in Cambodia from 12 July to 01 August 2006, hosted by the Royal University of Phnom Penh and was sponsored by the IUCN/UNDP/GEF Mekong Wetland Biodiversity Conservation Programme, the John D. and Catherine T. MacArthur Foundation, and the International Crane Foundation.

The 5<sup>th</sup> training course was held in Vietnam from May 20 to 10 June 2007, hosted by the Cantho University. The training course was sponsored by the John D. and Catherine T. MacArthur Foundation, World Wildlife Fund, USGS-National Wetland Research Center, International Crane Foundation and Cantho University.

## II Participants

### 2.1 Resource Persons

The course was taught by 4 main instructors and 6 invited lecturers and was assisted by 6 teaching assistants. The course also received administration support from senior staff of Hoa An Biodiversity – Application – Research Center of Cantho University of Vietnam.

#### Main instructors:

- Dr. Sansanee Choowaew, Mahidol University, Thailand
- Dr. Duong Van Ni, Can Tho University, Vietnam
- Mr. Jeb Barzen, International Crane Foundation, USA
- Dr. Tran Triet, University of Natural Sciences Ho Chi Minh City, Vietnam

#### Invited lecturers:

- Dr. Gregory Smith, Director of USGS-National Wetland Research Center
- Dr. Michelle Zjhra, Georgia Southern University, US
- Dr. Jim Hutcheon, Georgia Southern University, US
- Prof. Dr. Le Cong Kiet, University of Natural Sciences, Ho Chi Minh City
- Mr. Duong Tri Dung, University Network alumni, Cantho University
- Dr. Nguyen Van Huynh, Cantho University

#### Teaching assistants:

- Ms. Nguyen Thi Bach Kim
- Ms. Le Thi Phuong Mai
- Mr. Nguyen Van Du
- Mr. Dinh Van C
- Mr. Pham Tran Truc Giang
- Mr. Le Dang Khoa

#### Hoa An Center organizers:

- Ms. Nguyen Thi Van Hong
- Ms. Vo Thi Phuc

### 2.2 Course Participants

The course was attended by 21 trainees: 3 from Cambodia, 4 from Lao PDR, 6 from Thailand and 8 from Viet Nam (Table 1).

Among 21 trainees, 20 were lecturers selected from the Network's member universities and 1 is wetland practitioner selected from provincial wetland-related agencies in Viet Nam.

**Table 1** : List of trainees

No.	Title	Family name	First name	Country	Organization	Position	Field study
1	Mr.	Heng	SAVOEUN	Cambodia	RUPP	Lecturer	Biochemistry
2	Mr.	Loeung	CHANTHY	Cambodia	RUPP	Lecturer	Biology
3	Mr.	Ouk	PUTHEA	Cambodia	RUA	Lecturer	Forestry
4	Mr	Nedthongsavanh	SOMPHONE	Lao	NUOL	Deputy of Department	General Forestry
5	Dr	Soulideth	KHAMMANY	Lao	NUOL	Head of Department	Geography
6	Mr.	Southavong	SISOMPHONE	Lao	CP	Teacher	Plant Science

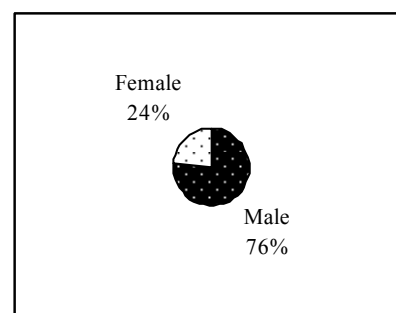
7	Mr.	Chalernesouk	VILAYKONE	Lao	CP	Teacher	Geography
8	Mr.	Thippayasuk sri	CHETSADA	Thailand	MSU	Researcher	Biology
9	Mr.	Soonchan	SAKSIRI	Thailand	MSU	Lecturer	Science
10	Mrs	To-im	JONGDEE	Thailand	MU	Lecturer	Tech. of Information System
11	Dr.	Boontanon	NARIN	Thailand	MU	Lecturer	Biogeochemistry
12	Ms	Kunsook	CHUTAPA	Thailand	CU	Ph. D. Student	Zoology
13	Mr.	Raung- prataungsuk	KUSOL	Thailand	CU	Master Student	Biology
14	Mrs	Phan	NGOC DUYEN	Vietnam	AGU	Lecturer	Environment science
15	Mr.	Nguyen	HUU TRI	Vietnam	AGU	Lecturer and Researcher	Agricultural Economic
16	Ms	Dang Phi	NHAT HAO	Vietnam	UAF	Lecturer	Forestry
17	Mr.	Nguyen	THIEN DI	Vietnam	UAF	Lecturer	Environment technology
18	Ms.	Pham	QUYNH HUONG	Vietnam	UNS	Teaching asistant	Science, Ecology
19	Mr.	Nguyen Thai	MINH QUAN	Vietnam	UNS	Teaching asistant	Biotechnology
20	Mr.	Tran	DUY PHAT	Vietnam	CTU	Researcher	Forestry
21	Mr.	Nguyen	HOANG GIANG	Vietnam	TC park	Deputy Director	Park manager

### 2.3 Participant Profile

Proportion of participants classified according to gender, nationality and age group are presented in Figure 2-4.

