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# ASSESSMENT WORKSHOP AND HANDS-ON TRAINING ON SIMAPRO

# **Speakers**

#### Shabbir H. Gheewala

Professor Joint Graduate School of Energy and Environment (JGSEE), KMUTT, Thailand

## **Koichi Shobatake**

Director TCO2 Co. Ltd, Japan

## Madatheri Rajesh

Chief Executive Officer
Hybrid Green Manufacturing Sdn Bhd, Malaysia

## Marlia Mohd Hanafiah

LCA Professional, UKM, Malaysia

## For Further enquiries

>> For questions related to workshop content, please contact **Dr. Marlia Mohd Hanafiah** at HP: +6019-3525969 / Phone:+603-89215865;

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3 – 5 October 2017
PRACULTY OF SCIENCE

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Organized by: SEMRG @ Faculty of Science and Technology

# **1** Introduction

The **SEMRG** Research Group will be organizing a 3-day training workshops providing a basic understanding of Life Cycle Assessment (LCA). Life cycle assessment (LCA) is a comprehensive assessment and a holistic approach that can provide relative and accurate information to be applied in environmental management. LCA can be used to evaluate environmental impacts associated with a product's life cycle from cradle-to-grave including raw material extraction, transportation, materials processing and manufacturing, distribution, use, maintenance and disposal by identifying the energy, materials used and emissions released to the environment. LCA can help users to make more informed decision and provide a better understanding of the potential impacts of product development on human health and ecosystem quality. The potential impacts can be modeled using Simapro Software. SimaPro is a tool that has been developed to help in gathering the facts and use the LCA expertise to provide the insights needed to create sustainable value

# **02** Objective

Therefore, the aim of the workshop is to provide exposure on how to conduct life cycle assessment analysis and to enhance the understanding of green technology application by the industry. The training on SimaPro will help students and researchers to learn and develop skills in using the software.

# **03** Tentative Programme

## 3rd October 2017 (Day 1)

8.30 am - 9.00 am : Registration 9.00 am - 10.15 am : Industrial talk

am - 10.15 am : Industrial talk

Industry outlook on green technology implementations: scope and challenges

Mr. Madatheri Rajesh

(CEO, Hybrid Green Manufacturing

Sdn Bhd, Malaysia)

10.15 am - 10.30 am : Coffee Break

10.30 am - 11.45 am : Session 1 - (LCA)

**Introduction to Life Cycle Assessment** 

Life Cycle Assessment – a general

introduction

Prof. Dr. Shabbir H. Gheewala

(King Mongkut's University of Technology Thonburi, Bangkok, Thailand) - KMUTT

11.45 am - 1.00 pm : Session 2 - (LCI)

Life Cycle Inventory

Data collection, validation and analysis Prof. Dr. Shabbir H. Gheewala, (KMUTT)

1.00 pm - 2.15 pm : Lunch Break

2.15 pm - 3.30 pm : Session 3 - (LCIA)

Life Cycle Impact Assessment Midpoint vs. Endpoint Indicators Dr. Marlia Mohd Hanafiah, (UKM)

3.30 pm - 4.45 pm : Session 4 - LCA Applications

Use of LCA for various applications (hotspot analysis, product improvement,

policy analysis)

Prof. Dr. Shabbir H. Gheewala, (KMUTT)

## 4th October 2017 (Day 2)

9.00 am - 10.15 am : Session 5 - LCA Case Studies

LCA of renewable energy sources Prof. Dr. Shabbir H. Gheewala

(KMUTT)

10.15 am - 10.30 am : Coffee Break

10.30 am - 1.00 pm : Hands-on Training Simapro

Introduction of LCA using SimaPro (1)

Mr. Koichi Shobatake (TCO2 Co. Ltd, Japan)

1.00 pm - 2.15 pm : Lunch Break

2.15 pm - 4.45 pm : Hands-on Training Simapro

Introduction of LCA using SimaPro (2)

Mr. Koichi Shobatake (TCO2 Co. Ltd, Japan)

### 5th October 2017 (Day 3)

9.00 am - 10.15 am : Hands-on Training Simapro

Introduction of LCA using SimaPro (3)

Mr. Koichi Shobatake (TCO2 Co. Ltd, Japan)

10.15 am - 10.30 am : Coffee Break

10.30 am - 1.00 pm : Hands-on Training Simapro

LCA of agricultural products (1)

Mr. Koichi Shobatake (TCO2 Co. Ltd, Japan)

1.00 pm - 2.15 pm : Lunch Break

2.15 pm - 4.45 pm : Hands-on Training Simapro LCA of agricultural products (2)

Mr. Koichi Shobatake (TCO2 Co. Ltd, Japan)



Raw Material Acquisition

Raw material extraction

Material processing Product Life Cycle

rocessing

Product use

End of life



Manufacturing



Manufacturing & Assembly