



# REGIONAL DIALOGUE TO PROMOTE THE UPTAKE OF ECO-DESIGN APPROACHES TO GREEN THE SMES IN ASIA

## BACKGROUND

Small and Medium-sized Enterprises (SMEs) in Asia play an important role in driving economy, employment and innovation and therefore are core engines of transition to green growth. In the Asia-Pacific, SMEs account for approximately 97% of all enterprises, two-thirds of employment and around 30 to 60 percent of GDP (Anbumozhi, 2019). Reducing the aggregate environmental impact of SMEs through achieving and going beyond environmental compliance in both manufacturing and services is therefore a key success factor in greening the economy.

**According to NRC (2017), green SME is an enterprise whose business model includes:**

1. Any product, process or service designed with the primary purpose of contributing to remediating or preventing any type of environmental damage.
2. Any product, process or service that is less polluting or more resource-efficient than equivalent normal products that furnish a similar utility.

*In addition to the significance of their environmental footprints, SMEs also play an increasingly important role in driving innovation in products as well as business models.*

It became evident that, to move towards a green and circular economy, attention should be given to pioneer SMEs who have developed circular business models, contributing to the increased use of renewable energy, improved recycling and waste management. Green SMEs would therefore not only be an essential element of the economy but could also drive innovation and competition and thereby help to address economic, environmental, and social challenges of Asia.

## OBJECTIVES

- To continue the discussion on how to increase the understating of the eco-design approaches for their promotion and uptake by the SMEs in Asia.
- To facilitate exchange of knowledge and good practices in the region that will deep dive on implementation challenges and benefits of

Eco-design is a proactive approach in designing products and services that use minimum resources and energy and have minimum negative environmental and social impacts throughout their life cycles while meeting the users' needs of functionality and quality. The practices are considered interventions from conception to development or from use to end-of-life, starting from design materials extraction, production, distribution, use, and end-of-life. An example includes selection of low-impact resources and processes, extending the lifespan of the material, system design for eco-efficiency, life cycle design, minimizing resource consumption, production lifetime optimization, etc. (Hilal Bugali, 2013).

In 2020, the EU SWITCH Asia RPAC in partnership with Thailand Environment Institute (TEI) successfully organized a regional dialogue to enhance awareness and knowledge on eco-design as an efficient path to achieve sustainable development. The dialogue highlighted that supporting facilities for Asian SMEs could be one of major thrusts in promoting eco-design and Sustainable Consumption and Production (SCP) patterns in Asia. As the region is today a fast-growing base for the manufacture of various kinds of products for the world, there is a clear need to enhance capacities of the Asian SMEs in dealing with increasingly stringent environmental legislation and certification requirements. The willingness and capability of SMEs to adopt sustainable practices and seize green business opportunities however generally face size-related resource constraints, skill deficit and knowledge limitations. There would thus be specific challenges for SMEs in making the transition towards green and circular economy approach and thereby different supporting measures are needed to enhance this uptake.

- adopting/instilling the eco-design thinking for the key sectors in Asia.
- To further gather perspectives on enabling factors/solutions that influence/support SMEs to incorporate eco-design approaches in their businesses.



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## CONTACT

**Dr. Mushtaq Ahmed Memon**  
Resource Efficiency Sub programme Regional Coordinator, UNEP Regional Office for Asia and the Pacific  
Project Manager, EU SWITCH-Asia Regional Policy Advocacy Component (RPAC).

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TUESDAY  
 30 NOVEMBER 2021  
 13:30-16:30 HRS.  
 (BANGKOK TIME)



## AGENDA

### Opening Session

13.30-13.35 **Remarks by RPAC**  
**Dr. Mushtaq Memon**  
 Project Manager, the EU SWITCH-Asia RPAC

13.35-13.40 **Remarks by TEI**  
**Dr. Wijarn Simachaya**  
 President of Thai Environment Institute (TEI) and the Secretary-General of Thailand Business Council for Sustainable Development (TBCSD)

13.40-13.45 **Remarks by AIT**  
**Prof. Dieter Trau**  
 Dean, AIT School of Engineering and Technology  
 Director, AIT Entrepreneurship Center