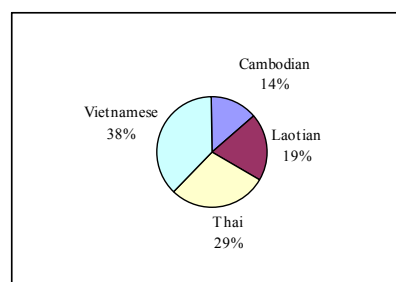
**Figure 2**  
GENDER

Male	16	76.2%
Female	5	23.8%



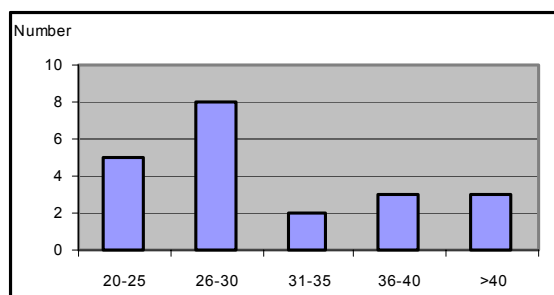
**Figure 3**  
NATIONALITY

Cambodian	3	14.3%
Laotian	4	19.0%
Thai	6	28.6%
Vietnamese	8	38.1%



**Figure 4****AGE GROUP**

Range	Number
20-25	5
26-30	8
31-35	2
36-40	3
>40	3

**III Course Program****3.1 Course activities**

The training consisted of 4 components: in-class lectures, field exercises, workshop, and research forum. Lectures was held at the Hoa An Biodiversity – Application – Research Center, located at 40 Km from main campus of Cantho University. Workshop and research forum sessions were held at the main campus of Cantho University, Cantho city. Field exercises were carried out at 3 wetland sites (see map in Figure-6, Appendix):

- U-Minh Thuong national park, peat swamp area;
- Phu My village, seasonal flooded wetland and Lepironia protected grassland;
- Hon Chong, coastal mangrove wetland and limestone karsts.

In-class lectures (30 hours) covered 15 topics of wetland ecology and management including wetland hydrology; wetland biogeochemistry; wetland plants; wetland birds and water bird ecology; wetland mamal, wetland fish, wetland spiders, wetland values, functions, and valuation; wetland classification and inventory; ecosystem approach to wetlands management; participatory approach to wetlands management.

Field exercises were organized into 3 broad topics: Peatswamp wetland - before and after burned; Grassland – functions and socio-economic development; and Mangrove – unctions and environmental conservation. Participants spent over 80 hours on practical fieldwork at 3 field sites. Participants had more than 50 hours individual and group work and over 30 hours presentations and discussion including a full-day workshop on Wetland Ecology and Management. The workshop was open to the public and Cantho university post graduated students attended.

**3.2 Classroom sessions****Table 2 Diary of Training Course**

No.	Date	Activities	Person speech	Theme
Day 1	20-May	Arrivals		
Day 2	21-May	Topic-1	Dr. Ni	Opening ceremony: Welcoming and opening speech
			Mr. Jeb Barzen	University Network
			Dr. Greg Smith	Opening remark
			22 participants	Introduction participants and instructors: Park manager (02), Forestry (04), Zoology (01), Biology (06), Biogeochemistry (03), Environmental science (03), Agricultural economic (01), Geography (02). Instructors: 4

			Ni, Ttriet, Jeb, Sansanee	Welcome messages
			Dr.Ni	Course syllabus
		Topic-2	Dr. Huynh	Wetland spiders: Pospone to 8 <sup>th</sup> June morning
		Topic-3	Dr. Greg Smith	Introdution to NWRC research activities and the DRAGON project
		Topic-4	Dr. Triet	Introduction to wetland ecosystems
		Topic-5	Mr. Jeb	Wetland hydrology
			Mr. Jeb	Take home exam: group work on water budget. Each country group selected a wetland and prepared a water budget.
			Dr. Ni, Mr. Phat	Finish day-2: Tour around Hoa An Center
Day-3	22-May	Group presentation		Group presentation
			Mr. Chanthy	Cambodia example
			Mr. Sisomphone	LAO example
			Mr. Kusol	Thailand example
			Ms. Huong	Vietnam example
		Topic-6	Dr. Michelle Zjhra	Wetland plants
		Topic-7	Mr. Duong Tri Dung	Fish ecology
		Topic-8	Mr. Jim Hutcheon	Wetland Mammals
		Topic-9	Dr. Ni	Biogeochemistry
Jeb	Exam: Water budget of different wetland presented by four groups			
Day-4	23-May	Practice	Jeb	Hoa An site at 5:30AM: Bird watching-Group I
				Group work presentation
		Group work presentation	Mr. Savoeun	Group-1
			Mr. Chetsada & Ms Hao	Group-2
			Mr. Puthea	Group-3
			Mr. Narin	Group-4
		Topic-10	Jeb	Wetland bird
		Topic-11	Triet	Invasive alien species
		Topic-12	Prof. Kiet	Agarwood resources
Topic-13	Triet	Mimosa pigra		
Topic-14	Sansanee	Wetland values		
Day-5	24-May	Field trip preparation	Jeb	Hoa An site at 5:30AM: Bird watching-Group II
			All participants	Cantho city (9:00 to 3:00PM): Field trip preparation
			All participants	Hoa An site at 6:30PM: Grouping and topic selected for final workshop (Table 3)
			All participants	Hoa An site: Schedule for 25th and Field trip
Day-6	25-May	Practice at Hoa An center	All participants	Hoa An site: all participant practiced on observing, measuring, description, reports...on soil, hydrology, vegetation and socio-economic
Day-7	26-May	Travel from Hoa An to U-Minh Thuong	All participants, instructors, research assistants, and services	Check-in and tour-around U-Minh Thuong

