

International Conference  
Series on Life Cycle Assessment

Life Cycle Assessment as A Metric to  
**Achieve  
Sustainable  
Development  
Goals**

Jakarta-Indonesia  
24 - 25 OCTOBER 2018

Collaborate with:  
ILCAN

The banner features several logos in the top left corner, including the Indonesian government emblem and a circular logo with the text 'LCA 2018'. On the right side of the banner, there is a stylized graphic of a globe with colorful segments. The background of the banner is white with colorful geometric shapes.





UNIVERSITAS  
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# International Conference Series on Life Cycle Assessment

# ICSOLCA 2018

Jakarta-Indonesia

23 - 25 OCTOBER 2018

Life Cycle Assessment as A Metric to Achieve  
Sustainable Development Goals

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Abstract Submission  
1 April-30 June 2018  
<https://icslca.sil.ui.ac.id/registration>

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## Featured Speakers

Prof. Jero Supriana, M.Sc., Ph.D.  
Director of Research Center for Quality Control,  
Jakarta International Trade Center



I. Sigit Raharso, M.Sc.  
Head of REAME (Research of Environmental and  
Material Assessment) Center,  
National Institute of Standards and Technology



Dr. Edi Iswanto Wibisono  
Director of Technology for Urban Environment  
& Air Quality,  
National Institute of Standards and Technology



Prof. Dr. Subramaniam Chinnaiyan  
Professor of Chemical Engineering, University of  
Wollongong, Australia (UNSW)



Dr. Jim Jones  
Chief Engineer, Product Development, FA



Prof. Dr. & Wiloso Wahyu Purwanto, DEA  
Director of Sustainable Energy Systems & Performance  
Center, Center for Sustainable Energy Performance,  
National Institute of Standards and Technology



Dr. Nina Sedjainur, MA  
Head of Sustainable Chemistry Division,  
National Institute of Standards and Technology



Assoc. Prof. James B. Guinée  
National Institute of Standards and Technology



Eric Nieme  
Manager, Center for Sustainability Performance



Prof. Marco Trevisan  
Head of Sustainability & R&D Center, Ferrari



## Topics

1. Life cycle assessment, LCI, LCIA, Data and database
2. Life cycle perspective in environmental management system [SDG #6, #9, #13]
3. Life cycle approach for technology and product development, innovation on renewable resources [SDG #9]
4. Life cycle management system on value chain, industrial ecology [SDG #12]
5. Circular economy for eradicating poverty, decent work and economic growth [SDG #1, #8, #10]
6. Innovation on energy and resource efficiency using life cycle approach [SDG #7, #12]
7. Sustainability reporting and labelling for businesses
8. Sustainability education [SDG #4]
9. Environmental footprint, carbon footprint, water footprint [SDG #6, #7, #13 & #15]
10. Food and agriculture LCA [SDG #2, #3]
11. Innovation on sustainable urban systems 2 [SDG #11, #13, #15]
12. Sustainable marine life, infrastructure and stewardships [SDG #14]

### Special Topics

13. Women and sustainability [SDG #5, #17]

## Important Date

1 April - 30 June 2018  
Abstract submission

9 July 2018 – 31 August 2018  
Full Paper submission

9 July 2018  
Abstract acceptance

9 July-15 September 2018  
Conference registration

24-25 October 2018  
Conference

Selected papers will be proposed to Scopus  
indexed Journals (publishers)

Scopus Preview

Kerjasama dengan :



INDONESIAN  
LIFE CYCLE ASSESSMENT  
NETWORK

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# School of Environmental Science, Universitas Indonesia



The Southeast Asian Studies Symposium



Green Campus School of Environmental Science UI 2018

During this time the activities of the University of Indonesia in the environmental field were carried out based on the agreement between the State Minister for the Environment of the Republic of Indonesia and the Chancellor of the University of Indonesia signed on June 7, 1980. Because of the need for experts in the environmental field who increasingly demanded scientific handling, then in the 1982 academic year / 83 Universitas Indonesia held a Postgraduate Program in Environmental Sciences with enthusiasm in the field of Human Ecology which was inaugurated by the Chancellor of UI Prof. Dr. Nugroho Notosusanto on August 25, 1982. This program was originally managed by the Faculty of Mathematics and Natural Sciences, University of Indonesia, then moved under the newly formed age at the beginning of 1983

In 1989, the Study Program opened three specificities, namely Human Ecology, Environmental Planning and Environmental Protection. Since UI's transition to a State-Owned Legal Entity (BHMN), in April 2000 all monodisciplinary Study Programs turned to the Faculty, while a multidisciplinary / study Study Program (including PSIL) remained under the management of the UI Postgraduate Program in accordance with PP No. 60/1999.