13.45-13.50 **Opening Remarks**  
**Thibaut Portevin**  
 Head of Cooperation, Delegation of European Union to ASEAN

13.50-14.00 **Circular Design-An Intervention from the Ellen MacArthur Foundation**  
**Chuan Fan**  
 Project Manager for Learning and Design  
 Ellen MacArthur Foundation

### Session 1: Potential Sectors for Greening SMEs in Asia

14.00-14.10 **Eco-design Approaches in Asia**  
**Dr. Nithiwadee Buawat**  
 Researcher, TEI

14.10-15.10 **Breakout rooms to discuss potential sectors on their implementations\***

#### Breakout room 1

Moderator:

**Assoc. Prof. Naragain Phumchusri**

- Electronics
- Construction
- Alternative Energy/Development (e-Vehicle)
- Agriculture (resource efficient use)

#### Breakout room 2

Moderator:

**Prof. Vilas Nitivattananon**

- Service (tourism and logistic)
- Textile
- Packaging
- Household/personal use

15.10-15.20

### Plenary Discussion\*\*

**Tunnie Srisakulchairak**  
 SWITCH-Asia RPAC

### Session 2: Enabling Factors to Enhance the Eco-design Approaches

15.20-15.30 **The Green Startup Toolkit**

**Dr. Lakeesha Ransom**  
 Faculty, AIT School of Management

15.30-15.40 **Enabling Factors to Green SMEs**

**Pavitra Mohanraj**  
 Technical Expert, FICCI and Founder Infinitive

15.40-16.20 **Breakout rooms to deep dive into the identified factors\***

- Financial mechanisms
- Policy and Regulation
- Technology and Innovation
- Education & Skills
- Gender and Vulnerable groups

#### Breakout room 1

Moderator:

**Dr. Chaiyod Bunyagidj**

#### Breakout room 2

Moderator:

**Prof. Dieter Trau**

16.20-16.25

### Plenary Discussion\*\*

**Tunnie Srisakulchairak**  
 SWITCH-Asia RPAC

16.25-16.30

### Conclusion and Closing

**Dr. Mushtaq Memon**

\*Participants are requested to join their chosen breakout room

\*\*Participants are requested to come back to main room



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## SPEAKERS PROFILE



**Dr. Mushtaq Ahmed Memon**  
*Regional Coordinator, Resource Efficiency in Asia Pacific United Nations Environment Programme (UNEP)*

**Mushtaq Memon** is working with UN Environment (United Nations Environment Programme) as a Regional Coordinator for Resource Efficiency in Asia Pacific Office located in Bangkok. He is supporting resource efficiency, sustainable consumption and production, green economy, green financing, sustainable public procurement, sustainable tourism, sustainable industries and various areas for Asia and the Pacific. He is also implementing EU funded SWITCH-Asia Phase 2 component by UN Environment to support Sustainable Development Goals (SDGs), especially SDG 12 on sustainable consumption and production in the region. He earned his Master's degree in Project Management and National Development from University of Bradford in UK, and Doctorate in Environmental and Resource Economics and Management at Hiroshima University in Japan.



**Dr. Wijarn Simachaya**  
*President of Thai Environment Institute (TEI) and the Secretary-General of Thailand Business Council for Sustainable Development (TBCSD)*

**Dr. Wijarn Simachaya** is the President of Thai Environment Institute (TEI) and the Secretary-General of Thailand Business Council for Sustainable Development (TBCSD). He various responsibilities in the past were natural resources and environmental plans, strategy development, pollution control plans as well as international cooperation on natural resources and environment issues. He was also a representative of the ministry of various UN, Sub-regional, and ASEAN forums. He had a long experience working in the government sector for 36 years. He currently works with various public-private agencies, civil societies and communities on the ground to develop environmental management models for the country, and moving toward sustainable development. He also serve as a chairman of Circular Economy Sub-committee under the National Committee of BCG Economic Model.



