



Conference Agenda Overview

October 3, Monday						
	TERRSA Hall at 1F	Seminar room 2&3 at 2F	Conference room (Middle) at 2F	Seminar room 1 at 2F	Conference room B&C at 3F	Conference room D at 3F
9:00am - 12:00pm		School 2: Current Developments in Life Cycle Impact Assessment	School 1: Life Cycle Assessment: theory and practice			Side event 1: Pre EcoBalance WS on Urban Mining; Utilization of secondary metal resources in our society advancing Circular Economy
1:00pm - 5:20pm				(2:30pm-4:30pm) Side event 4: Future Challenges Toward Sustainable Palm Products; The 3rd LCA Food Supply Chain Asia International Workshop	Side event 3: DS Lab International Workshop on "New Possibilities on Disclosure of Corporate Information for Sustainability"	Side event 2: Basel Forum 2016 Workshop in Asia-Pacific Region (The 10th NIES Workshop on E-waste)
6:00pm - 8:00pm	Welcome reception (New Miyako Hotel B1F Yomei-den Banquet Hall)					

October 4, Tuesday						
1-A0 Opening and plenary (TERRSA Hall)						
9:30am - 12:30pm						
12:30pm - 1:30pm	Lunch (60 min)					
	TERRSA Hall at 1F	Seminar room 2&3 at 2F	Conference room (Middle) at 2F	Seminar room 1 at 2F	Conference room B&C at 3F	Conference room D at 3F
1:30pm - 2:50pm	1-A1 Smart tools and robust data to implement standards for sustainable	1-B1 Environmental policy	1-C1 Sustainable living and life styles	1-D1 Supply chain and sustainability assessment	1-E1 Resource supply security	1-F1 Local environmental risk and potential
2:50pm - 3:10pm	Break (20 min)					
3:10pm - 4:30pm	1-A2 Stakeholder reflection on implementation of Life-Cycle aspects (from Thinking over Assessment to Management)	1-B2 Extending global life cycle community for sustainability	1-C2 Water footprint	1-D2 Design for sustainability	1-E2 Circular economy	1-F2 Resource efficiency
4:30pm - 4:50pm	Break (20 min)					
4:50pm - 6:10pm	1-A3 Data and software	1-B3 Circulation, regeneration and mitigation	1-C3 Biodiversity and ecosystems	1-D3 Consumer behavior	1-E3 Metal and mineral resources	1-F3 Estimating national eco- efficiency: what approaches can we take?
6:10pm - 6:30pm	Break (20 min)					
6:30pm - 8:00pm	1-A4 Young researchers meeting					

October 5, Wednesday						
	TERRSA Hall at 1F	Seminar room 2&3 at 2F	Conference room (Middle) at 2F	Seminar room 1 at 2F	Conference room B&C at 3F	Conference room D at 3F
9:00am - 10:20am	2-A1 Status of Asian LCI databases and movements toward global	2-B1 Consensus building in life cycle impact assessment: experiences, achievements and challenges	2-C1 Manufacturing	2-D1 Green ICT	2-E1 Stock and flow assessment	2-F1 Cost effectiveness in environmental management
10:20am - 10:40am	Break (20 min)					
10:40am - 12:20pm	2-A2 Keynote panel discussion: Sustainable value chain and corporate values	2-B2 Consensus building in life cycle impact assessment: experiences, achievements and challenges	2-C2 Industrial symbiosis	2-D2 Sustainable agricultural production	2-E2 Material flow analysis for base metals	2-F2 Bio-materials and bio- energy
12:20pm - 1:20pm	Lunch (60 min)					
1:20pm - 3:00pm	2-A3 Sustainability performance and investment	2-B3 Sustainable cities and communities	2-C3 Social and sustainability assessment	2-D3 Sustainable value chain of agricultural products	2-F3 Critical metals	2-F3 The future of energy- critical minerals
3:00pm - 3:10pm	Break (10 min)					
3:10pm - 5:10pm	2-A4 Poster session (TERRSA Hall)					
6:00pm - 8:30pm	Banquet (Hotel Granvia Kyoto 3F Genji Ballroom)					

October 6, Thursday						
	TERRSA Hall at 1F	Seminar room 2&3 at 2F	Conference room (Middle) at 2F	Seminar room 1 at 2F	Conference room B&C at 3F	Conference room D at 3F
10:00am - 11:20am	3-A1 Life cycle engineering and management	3-B1 Nutrients, water & ecosystem services in agriculture	3-C1 Environmental accounting and audit	3-D1 Environmental information communication	3-E1 Recycling from waste	3-F1 Energy supply
11:20am - 11:40am	Break (20 min)					
11:40am - 1:00pm		3-B2 Promoting transdisciplinary science toward sustainable use of biodiversity and ecosystem services	3-C2 Scope 3 and green value chain	3-D2 Hotspots analysis	3-E2 Modeling of recycling	3-F2 Energy demand
1:00pm - 2:00pm	Lunch (60 min)					
2:00pm - 3:20pm		3-B3 Promoting transdisciplinary science toward sustainable use of biodiversity and ecosystem services	3-C3 Organizational LCA	3-D3 Hotspots analysis	3-E3 Waste treatment and recycling	3-F3 Future prospects of energy
3:20pm - 3:40pm	Break (20 min)					
3:40pm - 5:40pm	Closing and networking drinks (TERRSA Hall)					

October 7, Friday						
Conference room 2 at 3F						
9:00am - 4:00pm	Side event 5: Expert Workshop "Contributions of Life Cycle Thinking to Sustainable Development Pathways – and the Role of Global LCA Data Access Network" Banquet (Granvia Hotel Kyoto)					



Program at a Glance

2016/10/4 (Tue.)						
Room A: TERRSA Hall at 1F		Room B: Seminar room 2&3 at 2F		Room C: Conference room (Middle) at 2F		
9:30am - 12:30pm	1-A0 Opening and plenary (TERRSA Hall) Keynote 1 To what extent is corporate sustainability important for institutional investors? Colin Melvin, Hermes Investment Management, United Kingdom Keynote 2 Management information disclosure and engagement with investors towards ESG investments Satoshi Ando, OMRON Corporation, Japan Keynote 3 Life cycle in support of 2 degrees Edgar Hertwich, Yale University, United States of America					
	12:30pm - 1:30pm Lunch (60 min)					
1:30pm - 2:50pm	1-A1 Smart tools and robust data to implement standards for sustainable success *With simultaneous translation (English - Japanese)		1-B1 Environmental policy		1-C1 Sustainable living and lifestyles	
	Chair	Martin Baitz, thinkstep AG, Germany	Chair	Li-Hsing Shih, National Cheng Kung University, Taiwan, Republic of China	Chair	Atsushi Inaba, Kogakuin University, Japan
	Chair	Yasunari Matsuno, Chiba University, Japan	Chair	Hyung Chul Kim, Ford Motor Company, United States of America	Chair	Marc-Andree Wolf, maki Consulting GmbH, Germany
	1-A1-1	1:30pm-11:50pm	1-B1-1	1:30pm-11:50pm	1-C1-3	1:30pm-11:50pm
	Smart tools and robust data to implement standards for sustainable success Martin Baitz thinkstep AG		Life cycle based CO2 emission credits: options for buffering unintended consequences of current tailpipe emissions regulation in the automotive industry Annkatrin Lehmann Technische Universität Berlin		Addressing housing deficit in the developing world Felipe Vasquez Norwegian University of Science and Technology	
	1-A1-2	1:50pm-2:10pm	1-B1-2	1:50pm-2:10pm	1-C1-1	1:50pm-2:10pm
	New practices, from Life Cycle Thinking to Shared Value Creation Stéphane MOREL RENAULT		Comparative study to investigate the relation between Environmental Policy mechanism and Innovation in recycling of End-of-life (ELV): Case study of ELV technologies in Japan and EU Rajeev Kumar Singh University of Tsukuba		Effects of lifestyle and household expenditure on household waste generation Yasuhiro MATSUI Okayama University	
	1-A1-3	2:10pm-2:30pm	1-B1-3	2:10pm-2:30pm	1-C1-2	2:10pm-2:30pm
	SUSTAINABILITY AT TEIJIN: CUSTOMER BENEFIT MODEL AND CASE STUDY TIRES Heidi Beers Teijin Aramid		Modeling and scenarios analysis of waste collection and transportation in Danang city, Vietnam. Yasuhiro MATSUI Okayama University		Sustainable Lifestyles and Stakeholder Engagement: How the twain shall meet Sanjeevan Bajaj FICCI Quality Forum	
	1-A1-4	2:30pm-2:50pm	1-B1-4	2:30pm-2:50pm	1-C1-4	2:30pm-2:50pm
Embedding product sustainability in business strategy using life cycle assessment approach Uday Gupta Mahindra Sanyo Special Steel Pvt Limited		Feasibility analysis of Large Scale Solar PV with Feed in Tariff Policy in Malaysia. Maryam Huda Ahmad Phesal University of Tsukuba		The Economic and Environmental Effects of Consumption by East-Asian Tourists in Kyoto: a Multi-regional Waste Input-Output Approach Makiko Tsukui Tokyo International University		
2:50pm - 3:10pm	Break (20 min)					
3:10pm - 4:30pm	1-A2 Stakeholder reflection on implementation of Life-Cycle aspects (from Thinking over Assessment to Management) *With simultaneous translation (English - Japanese)		1-B2 Extending global life cycle community for sustainability		1-C2 Water footprint	
	Chair	Martin Baitz, thinkstep AG, Germany	Chair	Masahiko Hirao, The University of Tokyo, Japan	Chair	Anne-Marie Boulay, CIRAI - Ecole Polytechnique, Canada
	Chair	James Archie Fava, thinkstep, United States of America	Chair	Martina B. Prox, ifu Hamburg GmbH, Germany	Chair	Kevin Harding, University of the Witwatersrand, Johannesburg, South Africa
	1-A2-1	3:10pm-3:30pm	1-B2-1	3:10pm-3:30pm	1-C2-1	3:10pm-3:30pm
	Informed design and procurement decisions with whole building LCA Darryl Stuckey Lendlease corporation		Corporate Sustainability Performance Measurement taking more and more a Life Cycle Perspective Martina B. Prox ifu Hamburg GmbH		Production-based water footprints of power generation in Mongolia Tomohiro Okadera National Institute for Environmental Studies	
	3:30pm-4:30pm		1-B2-2	3:30pm-3:50pm	1-C2-2	3:30pm-3:50pm
	Moderated discussion		Communication And Collaboration As Essential Elements For Accelerating The Uptake Of Life Cycle Information Guido Sonnemann University of Bordeaux		Freshwater thermal pollution from the power sector: global regionalized and traded impacts Christopher Oberschelp ETH Zurich	
		1-B2-3	3:50pm-4:10pm	1-C2-3	3:50pm-4:10pm	
		Policy Design and Evaluation for Sustainable Consumption and Production Patterns Masahiko Hirao The University of Tokyo		Water Stress Index and Water Scarcity Footprint Application to Land-use Policy for Food and Fuel Crops in Thailand Thapat Silalertruksa The Joint Graduate School of Energy and Environment, King Mongkut University of Technology Thonburi		



