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# 2018

1ST- 5TH OCTOBER

UNIVERSITY OF  
BATTAMBANG /  
CAMBODIA

## 1<sup>ST</sup> DOCKSIDE SUMMER SCHOOL

## TRANSBOUNDARY RIVER ECOSYSTEM MANAGEMENT

### WHAT WILL BE COVERED?

The first DOCKSIDE Summer School objectives are to increase the student and researcher's knowledge and to enable connectedness between them as well as to expand the Environmental Maritime Research (EMR) network, and to increase scientific collaboration.

The participants will come from the Higher Education Institutions in Cambodia, Spain, Denmark and France. During the one-week of intensive learning, the participants will have the opportunity to share methods, discuss the current and future research topics and develop network.

The theme of the summer school is "Transboundary River Ecosystem Management". University of Battambang will host the event on 1st-5th October 2018.

### IT WILL FOCUS ON THESE FOUR TOPICS:

- ▶ Sustainability of Natural Resources: The Case of the Tonle Sap
- ▶ Computational Modeling of Natural Resources and Maritime Issues
- ▶ Transboundary resources management
- ▶ Risk Management Approaches towards Transboundary Water Resources Management

Pre-reading materials will be sent to participants two weeks prior to the summer school, to enhance understanding and facilitate group discussion during the training. During the training, additional materials will also be provided.

DOCKSIDE project is co-funded by the Erasmus+ Programme of the European Union

For more info, please visit:  
[www.dockside-kh.eu](http://www.dockside-kh.eu)  
Facebook: docksideEUproject

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## TRANSBOUNDARY RIVER ECOSYSTEM MANAGEMENT

### TOPIC: COMPUTATIONAL MODELING OF NATURAL RESOURCES AND MARITIME ISSUES

#### TRAINERS :

Prof. Thomas Vallée (University of Nantes) and  
Prof. Murat Yildizoglu (University of Bordeaux)



#### SHORT DESCRIPTION (SUMMARY)

This course will describe how computational tools, like agent based model or graph theory, can be used in order to model the behavior of relevant bio-economic or maritime issues. The objective of the workshop is to allow the participants to understand, through the design of specific bio-economic models that allow to take into account both economic and natural resource dynamics, the potential conflicts between natural resources and economic objectives and their potential conflicts.

#### METHODS

The training course has both theoretical and practical perspectives on maritime and bio-economic issues. The lecture will be delivered and follow the styles of active learning rather than traditional pedagogical styles. Therefore, all participants need to actively take part in group works, discussions and presentations in class (to strengthen the participants' ability to use the risk management tools on real-life case studies). Hands-on sessions on computers will be part of the course, and the students will be required to come with their computers.

The participants will be invited to install some free software on their computers before coming to the workshop.

#### EXPECTED PARTICIPANTS (PROFILE)

MSc and PhD students, staff from universities, researchers.

#### BASIC KNOWLEDGE REQUIREMENTS

It is expected that the participant should have some basic understanding of programming and mathematical optimization concepts.

It is also expected that, during the training workshop, the participants will discuss potential applications of the methodologies learned either for research opportunities or for potential reports.

#### ADDED-VALUE THE PARTICIPANTS WILL ACQUIRE

It is expected that after finishing this training, the participants will be able to:

- ▶ Understand Bioeconomy and maritime issues.
- ▶ Use the theory and concepts to highlight interactions and conflicts.
- ▶ Learn to model computationally bioeconomic dynamics by
  - > Creating a simulation program
  - > Analyzing the results of the simulations

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## TRANSBOUNDARY RIVER ECOSYSTEM MANAGEMENT

### TOPIC: RISK MANAGEMENT APPROACHES TOWARDS TRANSBOUNDARY WATER RESOURCES MANAGEMENT

#### TRAINERS :

Dr. Dewan Ahsan, Prof. Niels Vestergaard  
(University of Southern Denmark) &  
Dr. Odile Delfour-Samama (University of Nantes)



#### SHORT DESCRIPTION (SUMMARY)

This course will describe the principles of risk management strategies (particularly related to the transboundary river ecosystems) which includes legal aspects of international river management, techniques for decision making under uncertainty and risk, stakeholder involvement, cost-benefit analysis and game theoretical approach in transboundary river management. The training course will also put special emphasis on how to communicate the risk management strategies to the stakeholders/non-specialists for successful implementation.

#### METHODS

The training course has both theoretical and practical perspectives on risk management of transboundary river ecosystems. The lecture will be delivered in English and will follow the styles of active learning rather than traditional pedagogical styles. Therefore, all participants need to actively take part in group works, discussions and presentations in class (to strengthen the participants' ability to use the risk management tools on real-life case studies). The participants will be divided into 4-5 working groups to encourage and enhance reflective learning.

#### EXPECTED PARTICIPANTS (PROFILE)

MSc and PhD students, governmental officials, NGO personnel and anyone who wants to become a Risk Manager.

#### BASIC KNOWLEDGE REQUIREMENTS

It is expected that the participant should have the basic understanding of Microsoft Excel.

