

**ASEAN WATER PLATFORM (AWP) 2018
- Can Tho University -**

"Water and its Many Issues. Methods and Cross-cutting Analysis"

6th – 14th July 2018

PROGRAMME

PLENARY SESSIONS / CTU Amphitheater (3rd Floor)

Tentative Agenda / Schedule

Friday 6 / 07	Saturday 7	Sunday 8
<ul style="list-style-type: none"> • 8:30 - 9:00 Opening Ceremony followed by a coffee break 	8:30 Plenary Session 4 1h 30mn discussion followed by a coffee break	<i>Off</i> Informal Networking
Plenary Session 1 1h 30mn discussion	Plenary Session 5 1h 30mn discussion	
Lunch		
Plenary Session 2 1h 30mn discussion	Opened to external stakeholders	
Plenary Session 3 1h 30mn discussion		

WORKSHOP 1. Risk Management Strategies in Natural Resource Management

Trainers: Dewan Ahsan (University of Southern Denmark, Denmark); Niels Vestergaard (University of Southern Denmark, Denmark), Robert Owen (University of Nantes, France) and Duc Phu Tran (Vietnam Maritime University)

Description:

This course will describe the principles of risk management strategies (particularly in natural resource management) which include stakeholder identification, analyse on risk management principals and guidelines, techniques for assessment and prioritization of risks and method to conduct cost benefit analysis, identification of the response strategies to reduce various risks involved in natural resource management and methodologies risk communication to the stakeholders.

Key words: Risk Management, ISO 31000, Stakeholder mapping, Cost-Benefit analysis, Risk communication

Content - Key area:

- Introduction to underpinnings of the theory of risk, uncertainty and risk behavior
- ISO risk management principles and guideline
- Application of stakeholder perspective in risk management in natural resources
- Overview on qualitative and quantitative risk assessment tools and decision-making process based on cost-benefits analysis technique
- Exercises on various case studies to demonstrate how to minimize risks involved with natural resources (e.g. wetlands, inland fisheries, aquaculture, lakes, rivers, risk of a dam on natural resources, etc.)

Outcome of the course:

This course will train the participants to exhibit the knowledge of the basic principles of risk management and specific knowledge about risk behavior, qualitative and quantitative assessments of risk. The participants will also be able to demonstrate an understanding on the basic mechanisms behind identifying the project stakeholders, and its implications in risk management and risk communication.

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
- Classify various types of risk
- Prepare a risk management plan that includes;
 - Conducting a cost-benefit analysis
 - Considering how to communicate the risk management plan to the stakeholders/non-specialists for successful implementation

Teaching methodologies:

The training course has both theoretical and practical perspectives on risk management. 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 cases studies). The participants will be divided into 4-5 working groups.

Prerequisites:

- 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 natural resource management (e.g. wetlands, fisheries, aquaculture, mangrove forest, lakes, transboundary river, 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 it is not mandatory to bring a case).**

Reading materials and lesson plan:

Pre-reading materials and the lecture plan will be sent to all participants (via email or drop box) at least 2 weeks prior to the course. Participants are requested to read the documents before the training. If necessary, additional background reading materials will be provided during the training.

Further information:

If further information is needed, please do not hesitate to contact with **Dewan Ahsan** (dah@sam.sdu.dk), leader of the training workshop.

WORKSHOP 2. Holistic Urban Water Resources Management

Lead Trainers: Miquel Salgot - Universitat de Barcelona (Barcelona, Spain); Dídac Cervera - Universitat de Barcelona (Barcelona, Spain)

Trainers: Eva Roth (SDU); Nguyen Hieu Trung (CTU); Camilo Durán (UN); Federica Rosatti (*to be confirmed*)

Practical coordination

1. Marga Zapata - Master 2 Student - Universitat de Barcelona (Barcelona, Spain)

Keywords: urban water cycle, conventional water resources; non-conventional water resources, water, wastewater, reclaimed water reuse, desalination, water resources mix, water safety

Presentation: Metropolitan / big cities areas using diverse water sources are in need to have enough tools to manage that water “mix”, capable to ensure a safe water supply, both in terms of quantity and quality. For this reason, conventional and non-conventional water resources must be employed adequately to guarantee supply in a sustainable way, even including natural water present in the area.

