

e-ASIA JRP International Environment Workshop

The Program Management Unit for Human Resources & Institutional Development, Research and Innovation (PMU-B), Thailand in cooperation with National Science and Technology Development Agency (NSTDA), Thailand and e-ASIA Secretariat will be hosting the e-ASIA JRP International Workshop on Environment.

1. Background

The recent IPCC's Working Group 2 Report on "Impacts, Adaptation and Vulnerability" has highlighted that climate change is already causing widespread disruption in every region in the world at current global warming levels, due to past emissions, and further worsening of impacts is inevitable. Many countries have pledged to reduce CO₂ emissions to limit the global temperature rise to a maximum of 1.5 °C by 2050. Advances in carbon capture technologies form keystones in reducing industrial CO₂ emissions amidst the incoming climate crisis. CO₂ emissions are prevalent in the power and manufacturing industry as it is difficult to develop methods that fully strip CO₂ from waste exhaust gases. Decarbonization methods, such as replacing coal with renewable options, have been deployed instead. New technology developments required to reduce costs and capture as much as 99% of CO₂. The developments are essential in reducing overall emission. To solve the climate crisis in the long term, CCS and CCUS which is technology-based, and nature-based solutions need to be utilized alongside renewable power sources and green technologies to replace the current fossil-fuel dependent power supply system.

As a result of e-ASIA Annual Board Meeting 2022, Indonesia, Thailand, and Japan agreed to jointly launch an open call in Environment on 12th e-ASIA call for proposals. The e-ASIA JRP Environment Workshop is therefore conceived in response to this initiative.

2. Purpose

This workshop aims to promote environment research in Asia and build a team of researchers to apply for the 12th e-ASIA JRP open call in Environment.

Country	Member Organization (Funding Agency)	Funding modality
Indonesia	Ministry of Education, Culture, Research and Technology (DIKBUDRISTEK)	○
Japan	Japan Science and Technology Agency (JST)	○
Thailand	National Research Council of Thailand (NRCT)	○
Thailand	Program Management Unit for Human Resources & Institutional Development, Research and Innovation (PMU-B)	○
Lao PDR	Ministry of Education and Sports (MOES)	△

○ :NEW (New budget from FA)

△ :In kind (Researchers participate with their own funds)

3. Details

(1) Date

Date: 9-10 February 2023

(2) Place

Pathumwan Princess Hotel (Bangkok, Thailand)

https://www.pprincess.com/?utm_source=google&utm_medium=business_listing

(3) Register link

<https://meeting-nstda.webex.com/webappng/sites/meeting-nstda/webinar/webinarSeries/register/fbd6f627f3d34cde96d2f9248325de8f>



(4) Format

Place: Hybrid

Participants: The workshop will be semi-closed. Participants are made up of session-chairs, presenters, and e-ASIA officials. Researchers recommended by e-ASIA's member organization will be allowed to participate as observers.

▪ The workshop program consists of the following sessions. (Please see the agenda)

- ① Opening ceremony
- ② Group Discussion
- ③ Wrap up Closing ceremony, Introduction of e-ASIA 12th Call on Environment

▪ At the opening ceremony ①, all presenters will participate as many as possible to understand the purpose of the workshop. The moderator will be from PMU-B.

▪ In each session of ②, the session-chair from Thailand or Indonesia or Japan (or can be selected from nominated speaker) will conduct the session. The session-chair will check researchers' research background in advance, prepare some discussion points and invite researchers to make presentations. However, if researchers from other sessions are also interested, they can participate, too.

▪ In the group discussions in ②, the session-chair will prepare discussion points on future joint research. The results should be summarized and presented in closing session.

▪ In wrap up and closing ceremony ③, Introduction of e-ASIA 12th Call on Environment and Each session chair will present a short summary of the group discussion. Each participating funding agency will give their comments about this call. In this part, we should invite everyone to participate as many as possible.