Day-8	27-May	Working as Groups	Group-1: Soil	In the core zone: Natural peat system
			Group-2: Hydrology	In the core zone: Natural peat system
			Group-3: Vegetation	In the core zone: Natural peat system
			Group-4: Socio-economic	In the bufferzone: Canal 14
			All participants, instructors, research assistants	20:00 Group reports on their finding
Day-9	28-May	Working as Groups	Group-2: Soil	In the core zone: Burned peat system
			Group-3: Hydrology	In the core zone: Burned peat system
			Group-4: Vegetation	In the core zone: Burned peat system
			Group-1: Socio-economic	In the bufferzone: Canal 19
			All participants, instructors, research assistants	20:00 Group reports on their finding
Day-10	29-May	Travel from U-Minh Thuong to Ha Tien	All participant	Triet: Introduction about the site
			All participant	Ni: Steps to remember
Day-11	30-May	Working as Groups	Group-3: Soil	In the project area
			Group-4: Hydrology	In the project area
			Group-1: Vegetation	In the project area
			Group-2: Socio-economic	In the bufferzone
			All participants, instructors, research assistants	20:00 Group reports on their finding
Day-12	31-May	Working as Groups	Group-3: Soil	In the project area
			Group-4: Hydrology	In the project area
			Group-1: Vegetation	In the project area
			Group-2: Socio-economic	In the bufferzone
			All participants	Tour around Ha Tien city
			All participants, instructors, research assistants	20:00 Group reports on their finding
Day-13	1-Jun	Travel from Ha Tien to Hon Chong	All participants	Site visit: Coastal area of Hon Chong protected ares
			All participants	Jeb: 20:00 How to write a scientific paper?
			All participants	Groupwork: How to be a good presenter?
Day-14	2-Jun	Working as Groups	Group-4: Soil	Early morning visited Holcim ciment factory: Wetland in Holcim factory and Mangrove forest
			Group-1: Hydrology	Wetland in Holcim factory and Mangrove forest
			Group-2: Vegetation	Wetland in Holcim cement plant and Mangrove forest
			Group-3: Socio-economic	People living in the protected forest area
			All participants, instructors, research assistants	20:00 Group reports on their finding



Day-15	3-Jun	Break	All participants	Sea tour to near shore islands
Day-16	4-Jun	Travel from Hon Chong back to Hoa An	Ni	At 16:00 Groupwork on data analysis and report writing
			All instructors	System-1: U-Minh Thuong
			All instructors	System-2: Phu My
			All instructors	System-3: Hon Chong
		Sansanee		Photo contest: Submitted max. 5 best photos
Day-17	5-Jun	Report writing	All participants, instructors, research assistants	As in table 3
Day-18	6-Jun	Report writing	All participants, instructors, research assistants	As in table 3
Day-19	7-Jun	Report writing	All participants, instructors, research assistants	As in table 3 Jeb left for U.S.
Day-20	8-Jun	Topic-2	Dr. Huynh	Presentation on spiders Group practice on presentation
Day-21	9-Jun	Workshop	All participant	Workshop schedule (9 Jun): Farewell party with ACC groups
Day-22	10-Jun	Departure		4AM at Asia hotel to HCM city

**Table 3:** Team members for field work and preparing final reports

No.	Field study	U-Minh Thuong (Peatland)		Phu My (Grassland)	Hon Chong (Coastland)
		Natural	After burn		
1	Soil	G1	G2	G3	G4
		Somphone	Hao	Quan	Duyen
2	Hydrology	G2	G3	G4	G1
		Huong	Puthea	Narin	Jongdee/Savouen
3	Vegetation	G3	G4	G1	G2
		Chutapa	Chetsada	Kusol/Giang	Saksiri/Phat
4	Socio-Economic	G4	G1	G2	G3
		Sisomphone	Thien Di	Chanthy/Khamman	Tri/Vilaykon

### 3.3 Workshop session

The “Workshop on Wetland Ecology and Management in the Lower Mekong Basin” was held on June 9 during 9:00AM – 15:30PM at the Learning Center in main campus of Cantho University. The workshop received considerable attention. There were over 60 attendees altogether including postgraduate students and academic staff of CTU, especially there were 24 American students from Wake Forest University, Virginia Tech. College, and Miami College. Participants presented their findings and experience from field work into three sections covered of Soil, Hydrology, Vegetation, and Socio-economic integration (Table 4).

