



Course Outline

Annual International Training Course

1. Course Title:

Enabling climate resilience in critical infrastructure and urban setting through impact chain and resilience assessment

2. Duration:

November 16 – 25, 2026 (8 days excluding weekend) (tentative)

3. Background:

Thailand International Cooperation Agency (TICA)

TICA is a national focal point for Thailand's international development cooperation. It was established in 2004 to realize Thailand's aspiration to be a contributor to international development cooperation. Believing that global challenges are best addressed through international cooperation and global partnership, TICA continues to work closely together with its development partners to realize the 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, TICA has strengthened its partnerships to harness the synergy of South-South and Triangular Cooperation to tackle global development challenges, including expediting the implementation of Sustainable Development Goals (SDGs). It also continues to realign our focuses in order to deliver Thailand's commitments as a global reliable partner.

Since 1991, TICA, in collaboration with educational institutions in Thailand, has offered short-term training courses under its Annual International Training Course (AITC) programme. The number of courses offered each year varies between 25 to 35 courses for 20-35 participants per course. AITC not only fosters good and friendly relations which Thailand has already enjoyed with recipient countries across regions, but also helps Thailand to reach out to those countries with which we desire to engage more closely. The courses offered by TICA in 2023-2025 are categorized into 5 themes: Sufficiency Economy Philosophy

(SEP), food security, climate change and environmental issues, public health, BCG Model related.

Organization/Institution

National Energy Technology Center (ENTEC) and Urban Futures & Policy Research Unit, Thammasat University

4. Objectives:

The program is designed to:

1. Raise awareness of researchers, practitioners, and officers in Southeast Asia and neighboring regions on the importance of climate resilience and disseminate knowledge and know-how to enable climate-resilient city and climate-resilient infrastructure.
2. Introduce enabling tools to enhance climate resilience in critical infrastructure, including risk assessment and impact chain, resilience assessment, and assessment of change over time, and equip the participants with the capacity to use the tools through tabletop exercise.
3. Enhance understanding of economic and financial feasibility of climate-resilient infrastructure and climate-resilient city projects, and provide a platform for sharing best practices for climate finance, and information on available funding opportunities for climate adaptation finance.
4. Cultivate network of researchers, practitioners, and officers with technical capacity and willingness to support climate-resilient infrastructure and climate-resilient city projects in Southeast Asia and other regions.

5. Course Contents:

1. Introduction
 - a. Course introduction
 - b. Country reports on national climate policy, infrastructure development policy, and relevant plans
2. Climate resilience
 - a. Climate change and disasters
 - b. Forecasting climate change
 - c. Climate mitigation, adaptation and resilience
 - d. Global climate commitment and global climate trends

- e. Related national, regional, and global policy landscape, e.g., ASEAN State of Climate Change Report, ASEAN Strategy for Carbon Neutrality, Global Goal for Adaptation
- 3. Climate-resilient city and climate-resilient infrastructure
 - a. Impact of climate change on city planning (including case studies and hands-on activities)
 - b. Impact of climate change on infrastructure (including case studies and hands-on activities with a focus on energy and transport infrastructure)
- 4. Enabling tools for climate resilience
 - a. Risk assessment, impact chain, and vulnerability assessment
 - b. Resilience assessment
 - c. Assessment of change over time
- 5. Tabletop exercise: infrastructure resilience assessment
 - a. Risk assessment, impact chain, and vulnerability assessment
 - b. Resilience assessment
 - c. Assessment of change over time
 - d. Gauging interactions between infrastructure and the city
 - e. Enabling resilient infrastructure in rural areas
- 6. Way forward
 - a. Enabling finance for climate resilient infrastructure and city
 - b. Economic feasibility VS financial feasibility
 - c. Available financial models and success cases
 - d. Climate finance mobilization and available funding opportunities
- 7. Discussion and final presentations

6. Participants' Criteria:

The course targeted participants are researchers, faculty members, or policy-related officers in Southeast Asia, or from other regions with similar urban setting and similar level of infrastructure readiness. Applicants must fulfill the following requirements.