It is also expected that for gathering experience on how to prepare a risk management plan, each participant will bring a potential research topic/case related to transboundary natural resource management (e.g. wetlands, fisheries, aquaculture, mangrove forest, lakes, transboundary river environmental protection, etc.) based his/her research or professional interest. During the training workshop, the participants will have the opportunities to work on their cases (either individually or in a group) together with the trainers. *However, please note that it is not mandatory to bring a case.*

#### ADDED-VALUE THE PARTICIPANTS WILL ACQUIRE

It is expected that after finishing this training, the participants will be able to:

- ▶ Use the theory and concepts from the course to evaluate/reflect upon existing risk management plans for transboundary water resources
- ▶ Classify various types of risk
- ▶ Prepare a risk management plan
- ▶ Communicate the risk management plan to the stakeholders/non-specialists for successful implementation of natural resources management

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## TRANSBOUNDARY RIVER ECOSYSTEM MANAGEMENT

### TOPIC: SUSTAINABILITY OF NATURAL RESOURCES: THE CASE OF THE TONLE SAP

#### TRAINERS :

Dr. Seng Ratha, Dr. Chea Ratha  
(University of Battambang), & Dr. Neang Malyne  
(Royal University of Agriculture)



#### SHORT DESCRIPTION (SUMMARY)

The course describes the principles of ecosystem approach to fisheries management, ecosystem status and food web structure of Tonle Sap, co-management arrangement and community adaptation to environmental change. The course intends to improve understanding of Tonle Sap's ecosystems by emphasizing on the status, the socio-ecological interactions and the responses to various drivers of change around the lake.

#### METHODS

As the training intends to provide both theoretical and practical perspectives on fisheries management, especially relevant to the Tonle Sap, the training methods will consist of lecture presentation, brainstorming, group work, and oral presentation reflection from the participants. The group work and participant presentation aim to stimulate discussion and research topics around the Tonle Sap Lake.

Therefore, participants are expected to have some preliminary thoughts on the research topics to enhance discussion. Feedback on research methods and analytical tools will be provided to participants during presentations.

#### EXPECTED PARTICIPANTS (PROFILE)

Master and PhD students interested in ecosystem management, natural resource management, fisheries, agriculture, rural development, economics, Tonle Sap and the Mekong systems. Motivated undergraduate students will be considered.

#### BASIC KNOWLEDGE REQUIREMENTS

The participants are expected to have some basic knowledge of natural resource management, ecosystem services, research methods and analytical tools.

#### ADDED-VALUE THE PARTICIPANTS WILL ACQUIRE

Upon completion of the training, participants are expected to:

- ▶ use the theories, concepts, and ecosystem as well as agro-ecosystem understanding to develop potential research topics for their thesis and dissertation;
- ▶ identify areas of a knowledge gap, future joint research, multidisciplinary research and other collaboration;
- ▶ improve their existing research (topics, methodologies, etc)

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**TRANSBOUNDARY RIVER  
ECOSYSTEM MANAGEMENT**

**TOPIC:**  
**TRANBOUNDARY RESOURCES MANAGEMENT**

**TRAINERS :**

Dr. Elena Ojea, Dr. Laura Movilla and Diego Salgueiro, M.Sc. (University of Vigo)



**SHORT DESCRIPTION (SUMMARY)**

The course will focus on research about environmental resource management that has an international dimension and where a transboundary perspective is needed. The course evolves around climate change and biodiversity loss, and presents ongoing research on international governance and social-ecological approaches in both areas. The main objective of the course is to give students the ability to propose research questions regarding climate change and biodiversity interactions with well-being, on the global context, identify methodologies for tackling those questions and planning the necessary research steps.

**METHODS**

This course focuses on environmental governance and management from a multidisciplinary perspective, with special emphasis on social sciences.

The course is structured in three blocks.

The first one is research capacity, where students will be given guidelines for research projects based on personal experiences and the state of the art.

The second one is conceptual and methodological, where research questions on climate change and biodiversity interactions with social systems globally and locally will be discussed. Methodologies will focus on law and international relationships, and tools for social-ecological analysis.

The last block will be research planning, where students will learn how to pose a research question and the steps needed to address it.

**EXPECTED PARTICIPANTS (PROFILE)**

We expect participants from a broad range of degrees from social sciences to environmental sciences as well as interdisciplinary profiles. We expect motivated participants aiming to develop research ideas in the future. Stakeholders from NGO, governments and other backgrounds related to social-environmental conflicts, interactions, regulations and policies are welcomed.

**BASIC KNOWLEDGE REQUIREMENTS**

We expect a basic knowledge of global and transboundary environmental issues such as climate change and the problem of biodiversity loss. Knowledge in law and/or environmental sciences will be helpful but not mandatory.

**ADDED-VALUE THE PARTICIPANTS WILL ACQUIRE**

The participants to this session will:

- ▶ acquire a transversal vision of research in social and environmental sciences
- ▶ understand the existing international governance of environmental resources and the challenges posed by climate change and biodiversity loss in the future
- ▶ acquire the ability to think in the complexity of social-ecological systems and the relevance of international agreements in transboundary issues related to resources.

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