**Table 4** Workshop schedule at CTU main campus

Time	Activities	Speakers
9:00	Opening workshop	<b>Dr. Ni</b>
9:05-9:20	Introduction about the University Network and Training Course	<b>Dr. Triet</b>
9:20-9:30	Set up facilities	
<b>9:30-11:00</b>	<b>Section 1: U-Minh Thuong Ecosystem</b>	

	Introduction about the site	<b>Sisomphone</b>
	Soil	<b>Nhat Hao/Somphone</b>
	Hydrology	<b>Huong</b>
	Vegetation	<b>Chutapa/Chetsada</b>
	Socio-economic	<b>Thien Di</b>
	Conclusion and Recommendation	<b>Sisomphone</b>
<b>11:00-12:30</b>	<b>Section 2: Phu My Ecosystem</b>	
	Introduction about the site	<b>Minh Quan</b>
	Soil	<b>Puthea</b>
	Hydrology	<b>Narin</b>
	Vegetation	<b>Kusol</b>
	Socio-economic	<b>Chanthy/Khammany</b>
	Conclusion and Recommendation	<b>Minh Quan</b>
12:30-13:30	Lunch at CTU canteen	
<b>14:00-15:30</b>	<b>Section 3: Hon Chong Ecosystem</b>	
	Introduction about the site	<b>Jongdee</b>
	Soil	<b>Phat</b>
	Hydrology	<b>Jongdee/Savooun</b>
	Vegetation	<b>Saksiri</b>
	Socio-economic	<b>Tri</b>
	Conclusion and Recommendation	<b>Jongdee</b>
15:30-16:30	Course evaluation and report	<b>Dr. Sansanee</b>
16:30-17:00	Photo contest awards, voting wetland hero, miss wetland	<b>Dr. Sansanee</b>
17:00-17:30	Speech of CTU Rectorate and Certificate delivery	<b>Dr. H.T.Toan, vice rector of CTU</b>

### 3.4 Course evaluation

After the wetland workshop, a course evaluation was carried out. Participants filled out the course evaluation forms anonymously to rate training activities carried out during the course and provide their suggestions for the implementation of future courses.

### 3.5 Closing ceremony and farewell dinner

The closing ceremony and certificate presentations started at 17 hrs, presided by the Vice-Rector of Cantho University, Dr. Ha Thanh Toan.

Evening: Farwell dinner at Restaurant Asia

- Announcement of "best students" 4 trainees receiving grade "A" – Pham Quynh Huong, Boontanon Narin, Loeng Chanthy, and Toim Jongdee were honored for their best performance in the training.
- Announcement of the winners of popular contest.
  - "Miss Wetland": Ms. Pham Quynh Huong and Dang Phi Nhat Hao
  - "Mister Wetland": Mr. Nguyen Thien Di
- Result of wetland photos contest was announced and awards were given to the winners:
  - First prize: Kunsook Chutapa
  - Second prize: Ms. Nguyen Thi Bach Kim and Soonchan Saksiri

June 10: Departure day. All participants returned to their home countries safely.

## IV Course Outputs

A 4GB memory stick (donated by USGS-National Wetland Research Center) containing all electronic copies of participant list, lecture notes, supporting documents, shared photos, and photo contest was given to each participant of the training.

#### **4.1 Lecture notes**

PowerPoint files available.

##### **4.1.1 Main lectures**

- Wetland Ecology : Introduction (Tran Triet)
- Wetland Hydrology (Jeb Barzen)
- Wetland Vegetation (Tran Triet)
- Environmental weeds (Tran Triet)
- The Ecology and Conservation of Large Water Birds in Southeast Asia (Jeb Barzen)
- Wetland Valuation (Sansanee Choowaew)
- Wetland Classification and Inventory (Tran Triet)
- Ecosystem Approach to Wetland Management (Duong Van Ni)
- Ecosystem Approach to Wetland Management: examples (Duong Van Ni)
- Participatory Approach to Wetlands Management (Sansanee Choowaew)
- Mimosa pigra case study (Tran Triet)
- Wetlands of the lower Mekong basin (Tran Triet)

##### **4.1.2 Guess lectures**

- An introduction about DRAGON programme and opportunity for collaboration (G. Smith)
- Fish Ecology of the Mekong Delta of Vietnam (D.T.Dung)
- Wetland plant (Michelle Zhjra)
- Wetland mammal (Jim Hutcheon)
- Agarwood resources (L.C.Kiet)

#### **4.2 Supporting materials**

PDF files available in CD. For brevity, full citations are not provided here.

- Ramsar wetland handbooks: volume 1 to 14. Ramsar Convention on wetlands. 2nd edition. 2004.
- A source book for conducting biological assessments and developing biodiversity visions for ecoregion conservation. Volume II: Freshwater ecoregions. WWF-US. 2002.
- Integrated water resources management. Global Water Partnership. 2000.
- Economic evaluation of wetlands. Ramsar Convention on wetlands. 1997.
- A Manual for an Inventory of Asian Wetlands Version 1.0 . Wetlands International. 2002.
- A hydrogeomorphic classification for wetlands. US Army Corps of Engineers. 1993.
- The essentials of environmental flows. IUCN. 2003.
- Environmental flows: Concepts and methods. World Bank. 2003.
- Environmental flows: Case studies. World Bank. 2003.
- Environmental flows: Flood flow. World Bank. 2003.
- Biodiversity and fishery in the Mekong river basin. Mekong River Commission. 2003.
- Deep pools as dry season fish habitats in the Mekong river basin. Mekong River Commission. 2002.
- Mekong giant fish species: on their management and biology. Mekong River Commission. 2003.
- Fish migrations of the lower Mekong basin: implication for development, planning and environmental management. Mekong River Commission. 2002.