A complex case, the Barcelona Metropolitan Area water supply, will be used as example which combines water from different origins and qualities. Links to the necessary information sources will be provided to the trainees before the workshop.

As part of the workshop, the participants will show for every country the characteristics of a metropolitan area / big city from their country and the features will be discussed in comparison with the example.

The workshop aims at providing participants with several **non-engineering tools** to approach in different ways the urban water cycle, especially considering the non-conventional resources. The training will be divided into several parts as follows.

Summarizing, all the origins of water in town as well as its final destination will be dealt with.

The evening activities will be coordinated by Ms Rosatti and Roth, Mr Trung and Durán.

1. The economic basis of the anthropic water cycle

The basis for sustainable management of water has one of the main components in the economy of the entire system. This includes the tax matter as well as the prices of the technologies.

The following items will be developed

- a) Economy and water quality
- b) Economic tools for environmental management
- c) Finance, Fiscal & Tax matters

This economy approach (as well as the hydraulic and health ones) should be useful for all kinds of water in town: surface, groundwater, rainstorm, snow, seawater, tap water, wastewater, reclaimed water, pools, ponds, swimming pools, ornamental fountains, supply points for drinking water, canals... All of them must be also analysed from the technical point of view.

The initial description will be general and one of the evening interventions will be applied. Afterwards a discussion on the specificities of every country will take place.

2. Urban water cycle

From the environmental point of view, the water cycle related to cities is changing due to several constraints. The water cycle in the Metropolitan area of Barcelona will be described.

In the greater Barcelona water is mainly provided by 2 rivers and groundwater for urban supply, river water and groundwater for agricultural practices (including periurban agriculture), reclaimed wastewater for water bodies' recovery and irrigation, seawater and brackish water desalination plants ...

Other features of the urban water cycle are (not exhaustive):

- Several wastewater treatment plants ensure wastewater treatment which is reused or discharged to the sea
- Rainwater is managed specifically, with rainstorm holding tanks in combination with the sewerage system
- Industrial water and wastewater is strictly controlled by metropolitan services
- The two rivers limiting the town (not the metropolitan area) were refurbished some time ago and exert a role for landscaping, fauna corridors...
- Seawater intrusion is detected in several places of the coastline
- Several ravines can cause flooding problems

The urban water cycle would be studied in details during an entire morning (9 to 12) and if needed part of the evening, and depending on the groups formed, the teams will define the features of the ASEAN towns included and start to prepare the final day discussion.

Mr. Trung will coordinate the data mining by the participants on their respective countries.

3. Circumstances & constraints in the urban water cycle

A number of modifying factors present and scheduled are to be dealt with during the third morning

- a) Climatic Change
- b) Water Pollution
- c) Increasing water demand
- d) Relation with water bodies
- e) Implementation of the Circular Economy mandates and concepts
- f) Integrated water resources management
- g) Establishing the water quality, which will allow to take decisions on which water for which uses.
- h) Knowing basic concepts allowing to implement theoretically several new approaches (Water Safety Plans, Sanitation Safety Plans, HACCP systems, etc.).

In terms of science, knowledge on the tools which define the features of every studied city will be dealt with in 2 hours. SWAT basic analysis will also be developed.

An intervention on the relationships of water and architecture is scheduled by Mrs. Federica Rosatti.

A discussion will be prepared under the leadership of Mr. Durán on every country.

4. Water quality, risk concepts and treatments

It is paramount to deal with quality matters and how these aspects exert an influence on the water safety. Then, the following aspects will be discussed with the participants:

- a) Quality of water: Microbiology & Toxicology
- b) Quality of Water: Physico-Chemistry
- c) Risk concepts. Hazard, danger, risk, risk management
- d) Tap water treatment
- e) Wastewater treatment, reclamation and reuse
- f) Rules and regulations

With the entire basis studied, the trainees will develop a solution for the supply of a Metropolitan Area; and how this can be applied to other conditions.