Since 2010 Universitas Indonesia has held an Environmental Science Study Program with 3 (three) specializations, namely: Industrial Environmental Management (MLI), Sustainable Development Planning (PPB), and Environmental Protection (PL) as a formal education pathway, to equip scholars with expertise environmental science.

The Environmental Sciences Study Program continues to grow rapidly, both in terms of the number of students in the master's and doctoral programs, as well as in terms of the quality of achievement. After 35 years of existence, PSIL officially changed, increasing its status to school. The School of Environmental Sciences (SIL) was officially formed on July 1, 2016 based on the Rector's Decree No.1092 / SK / R / UI / 2016 concerning the Opening of the University of Indonesia's School of Environmental Sciences. The School of Environmental Sciences became the first school to stand at the University of Indonesia and became the first school to focus on a multidisciplinary approach to Environmental Sciences in Indonesia.

Based on the Anggaran Rumah Tangga (ART) in the Regulation of the University of Indonesia Trustee No.004 / Regulation / MWA-UI / 201 stated that schools are equivalent to faculty. Understanding Schools according to ART UI is a set of supporting resources that organizes and manages multi education programs and / or inter / trans disciplines at the master and doctoral levels in certain scientific groups that cannot be developed in the faculty.

The basic consideration of the formation of SIL is the development of environmental science in order to support the vision of the University of Indonesia as a world class research university. Currently SIL oversees two study programs, namely: Environmental Science Study Program and Environmental Sciences Doctoral Program. In its development plan, SIL will form several new study programs as an embodiment to answer the challenges of the future development of environmental science and to answer the needs of environmental experts.

#### Vision

The Vision of the School of Environmental Sciences is to become a center of excellence and innovation in the field of environmental science studies oriented to sustainable development.

#### Mission

To realize the vision that has been set, the mission run by the School of Environmental Sciences is:

1. Educating human resources to have constructive and innovative analytical and thinking power in environmental science studies with three main pillars of environment, economy and social;
2. Developing the role and professionalism of human resources with critical reasoning abilities and having practical skills in the field of environmental science have an interdisciplinary approach to science, technology and socio-culture;
3. Developing research in the field of environmental science studies with national and international standards capable of delivering Indonesia to a global era;
4. Providing devotion to the community in the form of developing science and technology, models, and solving various problems.

#### Aim

The purpose of organizing the Environmental Sciences Study Program is:

1. Producing masters in the field of environmental sciences with high academic ability and integrity in comprehensively analyzing and understanding complex environmental issues by interpreting environmental, economic and social aspects;
2. Produce masters in the field of environmental science studies that have high competitiveness in the national, regional and international labor market;
3. Producing high-quality strategic research and publications in the field of environmental science studies by academics;
4. Increase the contribution of thought through community service to help find solutions to environmental problems faced by the community both locally and globally.

#### Target

1. Make experts and environmental professionals to be more sensitive and aware of the various multidimensional aspects of various human intervention or manipulation of their environment, in the lattice of thought of sustainable development;
2. Educate participants, both those from teachers, researchers, workers and stakeholders and to be able to identify various environmental problems, and develop priorities that are appropriate for various alternative solutions

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# Forewords



**Dr. Hayati Sari Hasibuan**

Head of Organizing Committee  
ICSolCA

Welcome to Jakarta

I am delighted to have you all here today to participate in the 3<sup>rd</sup> International Conference Series on Life Cycle Assessment. This Conference is convened by the School of Environmental Science-Universitas Indonesia in collaboration with Indonesian Life Cycle Assessment Network (ILCAN), Indonesian Research Scientific Institute, and the Ministry of Environment and Forestry. Our very much appreciation to the ILCAN team to put this conference together. It provides a platform to engage scholars, policy makers, business and civil society to present interdisciplinary and transnational solutions to Sustainable Development issues in the spirit of partnerships for the goals.