Program at a Glance

2016/10/4 (Tue.)						
Room D: AV Study room at 2F		Room E: Conference room B&C at 3F		Room F: Conference room D at 3F		
Lunch (60 min)						
1-D1 Supply chain and sustainability assessment		1-E1 Resource supply security		1-F1 Local environmental risk and potential		
Chair	Shigemi Kagawa, Kyushu University, Japan	Chair	Komal Habib, University of Waterloo, Canada	Chair	Erik O Ahlgren, Chalmers University of Technology, Sweden	
Chair	Junbeum Kim, University of Technology of Troyes, France	Chair	Kazuyo Matsubae, Tohoku University, Japan	Chair	Yasunori Kikuchi, The University of Tokyo, Japan	
1-D1-1	1:30pm-11:50pm Multi-Optimization of Thai Economy Based on Environmentally Extended Input-Output Model Viganda Varabuntoonvit Kasetsart University	1-E1-1	1:30pm-11:50pm Learning Criticality from Past Experiences Hiroki Hatayama National Institute of Advanced Industrial Science and Technology (AIST)	1-F1-1	1:30pm-11:50pm Evaluation of the Carbon emission reduction potential of China's Iron and Steel Sector by simulation analysis: Case Study in the Beijing-Tianjin-Hebei metropolitan region Zhaoling Li University of Tsukuba	
1-D1-2	1:50pm-2:10pm Vulnerability assessment of supply chains using the life cycle inventory database Jun Nakatani The University of Tokyo	1-E1-2	1:50pm-2:10pm Geopolitical-related supply risk assessment in the framework of Life Cycle Sustainability Assessment: the case of electric vehicles with a comparison to environmental impacts Guido Sonnemann University of Bordeaux	1-F1-2	1:50pm-2:10pm Quantification of the In-use Carbon Retention in the Society Hajime Ohno Tohoku University	
1-D1-3	2:10pm-2:30pm Environmental impacts of high penetration renewable energy scenarios for Europe Edgar Hertwich Yale University	1-E1-3	2:10pm-2:30pm Extending the Geopolitical Supply Risk Indicator: Application of LCSA to the Petrochemical Supply Chain of PAN-based Carbon Fibers Christoph Helbig University of Augsburg	1-F1-3	2:10pm-2:30pm Upcycling and Carbon Footprinting for Creative Waste Management and Greenhouse Gas Reduction RATTANAWAN MUNGKUNG Kasetsart University	
	2:30pm-2:50pm Discussion	1-E1-4	2:30pm-2:50pm Supply risk assessments of low-carbon energy technologies with Hybrid LCA Keisuke Nansai National Institute for Environmental Studies (NIES)	1-F1-4	2:30pm-2:50pm Risk Assessment of Water-Energy-Food Nexus for a Small Island Wei Lin National Taiwan University	
Break (20 min)						
1-D2 Design for sustainability		1-E2 Circular economy		1-F2 Resource efficiency		
Chair	Edgar Hertwich, Yale University, United States of America	Chair	Sonia Valdivia, Peruvian Life Cycle Network - Pontificia Universidad Catolica del Peru, Peru	Chair	Yuh-Ming Lee, National Taipei University, Taiwan, Republic of China	
Chair	Katsuhito Nakazawa, Fujitsu Laboratories Ltd., Japan	Chair	Yoshikazu Shinohara, National Institute for Materials Science, Japan	Chair	Yosuke Shigetomi, Nagasaki University, Japan	
1-D2-1	3:10pm-3:30pm Persuasive system design strategy and useful gamification elements for energy-saving behavior Li-Hsing Shih National Cheng Kung University	1-E2-1	3:10pm-3:30pm Traceability schemes for secondary metals from developing countries: ISO Guidance Principles Sonia Valdivia Peruvian Life Cycle Network - Pontificia Universidad Catolica del Peru	1-F2-1	3:10pm-3:30pm Framework for analysing resource-efficient and effective solutions Siri Ester Matilda Willskytt Chalmers University of Technology	
1-D2-2	3:30pm-3:50pm Functionality-wise evaluation method based on MIPS: A case study on frame structures Satoshi Ota University of Tokyo	1-E2-2	3:30pm-3:50pm A calculation of metal consumption toward 2100 Kohmei HALADA National Institute for Materials Science	1-F2-2	3:30pm-3:50pm What makes solutions within the manufacturing industry resource efficient and effective? Daniel Böckin Chalmers University of Technology	
1-D2-3	3:50pm-4:10pm EVALUATION METHOD OF FUNCTION AND FUNCTIONALITY-WISE QUANTITY PERFORMED BY MATERIALS THOROUGH THEIR LIFE CYCLE Daisuke Matsui THE UNIVERSITY OF TOKYO	1-E2-3	3:50pm-4:10pm Joining the loop: the mining industry's contribution to the circular economy Glen David Corder University of Queensland	1-F2-3	3:50pm-4:10pm Development of an indicator set for measuring resource efficiency on micro-level via life cycle assessment Nils Thonemann University of Göttingen	