These will be the tasks for the 4th morning and in the evening the participants will prepare the 5th morning tasks: group's exposition and preparation of the conclusions.

5. Conclusions

The trainees will discuss the possible solutions of the problem, in a growing metropolis menaced by periodic droughts, increasing demands, and other circumstances and define patterns which can contribute to solve the problems in similar and different circumstances all over the world.

The conclusions will be presented during the last day of the Workshop in a plenary session.

Target audience

Anyone interested on urban waters, including supply and wastewater management aquatic urban ecosystems, environmental and leisure water... wishing to establish the relationships of such water with economic, social and health aspects, among other.

Workshop organization

The workshop will consist of four sessions:

Session 1 (1 day): Economic approaches. The basics will be developed by D. Cervera (UB) during the entire morning (9 to 12): In the evening, after a presentation by E. Roth from 14 to 15 h, the students will discuss with

Sessions 2, 3 and 4 (3 days): Items described

Session 5 (1 day): Team work, discussion and preparation of the conclusions

Group division

Before the workshop participants will be divided into national groups. Every group will be formed before attending the seminar and will be in charge with the data of one river crossing / near a metropolis / big city of its country. The leadership of this previous data mining will be assumed by Mr. Trung.

WORKSHOP 3. Computer Modeling and Simulation of Socio-Environmental Systems. “Exploring and Designing Adaptation Strategies Against Salinity Intrusion in the Vietnamese Mekong Delta”

Trainers: Alexis Drogoul (IRD), Benoît Gaudou (Université de Toulouse 1/IRD), Kevin Chapuis (IRD), Youcef Sklab (IRD), Huynh Quang Nghi (CICT, CTU), Truong Chi Quang (CENRES, CTU)

Representing in all its complexity a real system, such as human communities having to adapt to changing environmental or climatic conditions, in order to measure the possible evolutions or to design adapted management solutions is one of the goals of current research in computer modeling, especially in the approach known as *agent-based modeling*. Complementary to conventional analytical methods or to sociological surveys, this approach makes it possible to design incrementally models whose dynamics are the result of interactions between computer representations of the entities (actors, institutions, environment) of the modeled system. These models then can serve as a support for a "virtual" experimental approach (using simulations) where the resulting dynamics can be studied with all the necessary details, and interaction with the user is encouraged.

The workshop will be organized around a tool (the GAMA modeling platform, developed by the IRD and its partners, see <http://gama-platform.org>) and a tutorial placing trainees

in a design position of an adaptation policy against the continuous intrusion of salted water in the branches of the Mekong River.

The objective of the workshop is to allow the participants (1) to discover and understand, through the design of models of increasing complexity and the taking into account of different economic or climatic scenarios, the stakes of adaptation planning towards these environmental threats; (2) to build on these models to propose, explore and compare realistic strategies of adaptation at the individual, collective or institutional scales.

Part of the workshop will be devoted to the design and writing of these models in groups of 4-5 trainees accompanied by a trainer, but the majority will be reserved for discussions, using these models as a support, between each group and, either the trainers or experts from other workshops (and/or Can Tho University). The last day of the workshop will allow participants to propose, test and compare the different solutions they have designed during the week.

Target audience: Anyone interested in (1) learning and using new methodological tools based on computer modeling; (2) understanding when the use of these tools is relevant with respect to a research question or an application. A prior knowledge of computer science (esp. programming or GIS), mathematics and/or statistics is a plus, but not mandatory.

Expected outcomes: It is expected that the trainees will understand the basic methodological steps beyond the transformation of a research question into a computer model and the way in which computer models can be useful for their questions.