- Fishery in the lower Mekong basin: status and perspectives. Mekong River Commission. 2002.
- Freshwater aquaculture in the lower Mekong basin. Mekong River Commission. 2002.
- The impacts of introductions and stocking of exotic species in the Mekong basin and policies for their control. Mekong River Commission. 2003.
- Distribution and ecology of some important riverine fish species of the Mekong basin. Mekong River Commission. 2004.

**Textbooks used in the course:**

- Mitsch, W.J. and Goosselink, J.G. 2000. *Wetlands*. 3<sup>rd</sup> Edition. John Wiley & Sons.
- Guidelines for Soil Profile Description (FAO)

**4.3 Field project presentation and reports prepared by course participants**

PowerPoint presentations:

- Wetland in Cambodia: ‘Ang Trapeang Thmaw’
- An example for wetland in Vietnam: ‘Can Gio Mangrove forest’
- Water Budget: Nong Bong Khai Non-Hunting Area – Chiang Saen Lake THAILAND
- An example of Phapho Wetland in Southern Part of Laos

**4.4 Group presentations at the Workshop Session and final reports**

PowerPoint files :

Team 1: U-Minh Thuong wetland ecosystem

- Wetland ecology in the U-Minh Thuong national park: Introduction about the site
- Hydrology and Water quality
- Peat and peaty Soils
- Vegetation
- Socio-economic conditions

Team 2: Phu My wetland ecosystem

- Wetland ecology in the Phu My *Lepironia* grassland: Introduction about the site
- Hydrology and water quality
- Soils
- Vegetation
- Social-economic conditions

Team 3: Hon Chong wetland ecosystem

- Wetland ecology in the Hon Chong mangrove forest: Introduction about the site
- Hydrology and water quality
- Soils
- Vegetation
- Social-economic conditions

WORD files: Final field project reports at each ecosystem, covered of Site introduction, Soil formation and processes, Hydrology and water quality, Vegetation and diversity, and Socio-economic dependence of the local communities.

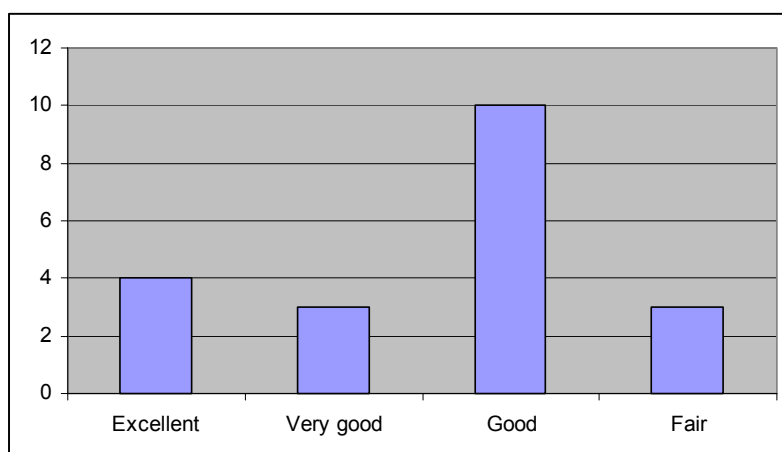
**4.5 Participant contacts**

- List of participant names, photos, positions, organizations, contact addresses
- List of names, positions, organizations, contact addresses of all resource persons

## V Result of participants assessment

Course participants were scored on 4 categories: in-class performance, field performance, presentation skills, and written reports. Each participant was assessed by 4 main instructors (Dr Sansanee Choowaew, Dr Tran Triet, Dr Duong Van Ni, and Mr Jeb Bazen) separately. The final grade was a consensus of instructor assessments and had one of the four values : A – Excellent, B+ - Very Good, B – Good, and C – Fair. The final grades were in Figure 5 and Table 5. Upon course completion, each participant received a Certificate of Accomplishment signed by the Rector of the Cantho University on behalf of the University Network for Wetland Ecology and Conservation Training in the Mekong Region.

**Figure 5:** Final results



**Table 5:** Final grades

Participant(s)	Mr. Jeb	Dr. Ni	Dr. Triet	Dr. Sansanee	Final grade
Hao	B	B	B+	B+	B
Huong	A	B+	A	A	A
Chetsada	B	B	B+	B+	B
Sisomphone	C	A	B+	B	B
Thien Di	B	B	B+	B+	B
Somphone	A	B+	B+	B	B+
Chutapa	B	B	B+	B+	B
Kusol	B	B	B+	A	B+
Puthea	C+	B	B+	B	B
Narin	A	A	A	A	A
Quan	B+	B	B+	B	B
Chanthy	A	B+	A	A	A
Giang	C+	C	C	B	C
Khammany	C+	C	C	B	C
Saksiri	A	B+	B+	B+	B+
Jongdee	A	A	A	A	A
Savooun	A	B	C+	B	B
Phat	B+	B	C+	B	B
Tri	B	B	B	B+	B
Vilaykone	C	C	C+	B	C

## VI Course Evaluation

At the end of the course, each participant filled in a questionnaire anonymously to evaluate the training. Questions covered 4 broad topics: technical aspects; training environment; logistics; and feedback or comments for future courses. For questions of the first 3 topics, participants were asked to rate course delivery according to a rating system of 5 levels: 1 = To be improved; 2 = Fair; 3 = Good; 4 = Very good; and 5 = Excellent. Results of participants' evaluation are given in Table 5.