Program at a Glance

			4:10pm-4:30pm	Panel discussion		4:10pm-4:30pm	Discussion
4:30pm - 4:50pm	Break (20 min)						
4:50pm - 6:10pm	1-A3 Data and software		1-B3 Circulation, regeneration and mitigation		1-C3 Biodiversity and ecosystems		
	Chair	Guido Sonnemann, University of Bordeaux, France	Chair	Gang Liu, University of Southern Denmark, Denmark	Chair	Taku Kadoya, National Institute for Environmental Studies, Japan	
	Chair	Yasushi Furushima, Mizuho Information & Research Institute, Inc., Japan	Chair	Tsuyoshi Fujita, National Institute for Environmental Studies, Japan	Chair	Trakarn Prapasongsa, Mahidol University, Thailand	
	1-A3-1	4:50pm-5:10pm	1-B3-1	4:50pm-5:10pm	1-C3-1	4:50pm-5:10pm	
	Towards consistent allocation procedures for co-production and recycling in LCA standards and guidelines Dieuwertje Louise Schrijvers University of Bordeaux		Development of infrastructure for reuse and remanufacturing Carl Johan Dalhammar Lund University		Impacts of hydropower production on biodiversity: overview and the way forward Francesca Verones NTNU		
1-A3-2	5:10pm-5:30pm	1-B3-2	5:10pm-5:30pm	1-C3-2	5:10pm-5:30pm		
Data-driven approach for sustainability science – Open Data, Big data and Sustainability Indicators Approach Vivek Anand Asokan The University of Tokyo		Refurbishing the existing building stock - Labour, Investment and other bottlenecks Claudio Nägeli Chalmers University of Technology		Biodiversity as the next strategic target Mark Goedkoop PRé			
1-A3-3	5:30pm-5:50pm	1-B3-3	5:30pm-5:50pm	1-C3-3	5:30pm-5:50pm		
Ocelot: Open source linking software for system models in LCA Chris Mutel Paul Scherrer Institute		Evaluation of the urban regeneration strategies considering the future life style changes in building sector Miho Kamei The University of Tokyo		Valuation of Thailand's Ecosystem Productivity Piyanon Kaenchan King Mongkut's University of Technology Thonburi			
1-A3-4	5:50pm-6:10pm	1-B3-4	5:50pm-6:10pm	1-C3-4	5:50pm-6:10pm		
inventories.io: A new format and network for inventory data Chris Mutel Paul Scherrer Institute		Mitigation Potentials in the Chinese Commercial Sector at Provincial Level up to 2030 Rui Xing National Institute for Environmental Studies, Japan		Participative valuation of ecosystem services of aquatic ecosystems – 6 case study area across Europe Philippe Ange Ker Rault Alterra WUR			
6:10pm - 6:30pm	Break (20 min)						
6:30pm - 8:00pm	Chair	Shogo Eguchi, Kyushu University, Japan					
	1-A4	6:30pm-8:00pm		Young researchers meeting Flash session with Int. J. LCA award by Springer			

2016/10/5 (Wed.)							
Room A: TERRSA Hall at 1F			Room B: Seminar room 2&3 at 2F			Room C: Conference room (Middle) at 2F	
9:00am - 10:20am	2-A1 Status of Asian LCI databases and movements toward global interoperability *With simultaneous translation (English - Japanese)		2-B1 Consensus building in life cycle impact assessment: experiences, achievements and challenges			2-C1 Manufacturing	
	Chair	Kiyotaka Tahara, National Institute of Advanced Industrial Science and Technology (AIST), Japan	Chair	Rolf Frischknecht, treeze Ltd., Switzerland	Chair	Yasushi Umeda, the University of Tokyo, Japan	
	Chair	Koichi Shobatake, TCO2 Co. Ltd., Japan	Chair	Llorenç Mila i Canals, UNEP, France	Chair	Sangwon Suh, University of California Santa Barbara, United States of America	
	2-A1-1	9:00am-9:15am	2-B1-1	9:00am-9:20am	2-C1-1	9:00am-9:20am	
	Toward the interoperability of global LCI databases Mark, Goedkoop PRé		The UNEP SETAC Life Cycle Initiative flagship project on Global guidance on environmental life cycle impact assessment indicators Rolf Frischknecht treeze Ltd.			Proposal of methodological extension of LCA to assess future technologies considering scale effect Kotaro Kawajiri AIST	
2-A1-2	9:15am-9:25am	2-B1-2	9:20am-9:40am	2-C1-2	9:20am-9:40am		
National LCI Development and applications Tassaneewan, Chom-In National Metal and Materials Technology Center		Improving global warming impact assessment in LCA: Results from a consensus finding workshop Katsumasa Tanaka National Institute for Environmental Studies (NIES)			Linear Physical Programming Approach for an Advanced-Repair-To-Order-Disassembly-To-Order System in Multiple Periods Aya Ishigaki Tokyo University of Science		
2-A1-3	9:25am-9:35am	2-B1-3	9:40am-10:00am	2-C1-3	9:40am-10:00am		
Current development of National LCI DB in Korea Jangyul, Cho Korea Environmental Industry & Technology Institute		Health effects from indoor and outdoor exposure to fine particulate matter in life cycle impact assessment Bruce Vigon SETAC			A comprehensive analysis in sustainable manufacturing of natural rubber: The case of a Sri Lankan crepe rubber processing mill Pasan T Dunuwila Toyohashi University of Technology		



Program at a Glance

1-D2-4	4:10pm-4:30pm	1-E2-4	4:10pm-4:30pm	1-F2-4	4:10pm-4:30pm
Integration of consumer satisfaction in assessing environmental impact: case of e-book reader Eri Amasawa The University of Tokyo		Resilience in Material Supply Chains, With a Case Study from the 2010 Rare Earth Crisis Benjamin Sprecher Yale University		Kanban control mechanism for manufacturing/remanufacturing systems with stochastic returns Aya Ishigaki Tokyo University of Science	
Break (20 min)					
1-D3 Consumer behavior		1-E3 Metal and mineral resources		1-F3 Estimating national eco-efficiency: what approaches can we take?	
Chair	Sanjeevan Bajaj, FICCI Quality Forum, India	Chair	Eiji Yamasue, Ritsumeikan University, Japan	Chair	Seiji Hashimoto, Ritsumeikan University, Japan
Chair	Kiyo Kurisu, The University of Tokyo, Japan	Chair	Alicia Gauffin, KTH, Sweden	Chair	Ester van der Voet, Leiden University, Netherlands, The
1-D3-1	4:50pm-5:10pm	1-E3-1	4:50pm-5:10pm	1-F3-1	4:50pm-5:10pm
Consumers' acceptance of smart homes with new advanced technologies: Applying a social-psychological approach Ayu Washizu Waseda University		A detailed assessment of indium supply potential from primary production Timothy Tyson Werner Monash University		Resource Efficiency and Circular Economy: How to evaluate progress towards a more sustainable society? Ester van der Voet Leiden University	
1-D3-2	5:10pm-5:30pm	1-E3-2	5:10pm-5:30pm	1-F3-2	5:10pm-5:30pm
Analysis on Factors Affecting Consumer Evaluation of Life Cycle Environmental Information of Food Products Naoki Yoshikawa Ritsumeikan University		Enhancing Resource Efficiency of Metal Working Processes: What Does LCA Tell Us? Liselotte Schebek Technische Universität Darmstadt		Developing methodology to evaluate decoupling economic growth from environmental impacts of resources and materials use in Japan – preliminary comparison Chika Aoki-Suzuki Institute for Global Environmental Strategies / Graduate School of Science and Engineering Ritsumeikan University	
1-D3-3	5:30pm-5:50pm	1-E3-3	5:30pm-5:50pm	1-F3-3	5:30pm-5:50pm
Promotion of environmental conscious consumption based on the understanding of people's heuristics Dai Kimura Chiba Institute of Technology		Impact assessment of primary mineral resources: the role of borrowing and dissipative resource use Rolf Frischknecht treeze Ltd.		Environmental impacts of resources and materials use: A Case Study of biomass including time-series and decomposition analysis Sebastien Michaël René Dente Ritsumeikan University	
1-D3-4	5:50pm-6:10pm	1-E3-4	5:50pm-6:10pm	1-F3-4	5:50pm-6:10pm
Promoting Pro-Environmental Behaviors: how different they are performed? –A comparison of 3 cities; Bangkok, Tokyo and Seoul Sarunnoud Phuphisith The University of Tokyo		Calculation of Characterization Factors of Mineral Resource Consumption Considering Future Supply and Demand Changes -A Comparison between Iron and Copper- Ryosuke Yokoi the University of Tokyo		Reviewing LCA Database for Metallic Materials Production Shinsuke Murakami the University of Tokyo	
Break (20 min)					

2016/10/5 (Wed.)					
Room D: AV Study room at 2F		Room E: Conference room B&C at 3F		Room F: Conference room D at 3F	
2-D1 Green ICT		2-E1 Stock and flow assessment		2-F1 Cost effectiveness in environmental management	
Chair	Yoshinori Kobayashi, Toshiba Corporation, Japan	Chair	Yasunari Matsuno, Chiba University, Japan	Chair	Aiichiro Kashiwagi, OSAKA GAS CO., LTD., Japan
Chair	Steven Robert McGreevy, Research Institute for Humanity and Nature, Japan	Chair	Glen David Corder, University of Queensland, Australia	Chair	Wichai Chattinnawat, Chiang Mai University, Thailand
2-D1-1	9:00am-9:20am	2-E1-1	9:00am-9:20am	2-F1-1	9:00am-9:20am
Environmental burdens of data centres – not only the use stage matters Kirana Wolf maki Consulting GmbH		Observation from Heaven - the Use of Nighttime Light Feng Chi Hsu University of Colorado at Boulder		Comparison of case studies on cost-benefit analysis of green roof Tomohiko Ihara The University of Tokyo	
2-D1-2	9:20am-9:40am	2-E1-2	9:20am-9:40am	2-F1-2	9:20am-9:40am
Estimating the Environmental Impact of ICT Services on the basis of Published Data Tomomi Nagao NTT		Study of Anthropogenic Disturbance with Geomorphologic Change Keisuke Yoshida Nagoya University		Cost and environmental optimization of by-product supply chains using CLCA Ernst Johannes Prosmann Aalborg University	
2-D1-3	9:40am-10:00am	2-E1-3	9:40am-10:00am	2-F1-3	9:40am-10:00am
Environmental Assessment of ICT options within local authorities Petra Hutner University of Augsburg		The steel scrap reserves and losses per industrial sector in United States Alicia Gauffin KTH		Sustainability of Energy Efficiency Investment to Local Manufacturing Jun-Ki Choi University of Dayton	