This conference marks a historic occasion for some reasons. Firstly, this conference will be the first time in Indonesia that combine two most important issues: the sustainable development goals and life cycle assessment. This is indeed a significant challenge for the research and knowledge development. For that reason, together with us in this conference, some prominent speakers from the region and beyond, to provide us an insight into the cutting-edge developments in life cycle assessment and sustainable development. There are around 200 valuable working papers will be presented and discussed at this conference. This conference gathers over 300 participants from approximately fifty organization, and from eight different countries.

Secondly, we are striving to initiate and implement a green concept in this conference, as the way to the green conference. We provide reusable bottle for the participant, to reduce the plastic waste. This is a paperless conference, we provide e-programme book, and e-certificate for the participants. The food served in buffet, so please consider wisely when you taking food, to reduce food waste.

Thirdly, all those papers that accepted in this conference will be published in the high reputation international publications that we have agreements with. These publications will enhance the academic debate to find the



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original research result, the state-of-the-art research, and innovations that contribute to the achievement of SDGs.

We are honored to hold this conference in the National Library of Republic Indonesia. Library is a fundamental infrastructure and a central part of the academic world. We choose the library for the conference venue on purpose, with the clear message that “Libraries are shaping the future learning and research”. We appreciate for the kindness of National Library Management Team for providing us this beautiful place for the conference. We are humbled to provide the venue for your networking activities.

Welcome to the conference. Enjoy your time at two days interesting presentations and discussions. Lecture aside, Jakarta is an interesting and historical travel destination. Take some time to explore Jakarta, and you will enjoy Jakarta.

Thank you very much.

Assalamualaikum Warahmatullahi Wabarakatuh.

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# Forewords



**Dr. Emil Budianto**

Director of School of  
Environmental Science,  
Universitas Indonesia

It is an honor and pleasure to convene this important conference in this beautiful National Library.

It is also a pleasure to share our school enthusiasm for what we can do to achieve the 17 Sustainable Development Goals.

Recently, Indonesia struck by the deadly earthquake, tsunami, and liquefaction that hit Sulawesi Tengah. Not long after disaster hit Lombok. Our deep heartfelt condolences to the people of Sulawesi Tengah and our deepest sympathy and solidarity to the grieving families of the victims.

Even though Indonesia hit continuously by the natural disaster, we are still in an endless effort to achieve the sustainable development. Indonesia has undergone a remarkable transformation over past half-century. At present, Indonesia is ranked fourth number population in the world, with a huge region, more than 17.000 islands.

All element of the nation needs to work together to achieve sustainable development. To achieve social equality, environmental sustainability, economic prosperity, and resilience to the disaster as well as advance science and technology. The cooperation among stakeholders then has become one of the tools in achieving sustainable development goals.

Universitas Indonesia, especially the School of Environmental Science, has been actively engaged in sustainable development initiatives, particularly on research and education. We have the cluster research on Sustainable Development both in magister and doctoral degree. There are almost five hundred thesis and dissertations in our school with the theme of sustainable development. In many aspects of research, including: economic, agricultural, forestry, waste management, water management, environmental protection, urban and city planning, disaster management, climate change, education, and social sustainability. The results of the research has



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been benefited as an input to the government policy, the community program, and the p sector program.

The embryo of the School of Environmental Science at the University of Indonesia goes back to 1982 when the Programme Study of Environmental Science was established in response to the need in Indonesia for expertise in the environmental field. Our vision was for this Programme to become the center of education and research in environmental issues, within the broader vision of the University as the 'World Class Research University'. Our missions are to create graduates (with Masters and Doctorate degrees) who hold, not only academic competency in the environmental sciences, but importantly, a sense of responsibility and duty to the needs of society and our Country with regards to environmental issues, most evidently sustainable development.

Until this academic year, we have graduated a total of 1000 students at the Masters level. Our Doctorate programme, in its 16th year, has graduated 140 Doctors. A large number of them hold strategic positions within Universities in Indonesia, Government bodies, as well as in the private sector. This academic year we have 150 Master students and 75 Doctoral degree students.

There are some challenges in sustainable development. Among other is how to measure our progress in getting the SDGs. How to monitor the achievement of those 17 SDGs and 169 targets? That is the theme of this conference today, to do LCA as a metric for Sustainable Development Goals. We hope that the valuable work and discussion during this conference will lead to the initiatives and innovations in getting the sustainable development goals.