e-ASIA JRP International Environment Workshop Agenda

9 February 2023

Time (Thailand)	Program
08:45 - 09:00	Workshop Opens
Opening Session	
<i>MC: Mr. Saranyu Laemlak, International Relations Office, NSTDA</i>	
09:00 - 09:05 (5 min)	Opening Remarks <i>Mr. Masaki SATO, Manager, Department of International Affairs, Japan Science and Technology Agency (JST)</i>
09:05 - 09:10 (5 min)	Welcome Remarks <i>Prof. Dr. Sompong Klaynongsruang, Director, The Program Management Unit for Human Resources & Institutional Development, Research and Innovation (PMU-B)</i>
09:10 - 09:15 (5 min)	Group Photo Introduce Chair for each session (MC)
Technical Sessions < Objectives > <ul style="list-style-type: none"> • Discuss issues and concerns in the topic area, and potential solutions. • Prepare observations and recommendations for group discussion. • Develop project ideas and possibility of joint research activities. • Time allotted to each speaker: 15 minutes for each presentation including Q&A + 30 minutes for group discussion 	
Session 1: Carbon Capture, Utilization and Storage (CCUS) (Technology-based Solutions) Chair: Dr. Hidetaka YAMADA, Associate Professor, Kanazawa University	
09:15 - 09:30 (15 min)	Speaker 1-1 (Chair): Introduction (overview) <i>Dr. Hidetaka YAMADA, Associate Professor, Kanazawa University, Japan</i> Title: <i>Amine-based capture of CO₂ for utilization and storage</i>
09:30 - 09:45 (15 min)	Speaker 1-2: <i>Dr. Hiroshi MACHIDA, Associate Professor, Nagoya University, Japan</i> Title: <i>Integrated Process for CO₂ Capture and Utilization using Phase Separation Solvent</i>
09:45 - 10:00 (15 min)	Speaker 1-3: <i>Prof. Wongkot Wongsapai, Chiang Mai University, Thailand</i> Title: <i>The Development of Carbon Capture Utilization and Storage Business Model for Carbon Neutrality Target in Thailand: The Key Enabling Issues</i>
10:00 - 10:15 (15 min)	Speaker 1-4: <i>Assistant Prof. Dr. Tanapon Phenrat, Naresuan University, Thailand</i> Title: <i>Potential Use of Subsurface Methanogenesis in Depleted Oil and Gas Fields around the World for Valuable Methane Production from Sequestered CO₂: Important Findings from Field Characterization and Laboratory Feasibility Study</i>
10:15 - 10:30 (15 min)	Speaker 1-5: <i>Prof. Dr. Wawan Gunawan A. Kadir, M.S., from Institute Technology Bandung (ITB), Indonesia</i>

	Title: <i>Implementation of Carbon Capture and Storage (CCS) on Increasing Oil Production and Reducing GHG (CO₂) Emissions</i>
10:30 - 11:00 (30 min)	Session 1: Group Discussion on future collaboration opportunities in e-ASIA JRP <i>Each session-chair will lead their discussion and prepare a short presentation for wrap-up.</i>
11:00 – 11:15 (15 min)	Coffee Break
Session 2: Carbon Capture, Utilization and Storage (CCUS) (Nature-based Solutions) Chair: Assoc. Prof. Dr. Sate Sampattagul, Chiang Mai University	
11:15 - 11:30 (15 min)	Speaker 2-1 (Chair): Introduction (overview) Assoc. Prof. Dr. Sate Sampattagul , Chiang Mai University, Thailand Title: <i>Overview of Technology and Policy for CCUS & Nature-based Solutions</i>
11:30- 11:45 (15 min)	Speaker 2-2: Dr. Motoaki SEKI , Plant Genomic Network Research Team Leader, RIKEN, Japan Title: <i>Ethanol-mediated novel survival strategy against drought, heat and high-salinity stresses in plants</i>
11:45 - 12:00 (15 min)	Speaker 2-3: Assoc. Prof. Dr. Anchana Prathep , Prince of Songkla University, Thailand Title: <i>Potential of nature-based solutions for climate mitigation with an emphasis on blue carbon in SE Asia</i>
12:00 - 12:15 (15 min)	Speaker 2-4 (ONLINE): Dr. Ir. Farah Mulyasari , S.T., M.T., Pertamina University (UP), Indonesia Title: <i>Blue Carbon Initiative: Natural-based Solution to Accelerate Indonesia's Net Zero Emission Goal by Pertamina Foundation and Universitas Pertamina</i>
12:15- 12:45 (30 min)	Session 2: Group Discussion on future collaboration opportunities in e-ASIA JRP <i>Each session-chair will lead their discussion and prepare a short presentation for wrap-up.</i>
12:45- 13:45 (1 hour)	Networking Lunch
Session 3: Low carbon Society Chair: Assoc. Prof. Dr. Amnat Chidthaisong	
13:45 – 14:00 (15 min)	Speaker 3-1 (Chair): Introduction (overview) Assoc. Prof. Dr. Amnat Chidthaisong , King's Mongkut University of Technology Thonburi (KMUTT), Thailand Title: <i>Overview of recent development of low carbon development and ways forwards.</i>
14:00 – 14:15 (15 min)	Speaker 3-2 (ONLINE): Dr. Toshihiko MASUI , Director of the Social Systems Division, National Institute for Environmental Studies, Japan Title: <i>Development of Asia-Pacific Integrated Model and its contribution to carbon neutral society</i>
14.15 – 14.30 (15 min)	Speaker 3-3: Prof. Dr. Ir. Dodik Ridho Nurrochmat , M.ScF.Trop, IPB University, Indonesia Title: <i>Promoting Social Forestry to Reduce Green House Emissions through Carbon Credits</i>
14:30 – 14.45 (15 min)	Speaker 3-4: Assoc. Prof. Sirintornthep Towprayoon , Joint Graduate School of Energy and Environment, King Monkut's University of Technology Thonburi, Thailand Title: <i>Low Carbon Research and the Way towards Zero Emission</i>