**Table 5:** Result of student evaluations. The number in each cell is the total of votes for the corresponding question with respect to 5 rating categories: 1 = To be improved; 2 = Fair; 3 = Good; 4 = Very good; and 5 = Excellent.

<b>Technical aspects</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	<b>Course design</b>					
1.1	Course structure/schedule		3	9	6	2
1.2	Proportion of theory and practice	1		8	7	4
1.3	Course length	3	3	8	4	2
1.4	Course contents of lecture sessions	1	1	7	8	3
1.5	Course contents of the guest speaker sessions	1	1	7	7	4
1.6	Course contents of fieldwork session at U Minh Thuong		1	7	8	4
1.7	Course contents of fieldwork session at Phu My		1	5	11	3
1.8	Course contents of fieldwork session at Hon Chong			7	9	4
1.9	Workshop session	1		8	8	3
1.10	Overall course contents/Subjects covered	1		9	9	1
2	<b>Course delivery</b>					
2.1	Key lectures		2	5	8	5
2.2	Invited lectures	2		7	8	3
2.3	Delivery methods/styles/techniques		2	10	6	2
2.4	Delivery tools/audio-visual equipments			13	5	2
2.5	Facilities provided and technical assistance		5	7	3	5
3	<b>Course materials</b>					
3.1	Course background information			7	12	1
3.2	Lecture notes		1	7	9	3
3.3	In - class excercises			11	5	4
3.4	Assignments/homeworks	1	2	10	3	4
3.5	Reading materials	3		8	7	1

<b>Training Evironment</b>						
1	Opertunities of participation	1	1	4	9	4
2	Interaction between trainees and traniners		1	4	9	5
3	Interaction among trainees		2	5	7	6
4	Classroom environment	1	3	5	6	5
5	Groupwork environment		2	8	7	3
6	Class size (number of trainees)		2	4	9	5

<b>Logistics</b>						
1	Accommodations	2	2	8	5	3
2	Meals/refreshments	1	1	8	10	
3	Transportation		2	10	4	4
4	Social events/activities	2	1	10	3	4
5	Free time/Excursions	4	1	7	5	3
6	Supporting staff		1	6	8	5
7	<b>Overall organization</b>	1		8	8	3

## Feedbacks And Comments For Future Courses

### 1. Potential/recommended trainees

- Lecturers, researchers involving with wetlands
- Undergraduate students
- Who use and manage wetland should be trained
- Those who love nature and work with community
- Anyone who really want to learn about wetland
- Lecturers in wetland field: environmental policy makers

## **2. Other subjects/practices to be added**

- Animal diversity should be covered
- Ecology, environment
- Should practice more on methods of data analysis
- Nutrient dynamics and interaction between vegetation and sediment
- Biodiversity, ecology
- Remote sensing and GIS
- Effects of policy on wetland ecology and management
- Interdisciplinary approach

## **3. Applications of knowledge and skills**

- GIS application in natural resource management
- Yes, I can understand clearly relationship between soil, hydrology and wetland vegetation
- In teaching and research
- Understanding more about wetlands
- I can use this experience for my future work in my country. Hope to be a wetland researcher too.
- This knowledge is very useful for me to understand better about wetlands
- Yes, because I am a teacher so that I have an opportunity to do that
- Yes. Knowledge on socio-economic analysis will be useful
- Yes, the research of wetland are very broad and very interesting. This experience will keep me a lot on the research
- Must select the appropriate lessons to put into my lectures to teach my students about wetlands
- Thinking process can be used to in every works from this training
- Collect samples such as plants in mangrove
- That is good experience for my ecology class. I am include topics about wetland practices for them
- This is a good experience to me. It gives more information to my work in the future
- I got many things from this training which I can apply in my organization such as wetland ecology, how to write scientific paper, field works on wetland areas.

## **4. Suggestions for the 6th training course to be held in Thailand in 2008**

- Practice in the field more. More practise on writing and presentation
- We should invite more participants
- Should have more freetime at night
- Each university should have more than 2 participants. They should be good in English
- More participants - more time to study (and visit)
- It will probably be better to submit only 1 report for each ecosystem
- Should manage about transportation, accommodation, library, computer and internet

## **5. Impression about this 5t training course**

- Good condition for training
- Group work in both field excursion and presentation
- Very enjoyed in this course and I hope I can participate again
- Can apply knowledge from this course to my work
- I am so happy to work in group of people from different countries

- Staff of Cantho is very friendly and kind. Friends (especially Thai) are very friendly  
A great deal of knowledge just in 3 weeks
- Got a lot of lessons
- The course was well organized. I'm grateful to the instructors and proud of all participants
- Very nice. Before I came, I thought I know something but now after the training I learn a lot more
- This is good. I get more lessons from this training
- Trainers and team work
- More practices, more experiences
- I am impress about the staff of Hoa An center and I will remember about vegetation in pot at Vietnam forever
- I would like to thank you all staff of Hoa An center.
- Mosquitoes, 5 star hotel, memories about wetlands in Vietnam
- So cool!