Program at a Glance

	<p>2-A1-4 9:35am-10:10am Current status of inventory databases in Japan -Internationalization of IDEA and progress of JLCA database- Kiyotaka, Tahara National Institute of Advanced Industrial Science and Technology (AIST)</p> <p>Discussion 10:10am-10:20am</p>	<p>2-B1-4 10:00am-10:20am Global guidance on land use impacts on biodiversity indicators in LCA Llorenç Mila i Canals UNEP</p>	<p>2-C1-4 10:00am-10:20am Scenario Analysis for Technology Choices in Woody Biomass Energy Businesses Yusuke Kishita The University of Tokyo</p>
10:20am - 10:40am	Break (20 min)		
10:40am - 12:20pm	<p>2-A2 Keynote panel discussion: Sustainable value chain and corporate values *With simultaneous translation (English - Japanese)</p> <p>Chair: Michiyo Morisawa, CDP, Japan</p>	<p>2-B2 Consensus building in life cycle impact assessment: experiences, achievements and challenges</p> <p>Chair: Llorenç Mila i Canals, UNEP, France Chair: Rolf Frischknecht, treeze Ltd., Switzerland</p>	<p>2-C2 Industrial symbiosis</p> <p>Chair: Hiroki Tanikawa, Nagoya University, Japan Chair: Carl Johan Dalhammar, Lund University, Sweden</p>
	<p>Sharing the latest topics on sustainable value chain and corporate values and discussion.</p> <p>[Lecturers on the latest topics] Big change in global responsible investment; From asset owner's point of view Etsuya Hirose (QUICK Corporation, Japan)</p> <p>ISO20400: a new international standard of "Sustainable Procurement" Hidemi Tomita (LRQA Japan)</p> <p>[Panelists] Colin Melvin (Hermes Investment Management, UK) Satoshi Ando (OMRON Corporation, Japan) Hidemi Tomita (LRQA Japan) Etsuya Hirose (QUICK Corporation, Japan)</p> <p>[Moderator] Michiyo Morisawa (CDP, Japan)</p>	<p>2-B2-1 10:40am-11:00am The WULCA consensus for water scarcity footprints: Assessing impacts of water consumption based on human and ecosystem demands Anne-Marie Boulay CIRAIG - Ecole Polytechnique</p> <p>2-B2-2 11:00am-11:20am Development of a consensus-based characterization model of water scarcity impact on human health Masaharu Motoshita National Institute of Advanced Industrial Science and Technology</p> <p>2-B2-3 11:20am-11:40am Mainstreaming life cycle thinking through a consistent approach to footprints Rolf Frischknecht treeze Ltd.</p> <p>2-B2-4 11:40am-12:00pm Reaching consensus on cross-cutting issues in life cycle impact assessment (LCIA) Francesca Verones NTNU</p> <p>2-B2-5 12:00pm-12:20pm Development of LIME3 -a global scale environmental life cycle impact assessment method- Norihiro Itsubo Tokyo city university</p>	<p>2-C2-1 10:40am-11:00am Regional Planning and Evaluation System for Industrial and Urban Symbiosis considering Land Use Changes Yi Dou National Institute for Environmental Studies</p> <p>2-C2-2 11:00am-11:20am Evaluation and Allocation of Greenhouse gas (GHG) emission reductions of industrial symbiosis (IS) networks using life cycle approaches Hung-Suck Park Univeristy of Ulsan</p> <p>2-C2-3 11:20am-11:40am Indicator assessment (co-benefits) for low-carbon pathways in European cities Clara Camarasa Chalmers University of Technology</p> <p>2-C2-4 11:40am-12:00pm Causal Mechanism of Infrastructures Construction for Smart Industrial Park Promotion Zhao wen Liu Chongqing University</p> <p>2-C2-5 12:00pm-12:20pm The Carbon Partnership Performance in Construction industry (case study on POSCO E&C case) Minjin Ha SMaRT ECO Corporation</p>
	Lunch (60 min)		
	<p>2-A3 Sustainability performance and investment</p> <p>Chair: Michiyasu Nakajima, Kansai University, Japan Chair: Andreas Möller, Leuphana University Lueneburg, Germany</p>	<p>2-B3 Sustainable cities and communities</p> <p>Chair: Hung-Suck Park, Univeristy of Ulsan, Korea, Republic of (South Korea) Chair: Yutaka Genchi, National Institute of Advanced Industrial Science and Technology, Japan</p>	<p>2-C3 Social and sustainability assessment</p> <p>Chair: Jun Nakatani, The University of Tokyo, Japan Chair: Mark Goedkoop, PRé, Netherlands, The</p>
	<p>2-A3-1 1:20pm-1:40pm Information Disclosure on Sustainability Performance to Corporate Stakeholders Bernd Wagner University of Augsburg</p> <p>2-A3-2 1:40pm-2:00pm New Corporate Information on Sustainability Performance, especially on Natural Capital Accounting in Japanese Companies Shoji Oka Kansai University</p> <p>2-A3-3 2:00pm-2:20pm The Development of Corporate Performance Information on Sustainability: Practice in Japanese Company Asako Kimura Kansai University</p>	<p>2-B3-1 1:20pm-1:40pm Energy autarky and civic activism: LCA results as decision support Roberta Stefanie Graf Fraunhofer IBP</p> <p>2-B3-2 1:40pm-2:00pm A Conceptual Design of Incentive System for E-waste Collection in Emerging Countries Jessica Hanafi Universitas Pelita Harapan</p> <p>2-B3-3 2:00pm-2:20pm Electronic and electric equipment waste separation in Thailand: A Life cycle assessment of a community's activities. Pornnapa Sutawong Naresuan University</p>	<p>2-C3-1 1:20pm-1:40pm A Stepwise Method for Life Cycle Sustainability Assessment Liang Dong Leiden University</p> <p>2-C3-2 1:40pm-2:00pm Social Life Cycle Impact Assessment of Desktops Considering the Use Phase Winco K C Yung Hong Kong Polytechnic University</p> <p>2-C3-3 2:00pm-2:20pm The sustainability assessment of biodiesel for Japanese local governments Renzhuo Wang Waseda University</p>



Program at a Glance

2-D1-4 Method for assessing environmental rebound effects caused by ICT use Xiaoxi Zhang NTT	10:00am-10:20am	2-E1-4 Assessment of Secondary Aluminum Reserves in Major Countries Kyaw Nyunt Maung Ritsumeikan University	10:00am-10:20am	2-F1-4 Energy Auditing in the Asian Context: Impediments of Knowledge Externalities Harald Ernst Otto Polytechnic University of Marche	10:00am-10:20am
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Break (20 min)