WORKSHOP 4. Field Research-Qualitative Methodologies in Social Science. “Usage and Management of the Water Resources in the Context of Change”

Lead trainers: Olivier Tessier – Ecole française d’Extrême-Orient (EFEO Ho Chi Minh City) ; Pierre-Yves Lemeur – The French National Research Institute for Sustainable Development (IRD France), Research Unit Governance, Risks, Environment and Development (GRED) ; Huynh Thi Phuong Linh – The French School of Asian Studies (EFEO Ho Chi Minh City)

Keywords: Social science and humanities; Fieldtrip and anthropological fieldwork; Qualitative research approach, Hand-on training; Social interaction; Teamwork; Reaction capacity; Innovative thinking

The workshop aims at providing participants a hand-on experience in using tools and methods for a social science’s qualitative research. The training includes a complete exercise of designing, executing a fieldtrip through which the participants will work on all steps of a scientific research. The steps include identifying research problem, identifying research objects, formulating hypothesis and main research orientations, collecting data,

arranging, sorting, and analyzing data. In addition, the training shall provide foundation for self reflection on methodologies, research techniques in the field (skills and attitudes). During the workshop, the participants and lecturers have to complete 4 requirements of a qualitative research in the field:

1. **Identify and choose theories**, conceptual and analytical framework before and during the fieldtrip;
2. **Choose and master the investigation techniques**. The lecturers analyze the extent of mastering the techniques (tools, methods) of each participant while conducting the interviews, as well as the interaction between the interviewer and the interviewee. After each interview, the lecturer and participants will review the content acquired and methods/techniques applied during the interview through which the lecturer could assess the progress of data collection activities (e.g. attitudes of the participants in the interview, note taking, the way of reaction to the response and question of the interviewees, deciding the research direction to take on or to give up);
3. **Form the research objects**: will be done gradually (1) throughout the progress of fieldtrip, (2) through the progress in investigation of each group by comparing, exchanging and synthesizing the data collected. The objective of this activity is to assist participants to have a hand-on experience of a fieldtrip which requires analyzing the data collected right away by the logic of “going back and forth”. It is essential to re-assess the suitability of the hypothesis set before the fieldtrip and the interview framework; Adjustment of research framework will be made accordingly.
4. **Use the findings**: the groups of two will discuss in big group, and then put the discussion to all workshop’s participants. The purpose of this activity is to assist the participants to compare the data, to share the methods of reading the data according to the context, and to learn how to synthesize and analyze the data.

Workshop organization

The workshop consists of three sessions:

Session 1 (1 day CTU): Introducing the techniques and methodologies of an anthropological fieldtrip, and theoretical principles applied to study a social reality

Note: The group will depart after lunch and have the first meeting with the authority in the afternoon.

Session 2 (three days in the field): practical session with a short fieldtrip applying several techniques including observation, participation, document review, interview, and so on.

Session 3 (1 day CTU): reading and analyzing the data collected. The workshop is wrapped up by a synthesis and review of the research steps and the main findings.

Group division

During the fieldtrip, the participants will be divided into two big groups, each group will be divided into group of two or three conducting the fieldtrip. Each big group is supervised by one or two lecturers. The lecturers will follow all stages of the workshop and act as both supervisor and participant. He/she will work together with the whole team in collecting, discussing, analyzing the data and making the synthesis of findings.

Day meeting

Each big group will meet at the end of each day in the field to exchange and discuss the data collected. In daily meeting, the group will start working on the synthesis and at the same time learn from the experience. Interaction and discussion between the two big groups is not the priority of the three-day fieldtrip; instead, all participants will be given time to discuss on the last day in order to synthesize and analyze the findings.

Research sites

Đông Thắng commune, Cờ Đỏ district, Can Tho city (40km from the city center)

Two hamlets: Thới Trung and Đông Mỹ

Background information about the sites will be provided to the participants before and during the first day of the workshop.

Topic of inquiry

“Usage and management of the water resources in the context of change”

The themes to be explored (not exhausted) include:

- Farming system in the context of change,
- The history of building and evolving of hydraulic system,
- Local dynamics of water usage and management,
- The methods of water appropriation and distribution between households,
- The official rules and unwritten ones, water sharing and conflict and the resolution.