

Call for Participants for the Southeast Asia International Joint-Research and Training Program on Sustainable Development Goals (SDGs) and Net Zero Emission (NZE)

■ Introduction

The rapid economic development and serious environmental pollution of the Association of Southeast Asian Nations (ASEAN), India, and other Asian countries make their governments a great need on the development of cutting-edge green technology for sustainable environment and energy. In 2016, the United Nations Development Program (UNDP) has launched a new program named “Sustainable Development Goals (SDGs)” which are a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity in 2030. More recently, the Intergovernmental Panel on Climate Change (IPCC) has launched the report and urged the international society to take the strategies to keep global warming to no more than 1.5 °C. The net zero emission (NZE) at 2050 is currently one of the most important issues worldwide. Up to now, more than 130 countries have set or are considering a target of reducing emission to net zero by mid-century (i.e. 2050). Actually, not just only the net zero CARBON emission, the net zero emission of wastewaters and wastes is also important to achieve the SDGs goals in 2030.

Among the 17 SDG goals promulgated by the UNDP, SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action) are the relevantly important indicators for southeast and south Asian countries to achieve SDG and NZE. During the past decades, Taiwan has successfully developed key technology on circular economy-based technology and sustainable energy for SDGs and NZE. We do believe the international collaboration with our neighboring countries not just only a treasure for ASEAN and South Asian Countries during their transition stage but also a win-win situation in Asian region.

After the successful first workshop of SEA program from 2012, National Tsing Hua University (NTHU), Taiwan has extended this program to more specialized topics. This year, we have held an on-line SEA workshop on 「Circular Economy Based Environmentally Green Technology for Sustainable Development」 during August 02 – 12, 2021. **To fulfill the sustainable development and net zero emission, the international partnership for the goals (SDG 17) is definitely one of the crucial activities needed to be addressed. Therefore, the purpose of this**

joint-research and training program is to strengthen the academic cooperation between Taiwan and Southeast/South Asian countries and other developing countries such as ASEAN, India, Sri Lanka, Bangladesh, Bhutan, Nepal, Middle East and other developing countries in the areas of SDGs and NZE. We encourage government officers, scholars, professors with administrative position to attend this training program.

Due to the COVID-19 pandemic, this workshop will be held virtually during the period of November 24 – December 9, 2021. A total of 9-day, 45-h courses including lecture, technical and lab demonstration, and foresight meeting will be provided. In addition, to the carbon reduction technology, the utilization of energy-saving technology for agricultural waste recycling and water reuse will be introduced. Through this training course, the participants will gain knowledge in cutting-edge technology of environmental sustainability and net zero emission. This would significantly enhance the advanced knowledge in SDGs of the participants as well as reinforce the academic and educational collaboration between Taiwan and Southeast/South Asian countries in the areas of low carbon and green energy.

■ Curriculum Planning

This training program, funded by the **Ministry of Science and Technology (MOST), Taiwan**, will mainly address the impact of industrialization and utilization of fossil fuels on the environmental pollution and global climate change, as well as the development and application of low carbon green energy to environmental sustainability. The main concept for curriculum design is based on the UN SDGs and 2050 NZE. The cutting-edged technology related to climate change, environmental sustainability, waste recycling and reuse, energy-saving technology and water-energy nexus my will be introduced. The development of environmentally benign technology for converting agricultural/industrial wastes to value-added materials and the fabrication of biochars and its application to environment and energy will be addressed. Moreover, a foresight meeting on the strategy on the SDGs and NZE in Southeast and South Asian Countries will be held. Several scholars from different countries such as Philippines, Indonesia, Thailand, Vietnam, Malaysia, and Nepal will be invited to present the policy and strategy of ASEAN and South Asia Countries. Definitely the Campus and Lab virtual tours will be arranged.

■ Course timetable (November 24 – December 9, 2021)

Curriculum of SEA Joint-Research and Training Program on SDGs and NZE

Date*	11:00 – 13:00 (Taiwan/Malaysia/Philippines Time)		14:00 – 17:00 (Taiwan/Singapore/Malaysia Time)		
	11/24 (Wed)	Opening Ceremony	Introduction to MOST/NTHU/CYUT		International Collaboration Opportunity
11/25 (Thu)	Technical Demo (I):	Flash Talk I (Every participant)		Climate Change Issue	
11/27 (Sat)	Technical and Lab Tour (II)	Flash Talk II (Every participant)		SDGs Issue (I)	
11/30 (Tue)	Technical and Lab Tour (III)	Flash Talk III (Every participant)		SDG Issue (II)	
12/01 (Wed)	Foresight Meeting: SDGs and NZE strategies in ASEAN and South Asian Countries				
12/02 (Thu)	Circular Economy Issue (I)	Flash Talk IV (Every participant)		NZE issue (I)	
12/04 (Sat)	Circular Economy Issue (II)	Flash Talk II (Every participant)		NZE Issue (II)	
12/07 (Tue)	Special Symposium on SDGs and Water-Energy in Mekong River				
12/09 (Thu)	Circular Economy Issue (III)		NZE Issue (III)		Closing Ceremony

*: Date is subject to change.

■ On-line Platform

The virtual training program will be organized by the Institute of Analytical and Environmental Sciences, National Tsing Hua University (NTHU), Hsinchu, Taiwan using Google Meet and Microsoft Team as platforms.

■ How to Apply?

Applicants who are interested in this international workshop can fill-up the **google form** (<https://forms.gle/fawhc7z9eLNKtbzA9>) first, and then **submit the curriculum vitae (CV) and statement of purpose (SOP) (PDF files are preferred) either by google form or by e-mail (seaprogram515@gmail.com)**. **The application deadline is October 18, 2021**. The short-list will be announced by the end of October (31/10/2021).

➤ Qualification

1. Candidates should be, but not limited to, postgraduates, lecturers, faculties (Assistant professor, Associate Professor, and Professor), or researchers who are highly interested in learning sustainable development and net zero emission, especial water-energy nexus and circular economy-based technology. Those faculties or scholars with administrative position are highly welcome. Previous experience in environmental, chemical, economic and/or energy science and technology is unnecessary.
2. This training program provides multi- and inter-disciplinary courses. Trainees with different backgrounds like economy, physics, chemistry, economy, materials science and engineering, environmental science and engineering, chemical engineering, mechanical engineering and other related areas are highly welcome.

➤ Selection Criteria

The training program will provide the cutting-edge knowledge as well as practical issues to those participants from ASEAN, India, Sri Lanka, Bangladesh, Middle East and other developing countries. The selection criteria are based on the CV, statement of purpose and other additional documents provided by the applicants. The balance of gender, region, country, and age are also the selection criteria. We also provide possible academic collaboration including research work and staff exchange to participants.

■ Contact us

For further information or questions, please contact Prof. Hui Lin Ong at the Faculty of Chemical Engineering Technology, Universiti Malaysia Perlis (UniMAP), Malaysia or Mr. Huynh Trung Viet (Baloud) at the Institute of Analytical and Environmental Sciences, NTHU, Hsinchu, Taiwan.

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