**Prof. Dieter Trau**  
*Dean, AIT School of Engineering and Technology  
Director, AIT Entrepreneurship Center*

An accomplished researcher in the field of Chemistry and Biomedical Engineering, **Prof. Dieter Trau** is also an entrepreneur who is the holder of numerous patents and founder of several life-science and medical companies. He is currently the Dean of School of Engineering and Technology at the Asian Institute of Technology (AIT) and Director of AIT Entrepreneurship Center. Before coming to AIT, Prof. Trau was an Associate Professor with tenure and Associate Head Research in the Biomedical Engineering Department of the National University of Singapore (NUS). He earned his engineering degree in Chemical and Bioengineering from the FH Aachen University of Applied Sciences, Germany, in 1994 and a PhD degree in Chemistry from the Hong Kong University of Science and Technology in 2001.



**Thibaut Portevin**  
*Head of Cooperation, Delegation of European Union to ASEAN*

**Mr. Thibaut Portevin** is the Counsellor - Head of Cooperation of the European Union (EU) Delegation to Indonesia and Brunei Darussalam and ASEAN. Prior to this position, he worked as Environment and Climate Change Project Officer of EU Delegation to Indonesia and Brunei Darussalam before becoming Green Economy Policy Officer of DG International Partnership, European Commission, Brussels. Mr. Portevin worked in humanitarian aid and development cooperation assignments with civil society organizations in multiple countries. He speaks English, French, Spanish, and Indonesian.



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### Chuan Fan

*Project Manager for Learning and Design  
Ellen MacArthur Foundation*

Chuan's role at the foundation is to reach and engage learners and designers in China with the foundation's abundant knowledge assets on circular economy. She collaborates with universities, social organisations, and businesses to facilitate the mindset shift needed for a systemic transition. Prior to joining the foundation, Chuan developed learning programmes on social innovation and experiential philanthropy for over 1000 university students and young professionals.



### Dr. Lakeesha Ransom

*Faculty, AIT School of Management*

Dr. Lakeesha K. Ransom earned her doctorate in Human Resource Development, with a minor in Strategic Management, and a master's in Comparative and International Development Education, with emphasis in Public Policy and Educational Psychology from the University of Minnesota. In addition, she is a certified home energy auditor in the US state of Minnesota. Dr. Ransom has over twenty years of leadership experience in the educational, corporate, not-for-profit, and governmental sectors. She currently advises start-ups globally, teaches courses in entrepreneurship and the circular economy, and serves as Enterprise Engagement Director at the Asian Institute of Technology in Bangkok.



### Tunnie Srisakulchairak

*SWITCH-Asia RPAC*

Tunnie Srisakulchairak has over 10 years of professional experience as a project manager at UNEP regional office for Asia and the Pacific. Prior to this, she worked as programme specialist in Asian Institute of Technology to promote linkages between science and policy and enhance multi-stakeholders participation in scientific assessment and policy recommendation process. She successfully manages key projects on climate adaptation and mitigation as well as Sustainable Consumption and Production (SCP). She has experiences in engaging with national governments into the policy dialogue and implementing activities on the ground especially in term of capacity building, raising awareness and policy advocacy in the region, especially governments in Southeast Asia.



### Dr. Nithiwadee Buawat

*Researcher, TEI*

Dr. Nithiwadee Buawat is a Researcher of Thailand Environment Institute. She has experience with green label certification with manufacturers producing environmentally friendly products or services. She also specializes in factory audits in accordance with ISO 9001, ISO 14001 and Green Label requirement. In addition, she has experience as a speaker on topics such as Green Manufacturing and Environmental Labeling.



### Pavitra Mohanraj

*Technical Expert, FICCI and Founder  
Infinite*

Pavithra is the Co-Founder of Infinite, a young advisory firm working to accelerate the adoption of Circular Economy (CE) in India through communications, capacity building, business advisory and ecosystem development projects. Infinite has played a key role in shifting mindsets and shaping the evolving conversation around Circular Economy in India. Infinite has worked with many esteemed partners and clients including the Ellen MacArthur Foundation (Disruptive Innovation Festival) and the bilateral EU-India Resource Efficiency Initiative (EU-REI). She has over a decade of experience working in green buildings in Singapore, and sustainability reporting / consulting and ecosystem development work around sustainability and CSR in India. In addition to leading Infinite's work, Pavithra also mentors start-ups in the circular economy space in India and Asia.