14.45-15.15 (30 min)	Session 3: Group Discussion on future collaboration opportunities in e-ASIA JRP <i>Each session-chair will lead their discussion and prepare a short presentation for wrap-up.</i>
15:15-15:30 (15 min)	Coffee Break
15:30 - 16:30 (60 min)	Funding Agency Meeting Session (Closed Meeting) Discussion: Propose topic of e-ASIA JRP 13 th & 14 th Call for proposal
16:30 – 18:15 105 min)	Break Free time (no coffee/ tea)
18:15-20:15	Networking Dinner * Limited to MOs (Board Members, Staff and SAC Members), Former Board Members and Invited Speakers & PIs

10 February 2023

Time (Thailand)	Program
Session 4: Materials (Battery) Chair: Prof. Dr. Mohammad Zaki Mubarak, S.T., M.T., Institute of Technology Bandung (ITB)	
08:45 – 09:00	Workshop Opens
09:00 – 09:15 (15 min)	Speaker 4-1 (Chair): Introduction (overview) Prof. Dr. Mohammad Zaki Mubarak , S.T., M.T., Institute of Technology Bandung (ITB), Indonesia Title: <i>The Effect of Scandium Doping in the Cathode on the Structural Properties and Electrochemical Performance of Nickel-Rich NMC 811 Lithium-Ion Batteries</i>
09:15 – 09:30 (15 min)	Speaker 4-2 (ONLINE): Dr. Pimpa Limthongkul , Research Group Director of Energy Innovation Research Group, National Energy Technology Center (ENTEC), Thailand Title: Energy Storage Material Research for Sustainable Development at ENTEC
09:30 – 09:45 (15 min)	Speaker 4-3 (ONLINE): Assoc. Prof. Dr. Nonglak Meethong , Khon Kaen University, Thailand Title: Li-based and beyond Li-batteries for Energy Storage
09:45 – 10:00 (15 min)	Speaker 4-4 (ONLINE): Prof. Junichiro OTOMO , Professor, School of Environment and Society, Tokyo Institute of Technology, Japan Title: <i>Advances in fuel cell technology for highly efficient energy conversion development of protonic ceramic fuel cells and applications.</i>
10:00 – 10:15 (15 min)	Speaker 4-5: Prof. Dr. Eng. Agus Purwanto , ST MT from Sebelas Maret University, Indonesia Title: <i>Development of nickel-rich cathode material for high density Li-ion batteries</i>
10:15-10:45 (30 min)	Session 4: Group Discussion on future collaboration opportunities in e-ASIA JRP <i>Each session-chair will lead their discussion and prepare a short presentation for wrap-up.</i>
Wrap-up and Closing Session <i>(MC: Emi Kaneko, Director, JST Singapore office, Japan)</i>	
10:45 – 11:15 (30 min)	Information of e-ASIA 12th Call on Environment <i>e-ASIA JRP Program Secretariat (10-min Presentation & 20-min Q&A)</i>
11:15-11:55 (40 min)	Wrap-up Presentations and Comments (10 min each session) <i>Each session chair to present a short summary of the group discussion.</i>
11:55-12:15 (20 min)	Comments from the e-ASIA call participating funding agencies (5 min each MO) (by the alphabetical order of country)

	<ul style="list-style-type: none"> ➤ Indonesia: DIKBUDRISTEK ➤ Japan: JST ➤ Thailand: PMU-B ➤ Thailand: NRCT
12:15 – 13:15 (60 min)	Lunch
Excursion	
13:30-14.15 (45 min)	Depart from Pathumwan Princess Hotel to National Science and Technology Development Agency by NSTDA van (Approx. 46 km)
14:30 - 15:00 (30 min)	Visit Catalyst Research Laboratory, National Nanotechnology Center (NANOTEC)
15:00 - 15:30 (30 min)	Visit Lithium Battery Testing Laboratory, Electrical and electronic products testing center (PTEC)
15:30 - 16.00 (30 min)	Networking & Refreshment
16:15	Depart from NSTDA to Pathumwan Princess Hotel or Suwannabhumi International Airport