



Course Outline

Online International Training Course via Zoom Meeting

1. **Course Title :** Training on Sustainable Basin Management in the Advent of Climate Change

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2. **Duration:** 1 – 21 September 2022

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3. **Background and Rational:**

TICA: Thailand International Cooperation Agency

TICA is a national focal point for Thailand’s international development cooperation. TICA was established in 2004 to realize Thailand’s aspiration to be a contributor of development cooperation. Believing that global challenges are best addressed by international cooperation and global partnership, today we continue to strengthen our contribution to achieve global development agenda through various capacity-building and human resources development programmes. In response to the recent changes in the global landscape of development cooperation, especially through the concept of South-South and Triangular Cooperation, TICA continues to realign our focuses in order to deliver Thailand’s commitment to be a relevant partner in global agendas including the 2030 Agenda for Sustainable Development.

Organization/Institution

Faculty of Environmental Management, Prince of Songkla University, Hat yai, Songkhla

Rational:

Lake and river basin provide essential services as freshwater resources in different purposes including water supply, irrigation, fishery, industry, stormwater drainage and recreation. Complex ecosystems of lake and river basin result in high biodiversity that support a variety of aquatic animals and indigenous plant species. Lake and river basins also provide agricultural and fishery resources for the cultivation of food and energy crops, animal husbandry, and coastal fishery. In addition, the cultural heritage of basin strongly provides the opportunity for tourism development as well. However, there are growing concerns about the deterioration of lake and river basins particularly in developing countries due to too much exploitation for supporting social and economic development. Various natural resources in basin have been used for economic- benefits without enough conservation and restoration leading to the rapid deterioration of resources and also conflict relevant to the resources consumption and access i.e., shallowing lake and river,

lowering biodiversity, water pollution, water conflict, animal extinction etc. Moreover, in the past decades, there were increasing concerns about potential impacts caused by climate change and extreme weather on the basin. Climate change and their impact including extreme rainfalls, season changes and the associated natural disaster i.e., flood, drought and landslide events are affecting ecosystem, human and food security, and economic losses in numerous basins in developing countries. Preventive measures and proactive preparation need to be considered to cope with these potential impacts.

Faculty of Environmental Management, Prince of Songkla University (PSU), where Geo-Informatics and Space Technology Centre (Southern Region) is located, have more than two decades of experiences in research and knowledge management for sustainable Songkhla Lake Basin development. According to all background and rationale shown above, Faculty of Environmental Management and the 5 collaborative institutes of PSU (Geo-Informatics and Space Technology Centre-Southern Region, Marine and Coastal Resources Institute, Institute for Peace Studies, Faculty of Law, and Faculty of Economics) and also the collaborative Chiang Mai University jointly initiate this 2.5 weeks training course for capacity building the participants who are working in the fields of watershed management particularly in developing countries. After complete the training, the participants are expected to have the comprehensive knowledge and the skill sets to plan, design the policy and adaptive measures for sustainable lake and river basin management in the advent of climate change.

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4. Objectives:

The program is designed to:

- Capacity building in sustainable lake and river basin management in a context of climate change including planning, designing policy and adaptation to climate change.
 - Sharing knowledge and experiences in sustainable lake and river basin management as well as climate change adaptation among the developing countries
 - Networking with the authorities, policy makers, and academics in the fields of integrated watershed management
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5. Course Contents:

Sustainable Basin Management in the Advent of Climate Change
Organized by Faculty of Environmental Management, Prince of Songkla University
Sponsored by Thailand International Cooperation Agency (TICA)
Hat Yai, Thailand, 1-21 September 2022