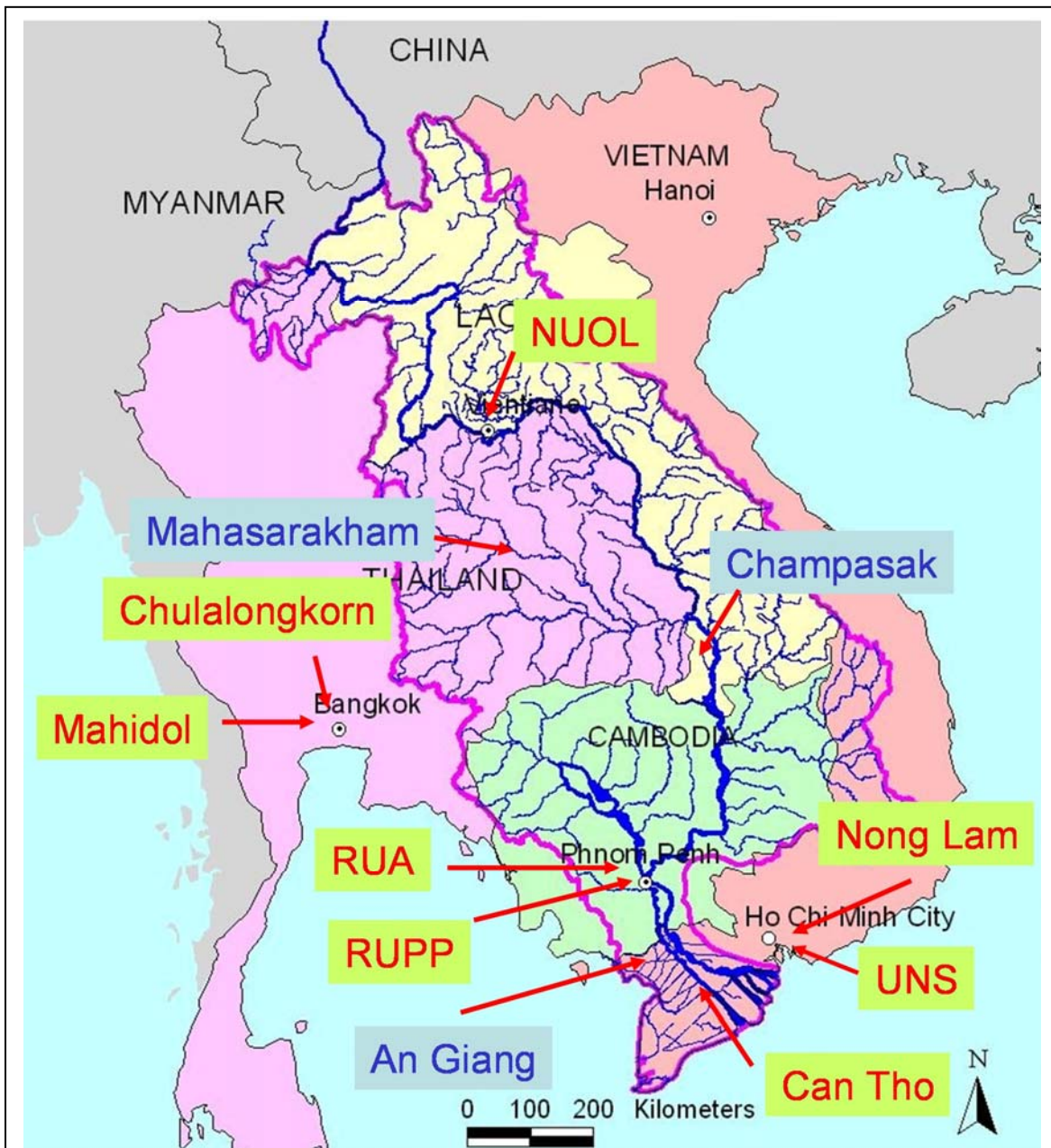
June 15, 2007

Reported on behalf of the 5th Training Course Organizing Committee

**Duong Van Ni**

Hoa An Biodiversity – Application – Research Center  
Cantho University, Cantho, Vietnam





**Figure 1:** Location of 11 members of the University Network for Wetland Ecology and Conservation Training in the Mekong Region. Source of the base map is from the Mekong River Commission.