2-D2 Sustainable agricultural production		2-E2 Material flow analysis for base metals		2-F2 Bio-materials and bio-energy	
Chair	Naoki Yoshikawa, Ritsumeikan University, Japan	Chair	Ichiro Daigo, The University of Tokyo, Japan	Chair	Yasuhiro Fukushima, Tohoku University, Japan
Chair	Rattanawan Mungkung, Kasetsart University, Thailand	Chair	Artem Golev, The University of Queensland, Australia	Chair	Venkata Krishna Kumar Upadhyayula, Umea University, Sweden
2-D2-1	10:40am-11:00am Life Cycle Assessment of Oil Palm Nurseries and Plantations at Site-Specific Conditions: Case Studies from Indonesia Vita Dhian Lelyana Indonesian Oil Palm Research Institute	2-E2-1	10:40am-11:00am The mechanics of material flow represented by dynamic WIO Shinichiro Nakamura Waseda university	2-F2-1	10:40am-11:00am CO2 Emission of "Bio-based PET" Toshiro SEMBA Iida Women's Junior College
2-D2-2	11:00am-11:20am Scenario Analysis of Land Use Change and Carbon Flows from Palm Oil Production in Indonesia Liselotte Schebek Technische Universität Darmstadt	2-E2-2	11:00am-11:20am Decoupling Analysis based on "Flow and Stock" Indicators: Methodology and U.S. Aluminum Case Study Gang Liu University of Southern Denmark	2-F2-2	11:00am-11:20am Practical Case Study: Life Cycle Sustainability Assessment of 2nd generation bio-refineries produced fumaric acid for downstream production of bio-plastics Mieke Klein ifu Hamburg GmbH
2-D2-3	11:20am-11:40am The Sustainability of Malaysian Palm Oil - the Biomass Approach as one of its Strategic Drivers Foo Yuen Ng Malaysian Palm Oil Council (MPOC)	2-E2-3	11:20am-11:40am Uncertainty and validation of dynamic MFA model Daryna Panasiuk IRT M2P	2-F2-3	11:20am-11:40am The LCA study of the gas cleaning system using HAS-Clay as an adsorbent for Bio-H2 purification. Shohei Kuroda Tokyo University of Science
2-D2-4	11:40am-12:00pm Life Cycle Assessment of Silica from Sugar Cane Dregs Dust Bambang Mulyana Hermanto Bogor Agricultural University	2-E2-4	11:40am-12:00pm Quality of secondary raw materials as a crucial impediment for establishing circular economic systems Witold-Roger Poganietz Karlsruhe Institute of Technology	2-F2-4	11:40am-12:00pm Reduction GHG Emission from Biodiesel Production Chain through Technologies Implementation Yandra Arkeman Bogor Agricultural University
2-D2-5	12:00pm-12:20pm Does higher crop productivity coincide with increased environmental impacts? Implications of correlated uncertainties in comparative life cycle assessment of rice production systems Kiyotada Hayashi National Agriculture and Food Research Organization	2-E2-5	12:00pm-12:20pm Dynamic Material Flow Analysis of Stainless Steel Yasunari Matsuno Chiba University	2-F2-5	12:00pm-12:20pm Environmental Benefit Assessment on Bioenergy Production in Terms of the Water-Energy-Land Nexus in Taiwan Li-Heng Chen National Taiwan University

Lunch (60 min)

2-D3 Sustainable value chain of agricultural products		2-F3 Critical metals		2-F3 The future of energy-critical minerals	
Chair	Kiyotada Hayashi, National Agriculture and Food Research Organization, Japan	Chair	Witold-Roger Poganietz, Karlsruhe Institute of Technology, Germany	Chair	Benjamin C. McLellan, Kyoto University, Japan
Chair	Liselotte Schebek, Technische Universität Darmstadt, Germany	Chair	Benjamin Sprecher, Yale University, United States of America	Chair	Elsa Margaret Dominish, University of Technology Sydney, Australia
2-D3-1	1:20pm-1:40pm Evaluation of Lifecycle of Packaged Strawberries Considering the Damage Reduction during Simulated Transportation Akihiro Izumi Plastic Waste Management Institute	2-E3-1	1:20pm-1:40pm Informal e-waste recycling and its metal recovery in the Philippines Atsushi Terazono National Institute for Environmental Studies	2-F3-1	1:20pm-1:40pm Critical Metals for 21st Century Energy Technologies: Assessing Global Resources and Grounds for Optimism Timothy Tyson Werner Monash University
2-D3-2	1:40pm-2:00pm Life cycle and land use assessment as a tool for enhancing sustainable agricultural value chains: Case study on major biomass products for food, feed and fuel in Thailand Trakarn Prapasongsa Mahidol University	2-E3-2	1:40pm-2:00pm Exploring urban mining challenges – case of critical resources recovery from WEEE Komal Habib University of Waterloo	2-F3-2	1:40pm-2:00pm Resources requirements for a Hydrogen Economy - Examining Alternatives Benjamin C. McLellan Kyoto University
2-D3-3	2:00pm-2:20pm LCA of Pandan Wangi Rice for Sustainable Food Supply Chain in Indonesia Yandra Arkeman Bogor Agricultural University	2-E3-3	2:00pm-2:20pm Hotspot analysis for global dissipative losses of 25 metals and metalloids Christoph Helbig University of Augsburg	2-F3-3	2:00pm-2:20pm Lithium and the mineral-energy nexus Damien Giurco University of Technology Sydney



Program at a Glance

2-A3-4	2:20pm-2:40pm	2-B3-4	2:20pm-2:40pm	2-C3-4	2:20pm-2:40pm
A proposition of disclosing social responsibility for investors in stock markets: Experimental economics approach KENJU AKAI The University of Tokyo		Policies for increased re-use and recycling in the Swedish plastics value chain Leonidas Milios Lund University		Application of Equator Principle to Social Impact Assessment of Offshore Wind Power Development SHIH JUNG LIAO National Taipei University	
2-A3-5	2:40pm-3:00pm	2-B3-5	2:40pm-3:00pm	2-C3-5	2:40pm-3:00pm
Social Preference and Responsible Investment under Uncertainty Nariaki Nishino The University of Tokyo		Effects of Residential Conditions on Elderly Persons who need Long-term Care in 1,200 Japanese Municipalities Kentaro Suzuki Keio University		Sustainability Assessment of Public Residential Buildings in Hong Kong based on LCSA Yahong Dong Technological and Higher Education Institute of Hong Kong	
3:00pm - 3:10pm	Break (10 min)				
3:10pm - 5:10pm	2-A4 Poster session (TERRSA Hall)				
6:00pm - 8:30pm	Banquet (Hotel Granvia Kyoto 3F Genji Ballroom)				

2016/10/6 (Thu.)						
Room A: TERRSA Hall at 1F		Room B: Seminar room 2&3 at 2F			Room C: Conference room (Middle) at 2F	
3-A1 Life cycle engineering and management		3-B1 Nutrients, water and ecosystem services in agriculture			3-C1 Environmental accounting and audit	
Chair	Rajesh Kumar Singh, thinkstep India, India	Chair	Masanori Saito, Tohoku University, Japan		Chair	Asako Kimura, Kansai University, Japan
Chair	Ryo Yokoyama, TDK Corporation, Japan	Chair	Yandra Arkeman, Bogor Agricultural University, Indonesia		Chair	Bernd Wagner, University of Augsburg, Germany
3-A1-1	10:00am-10:20am	3-B1-1	10:00am-10:20am	3-C1-1	10:00am-10:20am	
Identifying innovation opportunities with LCA Mark Goedkoop PRé		Projection of global nitrogen footprints under the future condition of food production and consumption Takuma Takiuchi The university of Tokyo		The Environmental Costs Analysis of Cement Industry in Thailand TASSANEewan CHOM-IN National Metal and Materials Technology Center		
3-A1-2	10:20am-10:40am	3-B1-2	10:20am-10:40am	3-C1-2	10:20am-10:40am	
Diffusion of Environmental Innovations in Developing Countries: Analysis of the Impact of FDI, R&D and Geographical Proximity Helmut Yabar University of Tsukuba		Scenarios of Global Phosphorus Flows from Agriculture and Domestic Wastewater Cherry Myo Lwin Ritsumeikan Global Innovation Research Organization (R-GIRO)		Sustainable Design Methodology of Integrated Quality Inspection for Multi-Echelon Supply Chain Under Material Flow Cost Accounting WICHAI CHATTINNAWAT Chiang Mai University		
3-A1-3	10:40am-11:00am	3-B1-3	10:40am-11:00am	3-C1-3	10:40am-11:00am	
Challenges for Knowledge Engineering in Environmental Life Cycle Assessment Caroline SABLAYROLLES University of Toulouse (France)		Assessing Water Scarcity in Malaysia: A Case Study of Rice Production Marlia Mohd Hanafiah Universiti Kebangsaan Malaysia		Material Flow Cost Accounting as a Decision Support Instrument Martina B. Prox ifu Hamburg GmbH		
3-A1-4	11:00am-11:20am	3-B1-4	11:00am-11:20am	3-C1-4	11:00am-11:20am	
Disruptive Technologies: Surviving Technology Valley of Death with Improved Sustainable Performance (Case Studies from Nano and Biotech Industry) Venkata Krishna Kumar Upadhyayula Umea University		A framework to incorporate experimental data into life cycle impact assessment on ecosystem services in agroecosystems Wirong Chanthorn Kasetsart University		Energy Auditing in the Asian Context: Neglected Channels of Knowledge Spillovers Harald Ernst Otto Polytechnic University of Marche		
11:20am - 11:40am	Break (20 min)					
		3-B2 Promoting transdisciplinary science toward sustainable use of biodiversity and ecosystem services			3-C2 Scope 3 and green value chain	
		Chair	Keiichiro Kanemoto, Shinshu University, Japan		Chair	Jessica Hanafi, Universitas Pelita Harapan, Indonesia
		Chair	Francesca Veronesi, NTNU, Norway		Chair	Leonora Patricia Güereca, Universidad Nacional Autónoma de México, México
3-B2-1	11:40am-12:00pm	3-C2-1	11:40am-12:00pm	3-C2-1	11:40am-12:00pm	
Introduction to TSUNAGARI: the need to establish transdisciplinary science toward conservation and sustainable use of biodiversity and ecosystem services in Asia Masahiro Nakaoka Hokkaido University		Quantifying scope 3 greenhouse gas emissions of a telecommunication company using CDP information Rolf Frischknecht treeze Ltd.				
3-B2-2	12:00pm-12:20pm	3-C2-2	12:00pm-12:20pm	3-C2-2	12:00pm-12:20pm	
Mapping the Environmental Footprint of Nations Keiichiro Kanemoto Shinshu University		SCOPE3 of Kogakuin University Focusing on Student's Activities Natsumi Inoue Kogakuin University				
11:40am - 1:00pm						