- Being nominated by their governments through the embassy in respective countries;
- Having completed at least bachelor's degree or equivalent academic background in science, engineering or related field;
- Being a researcher, faculty member, or policy-related officer with at least two

- (2) years working experience in energy, transport, or urban planning field;
- Being under 45 years of age;
- Being proficient in spoken and written English; and able to contribute actively to the discussion;
- Being in good health, both physically and mentally; each participant should have a health certificate provided by an authorized physician. Pregnancy is regarded as a disqualifying condition for participation in the Course; and
- Not being serving in any form of military service.
 - Women are encouraged to apply for the program. We are committed to promoting gender equality and women's empowerment, and providing equal opportunities for all applicants regardless of their sexual orientation or gender identity.

7. Attendance and Evaluation

Participants who complete the training will receive a certificate based on:

- Real-time class attendance (not less than 80%)
- Interactive class participation
- Country report and final presentations, and in-class discussion
- Participation in discussion on ways forward

8. Venue:

The course will be conducted at:

1. National Energy Technology Center (ENTEC), National Science and Technology Development Agency (NSTDA)
Address: 114 Thailand Science Park, Phahonyothin Road, Khlong Nueng, Khlong Luang, Pathum Thani, 12120, Thailand
Tel: 02 564 6400
Fax: 0 2564 6501-5
URL: <https://www.entec.or.th>
2. Urban Futures & Policy Research Unit, Faculty of Architecture and Planning, Thammasat University (TU)
Address: 99 Phahonyothin Road, Khlong Nueng, Khlong Luang, Pathum Thani 12120, Thailand
Tel: 0 2986 9605-6
URL: <http://www.urbanfuturestu.com>

9. Expected Results:

1. Awareness and knowledge of climate resilience, particularly climate-resilient city and climate-resilient infrastructure, and climate actions at national, regional and global levels
2. Understanding and ability to use enabling tools to enhance climate resilience in critical infrastructure, gained through tabletop exercise on risk assessment and impact chain, resilience assessment, and assessment of change over time
3. Knowledge of economic and financial feasibility of climate-resilient infrastructure and climate-resilient city projects, best practices for climate finance, and available funding opportunities for climate adaptation finance.

Network of researchers, faculty members, or policy-related officers who are willing to provide technical, financial, and/or policy support for climate-resilient infrastructure and climate-resilient city projects in Southeast Asia and other regions.

10. Organization/ Institution:

▪ Implementing Agency

National Energy Technology Center (ENTEC), National Science and Technology Development Agency (NSTDA)
114 Thailand Science Park, Phahonyothin Road, Khlong Nueng, Khlong Luang, Pathum Thani, 12120, Thailand
Tel: 02 564 6400
Fax: 0 2564 6501-5
URL: <https://www.entec.or.th>

Urban Futures & Policy Lab, Faculty of Architecture and Planning, Thammasat University (TU)
Address: 99 Phahonyothin Road, Khlong Nueng, Khlong Luang, Pathum Thani 12120, Thailand
Tel: 0 2986 9605-6
URL: <http://www.urbanfuturestu.com>

▪ Contact Persons

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E-mail: pidpong.jan@entec.or.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.go.th

Schedule for the Training Programme:

