

Amphibious Architecture Design and Engineering Design Workshop

(August 20 - 25, 2015)

Abstract:

Today's cities are facing huge challenges in uncontrolled urbanization, higher risks of flooding, scarcity of water for industry, households and ecosystems, rising pollution, ground subsidence, and climate change. Recent experiences have shown that amphibious architecture, design and construction are gaining prominence in catalyzing the transformation of our future urban landscapes to better deal with these challenges. The 2015 Design Workshop Amphibious Architecture Design and Engineering will focus on a Thai location and investigate the challenges and solutions found in order to comply with contemporary water management and design practices. It invites students to understand the theories and practices that bring together engineering, design and urban development and to apply the knowledge acquired in first, the elaboration of a vision and second, a spatial plan and third, engineering and design ideas for the chosen site. The main themes of the ICAADE2015 are Living with Water, Flood resilient systems and communities, Vernacular amphibious, Concepts, typologies and designs, Technology and construction, Challenges to implementation and Visions for the Future. These themes will be explored through site visits, talks with professionals and academics and a short studio-led exercise, where students and teachers will explore possibilities through the elaboration of spatial scenarios and the design of interventions on the location.

Organizing team:

Danai Thaitakoo Department of Landscape Architecture, Chulalongkorn University, Bangkok, Thailand
Fransje Hooimeijer Department of Urbanism, TU Delft, The Netherlands
Polpat Nilubon, Unesco-IHE Delft, The Netherlands

Today's cities are facing huge challenges. They are confronted with increased and uncontrolled urbanization, higher risks of flooding, scarcity of water for industry, households and ecosystems, rising pollution, ground subsidence, and climate change. These trends will have large consequences for the way we design our cities, neighborhoods and buildings. Recent experiences have shown that amphibious architecture, design and construction are gaining prominence in catalyzing the transformation of our future urban landscapes to better deal with these challenges.

The 2015 Design Workshop Amphibious Architecture Design and Engineering will focus on a location in Thailand and its surrounding region, and on the challenges and solutions found in order to comply with contemporary water management and design practices. It will invite students to understand the theories and practices that bring together engineering, design and urban development and to apply the knowledge acquired in first, the elaboration of a vision and second, a spatial plan and third, engineering and design ideas for the chosen area.

The aim of the Design Workshop is to explore Amphibious Culture in the interaction between the disciplines of urban design and planning, *landscape architecture*, architecture, design, and construction. The result will be a contextual **urban**

engineered plan with **architectural designs** that give meaning and form to Amphibious Culture.

The main themes of the ICAADE2015 are Living with Water, Flood resilient systems and communities, Vernacular amphibious, Concepts, typologies and designs, Technology and construction, Challenges to implementation and Visions for the Future. These are also the guiding themes in the Design Workshop and will be supported by the organizing committee of the ICAADE2015.

These themes will be explored through site visits, talks with professionals and academics and a short studio-led exercise, where students and teachers will explore possibilities through the elaboration of spatial scenarios and the design of interventions on the location.

The Design Workshop will take place in Bangkok between 20th and 25th August.

For more information, please write to f.l.hooimeijer@tudelft.nl and mention "Design Workshop 2015".

Didactic approach and methods

The objective is to elaborate a sketch spatial strategy and plan for a location in Thailand with respect to water resiliency. The aim is to provide students with a summarized experience on Amphibious Culture in its effects on spatial planning and strategy making, using short exercises to build up a simulated planning and design cycle, resulting in innovative architecture and construction design.

The Design Workshop will focus on an area in Thailand in order to provide students with a test bed where to apply knowledge and skills acquired during the course. The maximum participants is 50 Students who will be organized in teams of multiple disciplines (of five students) to work out a shared VISION but can have separate DESIGN PRODUCTS.