Program at a Glance

2-D3-4	2:20pm-2:40pm	2-E3-4	2:20pm-2:40pm	2-F3-4	2:20pm-2:40pm
Exploring the Potential of Biogas Production in Argentina: Case Study on Livestock Manure and Agricultural Residues Florencia Inés Venier University of Tsukuba		Environmental assessment of rare earth elements recycling: The case of recycling of end-of-life permanent magnets Dionysios Kontoulis KU Leuven		Impact of ore degradation from energy perspective Akiyuki Masuda The University of Tokyo	
Discussion	2:40pm-3:00pm	2-E3-5	2:40pm-3:00pm	2-F3-5	2:40pm-3:00pm
		Avoiding environmental impacts of light rare earth production through NdFeB magnet recycling – a global estimate Rita Schulze Oeko-Institut e.V.		Wealth from Waste: Pathways for Metals in a Circular Economy Damien Giurco University of Technology Sydney	
Break (10 min)					
2-A4 Poster session (TERRSA Hall)					
Banquet (Hotel Granvia Kyoto 3F Genji Ballroom)					

2016/10/6 (Thu.)					
Room D: AV Study room at 2F		Room E: Conference room B&C at 3F		Room F: Conference room D at 3F	
3-D1 Environmental information communication		3-E1 Recycling from waste		3-F1 Energy supply	
Chair	Nariaki Nishino, The University of Tokyo, Japan	Chair	Seung-Jin Lee, University of Michigan-Flint, United States of America	Chair	Ryota Ii, Pacific Consultants Co., Ltd., Japan
Chair	Anne-Marie Tillman, Chalmers University of Technology, Sweden	Chair	Yasuhiro Hirai, Kyoto University, Japan	Chair	Roberta Stefanie Graf, Fraunhofer IBP, Germany
3-D1-1	10:00am-10:20am	3-E1-1	10:00am-10:20am	3-F1-1	10:00am-10:20am
Examine the verification/certification of GHG emissions in a lifecycle approach Masayuki Kanzaki Japan Environmental Management Association for Industry		Changing chlorine metabolism of a nation - case study on chlorine recovery from PVC wastes in Japan Jiaqi Lu Tohoku University		The Climate Impact of Large-Scale Excess Heat Utilization – A Case of Complex System Interactions Erik O Ahlgren Chalmers University of Technology	
3-D1-2	10:20am-10:40am	3-E1-2	10:20am-10:40am	3-F1-2	10:20am-10:40am
A review of food LCA smartphone apps: the challenge of socially embedded information Steven Robert McGreevy Research Institute for Humanity and Nature		Inventory analysis of recycling methods of polyvinyl chloride in building materials Takayuki Isobe Musashino University		Prospective LCA of Emerging Energy Technologies: Case Study of Organic Photovoltaic Solar Cells Guido Sonnemann University of Bordeaux	
3-D1-3	10:40am-11:00am	3-E1-3	10:40am-11:00am	3-F1-3	10:40am-11:00am
SOCIETY READINESS TOWARD MODIFICATION OF MUNICIPAL SOLID WASTE MANAGEMENT SYSTEM INTO SEPARATION-BASED SYSTEM (Study Case: Padang City, Indonesia) Nova Ulhasanah Toyohashi University of Technology		On the recovery and reuse of N-methyl-2-pyrrolidone from waste streams in the production of resins for the microelectronics industry Mariano Javier Savelski Rowan University		Emerging photovoltaic technologies: Life Cycle Assessment of organic photovoltaics and pervoskite solar cells Steffi Weyand Technische Universität Darmstadt	
3-D1-4	11:00am-11:20am	3-E1-4	11:00am-11:20am	3-F1-4	11:00am-11:20am
Environmental evaluation method of packaging considering food loss and consumer behavior Naoki Yokokawa The University of Tokyo		Life Cycle Assessment of Beneficial Use of Calcium Carbide Sludge for Cement Production in China Yu LIU Beijing University of Technology		Life Cycle Inventory Analysis of Intercontinental Transport of Carbon-Free Hydrogen Yuki Kudoh National Institute of Advanced Industrial Science and Technology	
Break (20 min)					
3-D2 Hotspots analysis		3-E2 Modeling of recycling		3-F2 Energy demand	
Chair	Yasushi Kondo, Waseda University, Japan	Chair	Yuichi Moriguchi, The University of Tokyo, Japan	Chair	Yuki Kudoh, National Institute of Advanced Industrial Science and Technology, Japan
Chair	James Archie Fava, thinkstep, United States of America	Chair	Rubén Aldaco, Cantabria University, Spain	Chair	Harald Ernst Otto, Polytechnic University of Marche, Italy
3-D2-1	11:40am-12:00pm	3-E2-1	11:40am-12:00pm	3-F2-1	11:40am-12:00pm
Development of Hotspot Analysis Method using Japanese LCA methods and databases Norihiro Itsubo Tokyo city university		An Element-Based Optimization for Recycling of Waste Glass and Ceramic Materials Ichiro Daigo The University of Tokyo		Life Cycle Assessment of Vehicle Lightweighting: A Comparison of Use-Phase Energy Savings between ICEVs and EVs Hyung Chul Kim Ford Motor Company	
3-D2-2	12:00pm-12:40pm	3-E2-2	12:00pm-12:20pm	3-F2-2	12:00pm-12:20pm
Hotspots Analysis – What do we know and how can it be used to improve sustainability of product systems James Archie Fava thinkstep		Using empirical data in top-down and bottom-up approaches to modelling in-use stocks and flows: A case study of mobile phones in Australia Artem Golev The University of Queensland		Usage-dependent evaluation of electromobility Roberta Stefanie Graf Fraunhofer IBP	



Program at a Glance

		<p>3-B2-3 12:20pm-12:40pm</p> <p>Identifying the Species Threat Hotspots from Global Supply Chains</p> <p>Daniel Moran NTNU</p>	<p>3-C2-3 12:20pm-12:40pm</p> <p>Application of geostatistic and Life Cycle Assessment to map GHG emissions and land-use change risk in cocoa supply chains</p> <p>Giancarlo Raschio German Institute of Food Technologies DIL</p>
		<p>3-B2-4 12:40pm-1:00pm</p> <p>Environmental pressure footprints vs. impact footprints: which is the better proxy?</p> <p>Francesca Verones NTNU</p>	<p>3-C2-4 12:40pm-1:00pm</p> <p>How to interpret and utilize quantified Scope 3 emissions : From Japanese companies' case studies</p> <p>Masahiko SHIBATA Mizuho Information & Research Institute, Inc.</p>
1:00pm - 2:00pm	Lunch (60 min)		
2:00pm - 3:20pm		<p>3-B3</p> <p>Promoting transdisciplinary science toward sustainable use of biodiversity and ecosystem services</p>	<p>3-C3</p> <p>Organizational LCA</p>
		<p>Chair Masahiro Nakaoka, Hokkaido University, Japan</p>	<p>Chair Annekatrin Lehmann, Technische Universität Berlin, Germany</p>
		<p>Chair Daniel Moran, NTNU, Norway</p>	<p>Chair Masahiko Shibata, Mizuho Information & Research Institute, Inc., Japan</p>
		<p>3-B3-1 2:00pm-2:20pm</p> <p>Broad-scale, fine-resolution spatial analyses on biodiversity, functions and human threats in coastal ecosystems: how to link them with global economic analyses?</p> <p>Kenji Sudo Hokkaido university</p>	<p>3-C3-1 2:00pm-2:20pm</p> <p>Organizational LCA: status and results of the road testing phase</p> <p>Annekatrin Lehmann Technische Universität Berlin</p>
		<p>3-B3-2 2:20pm-2:40pm</p> <p>Comparing the life cycle impact of different fishing techniques in Thailand</p> <p>Francesca Verones NTNU</p>	<p>3-C3-2 2:20pm-2:40pm</p> <p>Application of Organizational Life Cycle Assessment to define materiality in environmental initiatives of azbil Group</p> <p>Ayako Nagayama Azbil Corporation</p>
		<p>3-B3-3 2:40pm-3:00pm</p> <p>Challenge to harmonize sustainable fishery with environmental conservation in oligotrophic coastal ecosystems</p> <p>Masakazu Hori Fisheries Research Agency</p>	<p>3-C3-3 2:40pm-3:00pm</p> <p>A Case Study of Organizational Life Cycle Assessment in a University in Indonesia</p> <p>Jessica Hanafi Universitas Pelita Harapan</p>
		<p>3:00pm-3:20pm</p> <p>Discussion</p>	<p>3-C3-4 3:00pm-3:20pm</p> <p>Assessing the depth of impacts in supply chains for sustainability management in organizations</p> <p>Masaharu Motoshita National Institute of Advanced Industrial Science and Technology</p>
3:20pm - 3:40pm	Break (20 min)		
3:40pm - 5:40pm	Closing and networking drinks (TERRSA Hall)		