Date/ Period /Topic	Time (Thailand time)	Content	Speaker	Note
Day 1: Introduction and climate resilience				
November 16, 2026	09:00 – 09:30	Opening ceremony		See the speaker list below.
	09:30 – 10:00	Course introduction	ENTEC	
	10:00 - 10:30	Break		
	10:30 – 12:30	Country report (national climate policy, infrastructure development policy, and relevant plans)	Participants	
		Lunch		
	13:30 – 14:30	Course outline and expectations	ENTEC & Urban Futures	
	14:30 – 15:30	Climate change and disasters	Urban Futures	
	15:30 – 16:00	Break		
	16:00 – 17:00	Forecasting climate change	TU	
	18:00 – 21:00	Welcome dinner		
Day 2: Climate resilience and climate-resilient city				
November 17, 2026	09:00 – 10:00	Climate mitigation, adaptation and resilience	Urban Futures	
	10:00 – 11:00	Global climate commitment and global climate trends	ENTEC	
	11:00 – 11:30	Break		
	11:30 – 12:30	Related national, regional, and global policy landscape	Urban Futures	
		Lunch		
	13:30 – 15:00	Impact of climate change on city planning and case studies	Urban Futures	
	15:00 – 15:30	Break		

	15:30 – 17:00	Enabling factors for a climate-resilient city	Urban Futures	
Day 3: Climate-resilient infrastructure and enabling tools for climate resilience				
November 18, 2026	09:00 – 10:30	Impact of climate change on infrastructure and case studies	ENTEC	
	10:30 - 11:00	Break		
	11:00 – 12:30	Enabling factors for a climate-resilient infrastructure	ENTEC	
		Lunch		
	13:30 – 15:00	Risk assessment, impact chain, and vulnerability assessment	Urban Futures	
	15:00 – 15:30	Break		
	15:30 – 17:00	Using impact chain to identify risks	Urban Futures	
Day 4: Enabling tools for climate resilience and site visit				
November 19, 2026	09:00 – 10:30	Resilience assessment and assessment of change over time	ENTEC	
	10:30 – 11:00	Break		
	11:00 – 12:30	Using resilience assessment to assess resilience level of infrastructure and its change over time	ENTEC	
		Lunch		
	13:30 – 17:30	Site visit: successful case in urban and infrastructure resilience	Urban Futures & ENTEC	
Day 5: Tabletop exercise: infrastructure resilience assessment				
November 20, 2026	09:00 – 09:30	Reviewing enabling tools (impact chain and resilience assessment)	Urban Futures & ENTEC	

	09:30 – 10:30	Description of case study and risk identification	Urban Futures	
	10:30 – 11:00	Break		
	11:00 – 12:30	Development of impact chain	Urban Futures	
		Lunch		
	13:30 – 15:00	Resilience assessment (hazard, impact, and exposure)	ENTEC	
	15:00 – 15:30	Break		
	15:30 – 17:00	Vulnerability assessment	Urban Futures	
Day 6: Tabletop exercise: infrastructure resilience assessment (cont'd)				
November 23, 2026	09:00 – 10:30	Resilience assessment (risk and resilience measures)	ENTEC	
	10:30 – 11:00	Break		
	11:00 – 12:30	Assessment of change over time	ENTEC	
		Lunch		
	13:30 – 15:00	Gauging interactions between infrastructure and the city	Urban Futures & ENTEC	
	15:00 – 15:30	Break		
	15:30 – 17:00	Enabling resilient infrastructure in rural areas	adiCET	
Day 7: Way forward				
November 24, 2026	09:00 – 10:00	Enabling finance for climate resilient infrastructure and city	Urban Futures	
	10:00 – 11:00	Economic feasibility VS financial feasibility, and available financial models	ENTEC	
	11:00 – 11:30	Break		
	11:30 – 12:30	Climate finance mobilization	DCCE/World Bank	
		Lunch		

	13:30 – 14:30	Available funding opportunities	World Bank/ GIZ	
	14:30 – 15:30	Success cases	UNDP	
	15:30 – 16:00	Break		
	16:00 – 17:00	Discussion on ways to extend the results from the training	ENTEC & Urban Futures	
Day 8: Final presentations and cultural visit				
November 25, 2026	09:00 – 11:00	Final presentations	Participants	
	11:00 – 11:30	Break		
	11:30 – 12:30	Closing ceremony		
		Lunch		
	13:30 – 17:30	Cultural visit	ENTEC & Urban Futures	

▪ **Note**

Blue: lecture

Green: workshop/tabletop exercise

Black: others