	Day	13.00 – 15.00	15.00 – 17.00
Week-1	Thu 1 Sep	<ul style="list-style-type: none"> - Welcome ceremony - Program orientation (Assoc. Prof. Dr. Kuaanan Techato, Dean & TICA Representative) - Introduction to Sustainable Basin Management: current status & future challenges (Chatchai Ratanachai) 	Assessment and mitigation of flood damages driven by climate change (Allan Sriratana Tabucanon)
	Fri 2 Sep	Lake Ecology: Physical, Chemical & Biological #1 (Ponlachart Chotikarn & Sutinee Sinutok)	Wastewater : point & non-point sources (Chatchai Ratanachai)
Week-2	Mon 5 Sep	Lake Ecology: Physical, Chemical & Biological #2 (Ponlachart Chotikarn & Sutinee Sinutok)	Solid wastes management (Pireeyutma Vanapruk)
	Tue 6 Sep	Peat swamp management (Noparat Bamrungrat)	Country report (Md. Shahariar Chowdhury)
	Wed 7 Sep	Sustainable urban management (Chanisada Choosuk)	Vegetation management (Kitichate Sridith)
	Thur 8 Sep	Country report (Md. Shahariar Chowdhury)	Country report (Md. Shahariar Chowdhury)
	Fri 9 Sep	Climate change impacts on community's livelihood (Jawanit Kittitornkool)	Country report (Md. Shahariar Chowdhury)
Week-3	Mon 12 Sep	Development of urbanization in SLB : past, present and future (Thongchai Roachanakanan)	Country report (Md. Shahariar Chowdhury)
	Tue 13 Sep	Geoinformatics application in SBM (Narissara Nuthammachot)	Country report (Md. Shahariar Chowdhury)
	Wed 14 Sep	Geoinformatics for disaster risk management (Phonpat Hemwan)	Country report (Md. Shahariar Chowdhury)
	Thur 15 Sep	Sustainable fisheries; case studies from bays and lakes (Sukree Hajisamae)	Country report (Md. Shahariar Chowdhury)
	Fri 16 Sep	Country report Md. Shahariar Chowdhury	Country report (Md. Shahariar Chowdhury)
Week-4	Mon 19 Sep	Public participation. (Umaporn Muneenam)	Country report (Md. Shahariar Chowdhury)
	Tue 20 Sep	Policy, institution, regulations & incentives for SBM (Narit Duangsuwan)	Country report (Md. Shahariar Chowdhury)
	Wed 21 Sep	Environmental laws related to basin management (Prapaporn Sangganjanavanich)	Establishment of the research network on Sustainable Basin Management (Chatchai Ratanachai & Ponlachart Chotikarn) <ul style="list-style-type: none"> - Closing remarks (Chatchai Ratanachai) - Closing ceremony (Assoc. Prof. Dr Kuaanan Techato, Dean & TICA Representative)

6. Participants Criteria:

Applicants must fulfill the following requirement:

- Be nominated by their respective government;
- Education: Bachelor degree in fields related to science, social science, or natural resources and environmental management
- Language: proficiency in English (speaking, reading and writing)

7. Attendance and Evaluation

Participants who completed the online training will receive E-certificate base on:

- Real time Online Class (not less than 80%)
- Online class participation and discussion
- Online presentation and report
- Online evaluation

8. Venue:

Songkhla: Faculty of Environmental Management, Hatyai, Songkhla

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9. Expected Results:

The participant will be able to be a balancer in the future and join with the faculty of environmental management to produce at least one case of global warming solving in their countries.

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10. Organization/ Institution:

- **Implementing Agency;**
Faculty of Environmental Management, Prince of Songkla University
- **Contact Person**
Dr. Kuaanan Techato,
Faculty of Environmental Management, Prince of Songkla University, Hat yai,
Songkhla, Thailand 90110, Tel + 66-7428-6843
Email: kuaanan.t@psu.ac.th Website: www.envi.psu.ac.th

11. Expenditure/Funding:

Thailand International Cooperation Agency (TICA)
Government Complex, Building B (South Zone), 8th Floor,
Chaengwattana Rd. Laksi District, Bangkok 10210 THAILAND
Website: <https://tica-thaigov.mfa.go.th/en/index>
Email: aitc@mfa.mail.go.th

Schedule for the Online Training Programme:

Date/ Period /Topic	Time (Thailand time)	Content	Speaker	Note
Day 1 : Thu 1 Sep				
Sustainable Basin Management in the Advent of Climate Change	13.00-14.00	- Welcome ceremony - Program orientation (Assoc. Prof. Dr. Kuaanan Techato, Dean & TICA Representative)		
	14.00-15.00	- Introduction to Sustainable Basin Management: current status & future challenges	(Chatchai Ratanachai)	
	15.00-17.00	Assessment and mitigation of flood damages driven by climate change	(Allan Sriratana Tabucanon)	
Day 2 : Fri 2 Sep				
	13.00-15.00	Lake Ecology: Physical, Chemical & Biological #1	(Ponlachart Chotikarn & Sutinee Sinutok)	
	15.00-17.00	Wastewater : point & non-point sources	(Chatchai Ratanachai)	
Day 3 : 5 Sep				
	13.00-15.00	Lake Ecology: Physical, Chemical & Biological #2	(Ponlachart Chotikarn & Sutinee Sinutok)	
	15.00-17.00	Solid wastes management	(Pireeyutma Vanapruk)	
Day 4 : Tue 6 Sep				
	13.00-15.00	Peat swamp management	(Noparat Bamrungrat)	
	15.00-17.00	Country report	(Md. Shahariar Chowdhury)	
Day 5 : Wed 7 Sep				
	13.00-15.00	Sustainable urban management	(Chanisada Choosuk)	
	15.00-17.00	Vegetation management	(Kitichate Sridith)	
Day 6 : Thur 8 Sep				
	13.00-15.00	Country report	(Md. Shahariar Chowdhury)	
	15.00-17.00	Country report	(Md. Shahariar Chowdhury)	

Date/ Period /Topic	Time (Thailand time)	Content	Speaker	Note
Day 7 : Fri 9 Sep				
	13.00-15.00	Climate change impacts on community's livelihood	(Jawanit Kittitornkool)	
	15.00-17.00	Country report	(Md. Shahariar Chowdhury)	
Day 8 : Mon 12 Sep				
	13.00-15.00	Development of urbanization in SLB : past, present and future	(Thongchai Roachanakanan)	
	15.00-17.00	Country report	(Md. Shahariar Chowdhury)	
Day 9 : Tue 13 Sep				
	13.00-15.00	Geoinformatics application in SBM	(Narissara Nuthammachot)	
	15.00-17.00	Country report	(Md. Shahariar Chowdhury)	
Day 10 : Wed 14 Sep				
	13.00-15.00	Geoinformatics for disaster risk management	(Phonpat Hemwan)	
	15.00-17.00	Country report:	(Md. Shahariar Chowdhury)	
Day 11 : Thur 15 Sep				
	13.00-15.00	Sustainable fisheries; case studies from bays and lakes	(Sukree Hajisamae)	
	15.00-17.00	Country report:	(Md. Shahariar Chowdhury)	
Day 12 : Fri 16 Sep				
	13.00-15.00	Country report:	(Md. Shahariar Chowdhury)	
	15.00-17.00	Country report:	(Md. Shahariar Chowdhury)	
Day 13 : Mon 19 Sep				
	13.00-15.00	Public participation.	(Umaporn Muneenam)	
	15.00-17.00	Country report:	(Md. Shahariar Chowdhury)	
Day 14 : Tue 20 Sep				
	13.00-15.00	Policy, institution, regulations & incentives for SBM	(Narit Duangsuwan)	
	15.00-17.00	Country report:	(Md. Shahariar Chowdhury)	

Date/ Period /Topic	Time (Thailand time)	Content	Speaker	Note
Day 15 : Wed 21 Sep				
	13.00-15.00	Environmental laws related to basin management	(Prapaporn Sangganjanavanich)	
	15.00-17.00	Establishment of the research network on Sustainable Basin Management	(Chatchai Ratanachai & Ponlachart Chotikarn)	
		- Closing remarks	Chatchai Ratanachai	
		- Closing ceremony	(Assoc. Prof. Dr Kuaanan Techato, Dean & TICA Representative)	