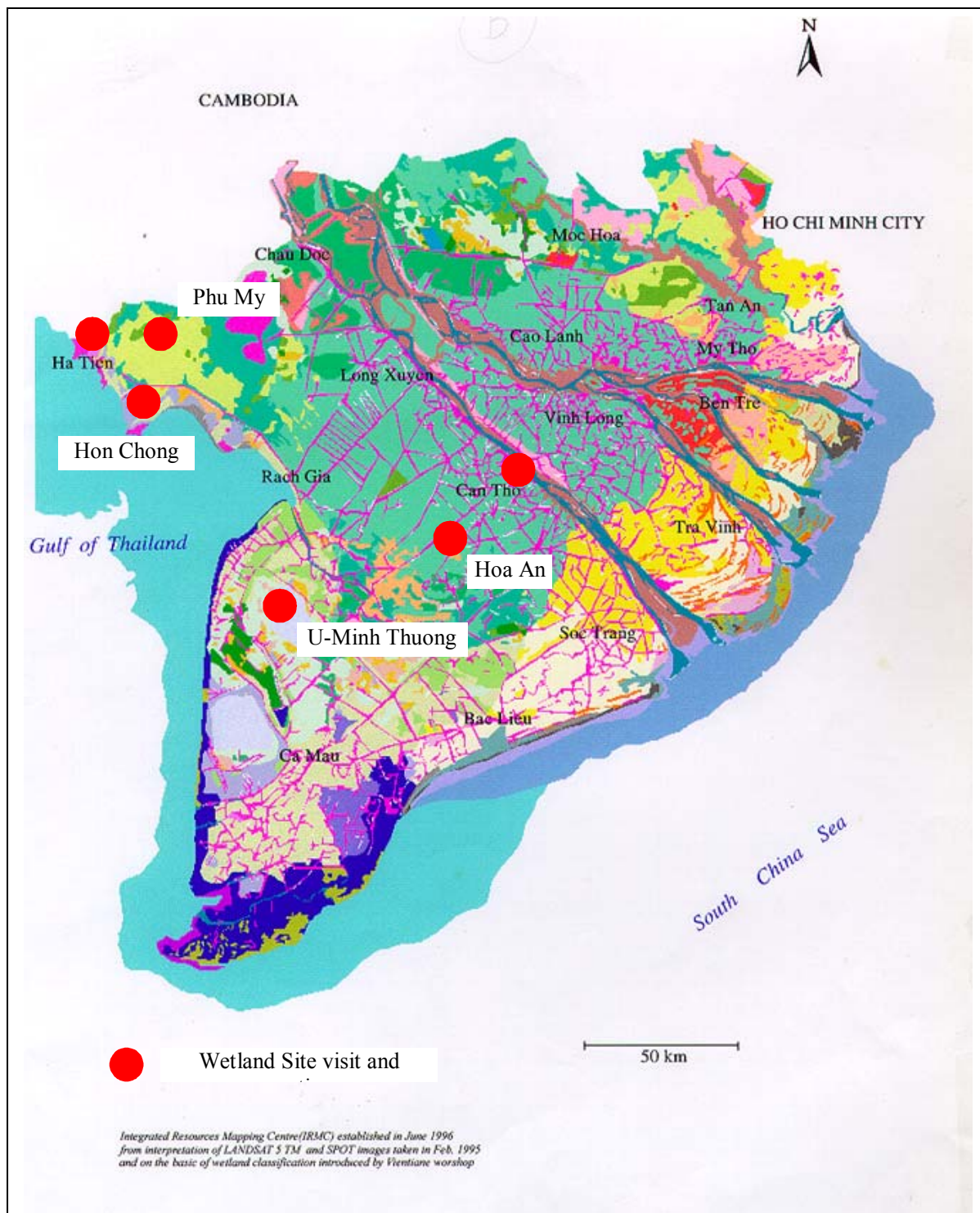


Figure 6 Map showing field site study at the Mekong Delta of Vietnam

## Pictures showing activities of the 5<sup>th</sup> Training Course



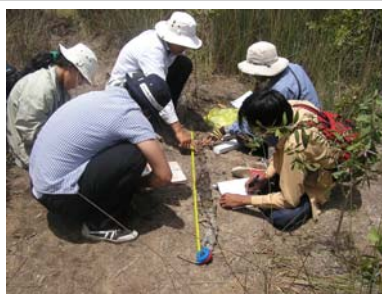
Opening ceremony at Hoa An Research Center, Cantho University, Vietnam



Lectures



Participants, Instructors, and Guests at Hoa An Research Center



Soil survey



Hydrology and water quality survey



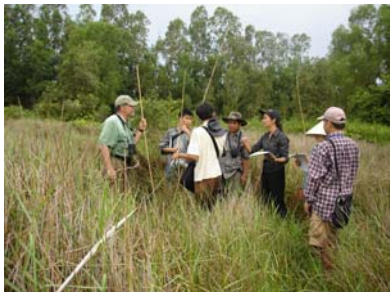
Vegetation survey



Socio-economic survey



Meal and relaxes



Groupwork on watershed survey



Groupwork on vegetation identification



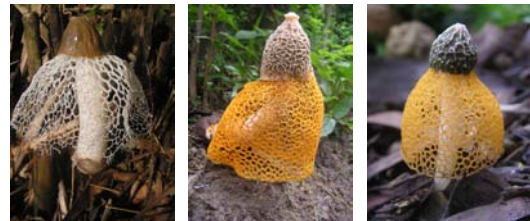
Groupwork on socio-economic data analysis



Presentation



Travel in the field trip



Enjoy the diversity on wetland



Enjoy watching bird in wetland



Enjoy the beauty of wetland