Program at a Glance

		3-E2-3 The sustainability of regional e-waste management systems: Monitor technology case studies Seung-Jin Lee University of Michigan-Flint	12:20pm-12:40pm	3-F2-3 When to consume electricity? View from cost and carbon emission: case in Germany Jun Kono Chalmers University of Technology	12:20pm-12:40pm
3-D2-3 12:40pm-12:50pm Feasibility of hotspot analysis as a screening method in Eco Mark programme Hirota, Sano Japan Environment Association		3-E2-4 Development of eco-industrial design and evaluation model based on regional temporal and spatial dynamic analysis on material and energy metabolism Liang Dong Leiden University	12:40pm-1:00pm	3-F2-4 Environmental assessment of residential fuel cell in different stages of family life Akito Ozawa National Institute of Advanced Industrial Science and Technology	12:40pm-1:00pm
3-D2-4 12:50pm-1:00pm EcoLeaf programme and the environmental hotspot analysis Masayuki, Kanzaki Japan Environmental Management Association for Industry					

Lunch (60 min)

3-D3 Hotspots analysis		3-E3 Waste treatment and recycling		3-F3 Future prospects of energy	
Chair	Norihiro Itsubo, Tokyo city university, Japan	Chair	Shinsuke Murakami, the University of Tokyo, Japan	Chair	Shinsuke Kondoh, AIST, Japan
Chair	James Archie Fava, thinkstep, United States of America	Chair	Tak Hur, Konkuk University, Korea, Republic of (South Korea)	Chair	Damien Giurco, University of Technology Sydney, Australia
3-D3-1	2:00pm-2:20pm Waste Input-Output (WIO) and Its Application to Hotspots Analysis Yasushi Kondo Waseda University	3-E3-1	2:00pm-2:20pm Life Cycle Assessment of Aluminium Recycling Process: Case of Shredder Cables Guilhem Grimaud MTB Recycling	3-F3-1	2:00pm-2:20pm Life-cycle environmental and resource implications of low-carbon energy technologies Sangwon Suh University of California Santa Barbara
3-D3-2	2:20pm-2:40pm Development of Inventory Database for Hotspot Analysis based on IDEA Kiyotaka Tahara National Institute of Advanced Industrial Science and Technology (AIST)	3-E3-2	2:20pm-2:40pm Development of Eco-design methodology for disposable diapers and their marketing strategy Myeonghwa Kim SMaRTECO	3-F3-2	2:20pm-2:40pm Life Cycle Greenhouse Gas and Water Consumption Potential Assessment Based on Thailand Alternative Energy Development Plan Worayut Saibuatrong Kasetsart University
3-D3-3	2:40pm-3:00pm Case studies of Hotspot analysis using the Environmental Footprint Databases Haruo Suzuki Tokyo City University	3-E3-3	2:40pm-3:00pm Greenhouse gas reduction effects by food loss prevention from business sectors Junya Yano Kyoto University	3-F3-3	2:40pm-3:00pm Simulation-based scenario analysis of regional energy system considering future technology implementation Kotaro Ouchida The University of Tokyo
	3:00pm-3:20pm Discussion		3:00pm-3:20pm Discussion		3:00pm-3:20pm Discussion

Break (20 min)

Closing and networking drinks (TERRSA Hall)



Presentation Lists: Oral Presentations

1-A0: Opening and plenary

Time: Tuesday, 04/Oct/2016: 9:30am - 12:30pm
Location: TERRSA Hall at 1F

1-A0: 1

To what extent is corporate sustainability important for institutional investors?

Colin Melvin

Hermes Investment Management, United Kingdom

1-A0: 2

Management information disclosure and engagement with investors towards ESG investments

Satoshi Ando

OMRON Corporation, Japan

1-A0: 3

Life cycle in support of 2 degrees

Edgar Hertwich

Yale University, United States of America

1-A1: Smart tools and robust data to implement standards for sustainable success

Time: Tuesday, 04/Oct/2016: 1:30pm - 2:50pm
Location: TERRSA Hall at 1F

Session Chair: Martin Baitz, thinkstep AG
Session Chair: Yasunari Matsuno, Chiba University, Japan

1-A1: 1 (1:30pm - 1:50pm)

Smart tools and robust data to implement standards for sustainable success

Martin Baitz, Barbara Nebel, Matthias Nebel, Masahiro Osumi, Harald Florin

thinkstep AG, Germany

1-A1: 2 (1:50pm - 2:10pm)

New practices, from Life Cycle Thinking to Shared Value Creation

Stéphane MOREL¹, Franck AGGERI²

¹RENAULT, Guyancourt, France; ²Mines Paristech, Paris, France

1-A1: 3 (2:10pm - 2:30pm)

SUSTAINABILITY AT TEIJIN: CUSTOMER BENEFIT MODEL AND CASE STUDY TIRES

Heidi Beers¹, Shuichi Osaki², Marjan Kamer¹, Yukako Kurose², Nobuyuki Takakura²

¹Teijin Aramid, The Netherlands; ²Teijin Limited

1-A1: 4 (2:30pm - 2:50pm)

Embedding product sustainability in business strategy using life cycle assessment approach

Uday Gupta¹, Ramchandra Shivram Rane¹, Rajesh Kumar Singh²

¹Mahindra Sanyo Special Steel Pvt Limited, Khopoli, Mumbai, India; ²thinkstep Sustainability Solutions Pvt Limited, Mumbai, India

1-B1: Environmental policy

Time: Tuesday, 04/Oct/2016: 1:30pm - 2:50pm
Location: Seminar room 2&3 at 2F

Session Chair: Li-Hsing Shih, National Cheng Kung University, Taiwan, Republic of China
Session Chair: Hyung Chul Kim, Ford Motor Company, United States of America

1-B1: 1 (1:30pm - 1:50pm)

Life cycle based CO₂ emission credits: options for buffering unintended consequences of current tailpipe emissions regulation in the automotive industry

Annekatriin Lehmann, Markus Berger, Matthias Finkbeiner

Technische Universität Berlin, Germany

1-B1: 2 (1:50pm - 2:10pm)

Comparative study to investigate the relation between Environmental Policy mechanism and Innovation in recycling of End-of-life (ELV): Case study of ELV technologies in Japan and EU

Rajeev Kumar Singh, Helmut Yabar, Takeshi Mizunoya, Yoshiro Higano

University of Tsukuba, Japan

1-B1: 3 (2:10pm - 2:30pm)

Modeling and scenarios analysis of waste collection and transportation in Danang city, Vietnam.

LE Thi Tuong Vi, NGUYEN Hong Dang, Yasuhiro MATSUI

Graduate School of Environmental and Life Science, Okayama University, Japan

1-B1: 4 (2:30pm - 2:50pm)

Feasibility analysis of Large Scale Solar PV with Feed in Tariff Policy in Malaysia.