Description of Steps:

- (DAY 1: 20th august) Introduction, presentations by specialist
- (DAY 2: 21th august) site visit
- (DAY 3: 22th august) In interdisciplinary groups the students will be invited to develop a **VISION** of area X, taking into account:
 - 1) Its geographical make-up, position in the water system
 - 2) Its social, environmental and economic trends,
 - 3) The spatial characteristics of the existing built environment, natural system and
 - 4) The position of the area in the urban, metropolitan and regional contexts in relation to, and connect with water issues.

Students will be also invited to explore spatial planning and design innovation, good and bad practices, good and bad examples of plan making, urban design and management in relation to water sustainability and resilience.

Activities involve: directed literature exploration, directed mapping, site visits, mapping exercises and talks with officials and specialists. Tools used are directed literature exploration, maps, group discussion and self-learning.

- (DAY 4: 23th august) Students will be encouraged to define the challenges and opportunities offered by area X through SWOT and mapping exercises, with emphasis on issues of Amphibious Culture. After that they start on different **DESIGN PRODUCTS** in landscape, urban design, architecture, product design and construction.

Activities involve: SWOT workshop, mind mapping exercises, mapping and group discussions and self-learning, setting design goals.

- (DAY 5: 24th august) Based on their findings, students will be asked to elaborate and work out their chosen design product. Students will be also encouraged to map the stakeholders involved in their plan.

Activities involve: strategy-making, designing, engineering, drawing and sketching, detailing .

- (DAY 6: 25th august) Students will be asked to explain and present the logic of their plans orally and through visualization and to support their proposals with evidence and references

Activities involve: putting together a presentation that describes the main steps of the process of plan making and the preliminary results. Students will be encouraged to prepare not only a slide presentation, but to express their ideas through posters, drawings, maps, photographs and other graphic materials, as well as to explain their ideas orally and textually.

(POST-DESIGN WORKSHOP) Students will be asked to format their materials according to a template provided to them and to submit their results in the form of a mini-report, where the crucial steps are explained textually and graphically. The idea is to collect presentations in a bundle and publish results on-line.

LEARNING OBJECTIVES

At the end of the workshop, students are able:

1. To give meaning and form to Amphibious Culture.
2. To understand the challenges of the water issue in regional, metropolitan and urban environments and resilience of urban environments in relation to climate change.
3. To understand the connections between the planning and design of built environments, architecture and construction in relation to the challenges above.
4. To discuss the possible roles planning and design, architecture and engineering professionals have in the practice of Amphibious Culture.
5. To connect issues of construction, participation and democracy to spatial plan-making and design.
6. To understand general steps in spatial plan and strategy-making and to get familiarized with possible methods and tools associated with each step.

7. To understand the role of technology in urban development considering climate change and their role as boundary spanner.
8. To understand general steps in design and construction and to get familiarized with possible methods and tools associated with each step.

Field visit Plan (DAY 2: 21th august)

07:30 - Departure (Chula I-House - <http://www.chula.ac.th/en/prospective-student/accommodation>)

3 groups 6-8 students 1-2 Group instructors per group per van

- **Sena group**
- **Hua Wiang group**
- **Lad Chado group**

09:00 - Arrive at Sena site (Sena.kmz)

09:20 - Arrive at Hua Wiang site (Hua Wiang.kmz)

09:40 - Arrive at arrive at (Lad Chado.kmz)

12:00 - Lunch on the field

16:00 - Departure from each site

17:30 - Arrive at Chula

Student Design Workshop ICAADE2015 (Fee)

The fee for the workshop is	=	75 Euro
	=	85 USD (U.S. dollars)
	=	105 CAD (Canadian dollars)
	=	110 AUD (Australian dollars)
	=	2,620 TWD (Taiwan dollars)

The fee cost is included:

1. Transportation for a site visiting: one day trip (Ayutthaya province)
2. Food for a site visiting: one day trip (Ayutthaya province)
3. Last day party (Night party)

The venue

- You have to reserve by yourself. (1 room - Cost : **900 Baht** per night for 2persons)
- Information for a venue: <http://www.chula.ac.th/en/prospective-student/accommodation>

PS Please let me know if you have any questions.