### Dr. Chaiyod Bunyagidj

*Vice President Thai SCP Network, Board  
Member, Asia Pacific Roundtable for  
Sustainable Consumption and Production  
(APRSCP)*

Dr. Chaiyod Bunyagidj is the Vice President of Thai SCP Network, Board Member, Asia Pacific Roundtable for Sustainable Consumption and Production (APRSCP). He was previously served as Vice President at Thailand Environment Institute (TEI) as well as Executive Director of Thailand Business Council for Sustainable Development (TBCSD). With 20 years at TEI, he had engaged intensively with corporate environmental and social responsibility as well as the national policy and strategy for sustainable development specifically on Sustainable Consumption and Production (SCP) issues.



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### Dr. Mushtaq Ahmed Memon

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## PANELIST PROFILE

Breakout rooms to discuss potential sectors on their implementations

### BREAKOUT ROOM 1



**Assoc. Prof. Naragain Phumchusri**  
*Department of Industrial Engineering,  
Chulalongkorn University*

**Naragain Phumchusri** is an Associate Professor and the Deputy Head of Department at the Department of Industrial Engineering, Chulalongkorn University, Thailand. She received her Ph.D. in Industrial Engineering from Georgia Institute of Technology, Atlanta, GA, USA in 2010. Her current research interests include stochastic models for revenue management, machine learning for demand forecasting, inventory optimization, warehouse & supply chain management, and data analysis for tourism industry. She is also a co-founder of Navatas Hospitality Co., Ltd., a tour company focusing on green tourism.



**S. Karthikeyan**  
*Principal Counsellor  
CII Sohrabji Godrej Green Business Centre  
Confederation of Indian Industry*

**S. Karthikeyan** has more than two decades of experience in offering sustainability services for manufacturing and building sector. Presently he is heading the technical division of CII - Indian Green Building Council (IGBC) and the department of GreenPro - an Ecolabel which was recently launched by CII. He has been instrumental in conceptualising and developing the country specific Ecolabel for building products, industrial products, and consumer products. He has contributed immensely for the success of the Ecolabel with more than 150 companies adopting the GreenPro label for their over 2500 products. He played a vital role in GreenPro gaining recognition from Global Ecolabelling Network (GEN) and UN Environment. He has been leading all the new initiatives of IGBC in the recent past including Net Zero Energy, Water & Waste rating system, Green Data Centre, Green Railway stations, Green Hospitals and Green Resorts.



**Oudom Thay**  
*Vice President Thai SCP Network, Board  
Member, Asia Pacific Roundtable for  
Sustainable Consumption and Production  
(APRSCP)*

**Oudom Thay** is the National Sales Manager for ATEC Biodigester Cambodia, With over 9 years of experience in sales and Business Development for both the public and private sector. Oudom is passionate about making positive changes and impacts to the farmer community in Cambodia, he brings with him the skill and expertise in strategic sales, market data analysis and customer oriented approach.



**Samit Jain**  
*Managing Director, Pluss Advanced  
Technologies*

**Samit Jain** has a Master's degree in Physics and Bachelor's degree in Electrical and Electronics Engineering from the Birla Institute of Technology & Science, Pilani, India. He also holds an M.S. in Electrical Engineering from the University of Hawai'i, USA. As MD at Pluss, Samit heads the overall strategy, marketing, and finance portfolios. Pluss is committed to create value through products and services designed to benefit people and create a better world. With a belief that Energy access is going to be the key for a sustainable world, Samit has led the growth of energy storage materials and their applications at Pluss. He led his team to develop and create products - some of which were the first in the world - MiraCradle™, worlds first neonatal cooler can keep a baby cool for 3 days. He has spoken at several national and international conferences over the years on promoting energy storage.



**Dr. Supachai Sampao**  
*Chief, Energy Efficiency Standard and  
Conservation Group  
Department of Alternative Energy  
Development and Efficiency (DEDE)  
Ministry of Energy*

With over 27 years of experience in DEDE, **Dr. Supachai Sampao** is responsible for study and making the ministerial regulations of Thailand energy-saving machine or equipment and material to support the highly efficient energy-saving label measures of DEDE and label number five of EGAT, referee in the Thailand Energy Award Project 2017 - 2021, subordinate Unit Certification Committee CB Thailand. He was Chairman of ASEAN EE MRA Working Group 2018-2019 for Harmonization Standard / Method of Electrical and Electronic Equipment (MEPS) and chairman of Lighting Policy Working Group in ASEAN SHINE project. He has Innovative qualification review committee that lists Thai innovations for government procurement and expert in the Thai National Committee on International Electrical Technical Standards. Committee of TISI on Technical Barriers to Trade (TBT), academic Committee of TISI for Air Conditioners, Heat Pumps, Machinery, Air compressor and Lighting. He is also an Expert in the Green Label Technique Subcommittee.



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## CONTACT

**Dr. Mushtaq Ahmed Memon**  
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### BREAKOUT ROOM 2



**Prof. Vilas Nitivattananon**

Dean of the School of Environment, Resources and Development (SERD), AIT

**Prof. Vilas Nitivattananon** is a Professor and Chair of Urban Innovation and Sustainability Program, under the School of Environment, Resources and Development, Asian Institute of Technology (AIT), Thailand. He has academic degrees in engineering, economics and systems management, with a PhD from University of Pittsburgh, USA. His specialization and research interest includes: systems approach and management for urban sustainability, strategic water and infrastructure development, climate change and disaster resilience, sustainable tourism and consumption. Dr. Vilas has extensive experience in public and private sectors including with non-profit organizations as well as industry. He developed and managed development projects from conception to completion, for international, national and local scales – under UNEP, UNESCAP, WB, ADB, USAID, MOFAID, and JICA, and many others.



**Dr. Curie Park**

Research Associate  
Industrial Sustainability  
University of Cambridge, UK

**Dr. Curie Park** is a Research Associate at Centre for Industrial Sustainability, IfM, University of Cambridge. Her research focus is on creating a positive sustainability impact in a speedy and efficient fashion. As a product designer by training, she is particularly interested in maximizing the impact through sustainable design at product, process, and systems levels in a global context. After the completion of her Ph.D. on identifying the impact factors for sustainable design implementation for the FMCG industry in 2014, Curie started working for Centre for Industrial Sustainability since 2015. Her research projects include Redress project (funded by Innovate UK): circular economy business mode innovation for a UK's leading fashion retailer; TransTextile (funded by University of Cambridge, EPSRC): Interdisciplinary collaboration for high value innovation for the post-production textile waste in Sri Lanka; CloudForest (funded by Innovate UK): democratising the forestry investment industry through designing a sustainable business model on a crowd-funding platform; and Creative Hub for waste innovation in Thailand (funded by Newton Fund, British Council): Interdisciplinary collaboration for high value innovation for industrial waste from SMEs in Thailand.



**Prince Jimdel Ventura**

Founder and CEO  
Wear Forward, Philippines

**Prince Jimdel Ventura** is a fashion social technopreneur, consultant, designer, stylist, speaker, and the lead champion of circular fashion in the Philippines. He is a Clothing Technology graduate from the University of the Philippines with a holistic training in textile and garment research, design, production, merchandising, and entrepreneurship. Prince is the founder and CEO of Wear Forward which is the Philippines' premier clothing as a service fashion tech startup and social enterprise that focuses on sustainability, circularity, and innovation. Wear Forward manages and refashions textile wastes and provides an AI-powered circular fashion marketplace and virtual wardrobe. He aims to raise awareness about the environmental and socioeconomic impacts of the fashion industry and address the issues both producers and consumers face today.



**Patnaree Royruangpanich**

Co-Founder of S&P Bioenergy Co., Ltd.

**Ms. Patnaree Royruangpanich** is the Co-Founder and Marketing Executive of S&P Bioenergy Co., Ltd. She earned her Master of Business Administration from Assumption University and her Bachelor's degree in Business Administration from Thammasat University. She is an experienced business unit developer specializing in Eco-Friendly Household Product and had managed many projects involving front and back end development.



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