Maryam Huda Ahmad Phesal, Keichi Okajima

University of Tsukuba, Japan



Presentation Lists: Oral Presentations

1-C1: Sustainable living and lifestyles

Time: Tuesday, 04/Oct/2016: 1:30pm - 2:50pm

Location: Conference room (Middle) at 2F

Session Chair: Atsushi Inaba, Kogakuin University, Japan

Session Chair: Marc-Andree Wolf, maki Consulting GmbH, Germany

1-C1: 1 (1:30pm - 1:50pm)

Effects of lifestyle and household expenditure on household waste generation

Vu Chi Mai TRAN, Yasuhiro MATSUI

Graduate School of Environmental and Life Science, Okayama University, Japan

1-C1: 2 (1:50pm - 2:10pm)

Sustainable Lifestyles and Stakeholder

Engagement: How the twin shall meet

Himanshu Dhundia, Sanjeevan Bajaj

FICCI Quality Forum

1-C1: 3 (2:10pm - 2:30pm)

Addressing housing deficit in the developing world

Felipe Vásquez¹, Yris Olaya Morales², Daniel B. Müller¹

¹Norwegian University of Science and Technology;

²Universidad Nacional de Colombia

1-C1: 4 (2:30pm - 2:50pm)

The Economic and Environmental Effects of Consumption by East-Asian Tourists in Kyoto: a Multi-regional Waste Input-Output Approach

Makiko Tsukui¹, Shigemi Kagawa², Yasushi Kondo³, Ryoji Hasegawa⁴

¹Tokyo International University, Japan; ²Kyushu University, Japan; ³Waseda University, Japan; ⁴Osaka International University, Japan

1-D1: Supply chain and sustainability assessment

Time: Tuesday, 04/Oct/2016: 1:30pm - 2:50pm

Location: AV Study room at 2F

Session Chair: Shigemi Kagawa, Kyushu University, Japan

Session Chair: Junbeum Kim, University of Technology of Troyes, France

1-D1: 1 (1:30pm - 1:50pm)

Multi-Optimization of Thai Economy Based on Environmentally Extended Input-Output Model
Kultida Kunanuntakij¹, Viganda Varabuntoonvit¹, Natanee Vorayos², Chanin Panjapornpon¹, Thumrongrut Mungcharoen³

¹Chemical Engineering Department, Kasetsart University, Thailand; ²Mechanical Engineering Department, ChiangMai University, Thailand;

³Energy and Environment Cluster and Director of Sustainable Environment Program, National Science and Technology Development Agency (NSTDA), Thailand

1-D1: 2 (1:50pm - 2:10pm)

Vulnerability assessment of supply chains using the life cycle inventory database

Jun Nakatani¹, Kiyotaka Tahara², Kenichi Nakajima³, Ichiro Daigo¹, Hideaki Kurishima⁴, Yuki Kudoh², Kazuyo Matsubae⁵, Yasuhiro Fukushima⁵, Tomohiko Ihara¹, Yasunori Kikuchi¹, Asako Nishijima¹, Yuichi Moriguchi¹

¹The University of Tokyo, Japan; ²National Institute of Advanced Industrial Science and Technology, Japan; ³National Institute for Environmental Studies, Japan; ⁴Shibaura Institute of Technology, Japan; ⁵Tohoku University, Japan

1-D1: 3 (2:10pm - 2:30pm)

Environmental impacts of high penetration renewable energy scenarios for Europe
Peter Berrill¹, Anders Arvesen¹, Yvonne Scholz², Hans Christian Gils², Edgar G. Hertwich^{1,3}

¹Industrial Ecology Programme and Department of Energy and Process Engineering, Norwegian University of Science and Technology (NTNU), Sem Sælands vei 7, NTNU, NO-7491 Trondheim, Norway; ²Institute of Engineering Thermodynamics, German Aerospace Center (DLR), Pfaffenwaldring 38-40, D-70569 Stuttgart, Germany; ³Center for Industrial Ecology, School of Forestry & Environmental Studies, Yale University, New Haven, CT 06511, USA

Discussion (2:30pm - 2:50pm)

Tue 4 Oct

Wed 5 Oct

Thu 6 Oct



Presentation Lists: Oral Presentations

1-E1: Resource supply security

Time: Tuesday, 04/Oct/2016: 1:30pm - 2:50pm

Location: Conference room B&C at 3F

Session Chair: Komal Habib, University of Waterloo, Canada

Session Chair: Kazuyo Matsubae, Tohoku University, Japan

1-E1: 1 (1:30pm - 1:50pm)

Learning Criticality from Past Experiences

Hiroki Hatayama, Kiyotaka Tahara

National Institute of Advanced Industrial Science and Technology (AIST), Japan

1-E1: 2 (1:50pm - 2:10pm)

Geopolitical-related supply risk assessment in the framework of Life Cycle Sustainability Assessment: the case of electric vehicles with a comparison to environmental impacts

Eskinder D. Gemechu¹, **Guido Sonnemann¹**, **Steven B. Young²**

¹University of Bordeaux, France; ²University of Waterloo, Canada

1-E1: 3 (2:10pm - 2:30pm)

Extending the Geopolitical Supply Risk Indicator: Application of LCSA to the Petrochemical Supply Chain of PAN-based Carbon Fibers

Christoph Helbig¹, **Eskinder D. Gemechu²**, **Baptiste Pillain²**, **Steven B. Young³**, **Andrea Thorenz¹**, **Axel Tuma¹**, **Guido Sonnemann²**

¹Resource Lab, University of Augsburg, Germany;

²The Life Cycle Group, Institute of Molecular Sciences, Université de Bordeaux, France; ³School of Environment, Enterprise and Development (SEED), University of Waterloo, Canada

1-E1: 4 (2:30pm - 2:50pm)

Supply risk assessments of low-carbon energy technologies with Hybrid LCA

Keisuke Nansai¹, **Sangwon Suh²**, **Kenichi Nakajima¹**, **Shigemi Kagawa³**, **Yasushi Kondo⁴**, **Yosuke Shigetomi⁵**

¹National Institute for Environmental Studies, Japan;

²University of California Santa Barbara, USA; ³Kyushu University, Japan; ⁴Waseda University, Japan;

⁵Nagasaki University, Japan

1-F1: Local environmental risk and potential

Time: Tuesday, 04/Oct/2016: 1:30pm - 2:50pm

Location: Conference room D at 3F

Session Chair: Erik O Ahlgren, Chalmers University of Technology, Sweden

Session Chair: Yasunori Kikuchi, The University of Tokyo, Japan

1-F1: 1 (1:30pm - 1:50pm)

Evaluation of the Carbon emission reduction potential of China's Iron and Steel Sector by simulation analysis: Case Study in the Beijing-Tianjin-Hebei metropolitan region

Zhaoling Li, **Helmut Yabar**, **Yoshiro Higano**

University of Tsukuba, Japan

1-F1: 2 (1:50pm - 2:10pm)

Quantification of the In-use Carbon Retention in the Society

Hajime Ohno¹, **Yasunori Kikuchi²**, **Yasuhiro Fukushima¹**

¹Tohoku University, Japan; ²Tokyo University, Japan;

1-F1: 3 (2:10pm - 2:30pm)

Upcycling and Carbon Footprinting for Creative Waste Management and Greenhouse Gas Reduction

RATTANAWAN MUNGKUNG^{1,2}, **Singh Intrachotoo^{3,4}**, **Kannika Sorakon¹**, **Tananon Nudchanate¹**, **Jomkwan Meemano¹**

¹Centre of Excellence on enVironmental strategy for GREEN business (VGREEN); ²Department of Environmental Technology and Management, Faculty of Environment; ³Creative Center for Eco-Design, Faculty of Architecture, Kasetsart University, Bangkok, Thailand; ⁴Department of Building Innovation, Faculty of Architecture, Kasetsart University, Bangkok, Thailand

1-F1: 4 (2:30pm - 2:50pm)

Risk Assessment of Water-Energy-Food Nexus for a Small Island

Wei Lin, **I-Chun Chen**, **Yi-Shin Wang**, **Hwong-Wen Ma**

National Taiwan University, Taiwan, Republic of China

Tue 4 Oct

Wed 5 Oct

Thu 6 Oct



Presentation Lists: Oral Presentations

1-A2: Stakeholder reflection on implementation of Life-Cycle aspects (from Thinking over Assessment to Management)

Time: Tuesday, 04/Oct/2016: 3:10pm - 4:30pm

Location: TERRSA Hall at 1F

Session Chair: Martin Baitz, thinkstep AG, Germany

Session Chair: James Archie Fava, thinkstep, United States of America

1-A2: 1 (3:10pm - 3:30pm)

Informed design and procurement decisions with whole building LCA

Darryl Stuckey

Lendlease corporation, Australia

3:30pm - 4:30pm

Moderated discussion

1-B2: Extending global life cycle community for sustainability

Time: Tuesday, 04/Oct/2016: 3:10pm - 4:30pm

Location: Seminar room 2&3 at 2F

Session Chair: Masahiko Hirao, The University of Tokyo, Japan

Session Chair: Martina B. Prox, ifu Hamburg GmbH, Germany

1-B2: 1 (3:10pm - 3:30pm)

Corporate Sustainability Performance Measurement taking more and more a Life Cycle Perspective

Martina B. Prox^{1,2}, Guido Sonnemann³, Philip Strothmann¹

¹Forum for Sustainability through Life Cycle

Innovation (FSLCI); ²ifu Hamburg GmbH, Germany;

³University of Bordeaux, ISM, France

1-B2: 2 (3:30pm - 3:50pm)

ation And Collaboration As Essential Elements For Accelerating The Uptake Of Life Cycle Information

Philip Strothmann, Guido Sonnemann, Jim Fava, Martina Prox

FSLCI, Germany

1-B2: 3 (3:50pm - 4:10pm)

Policy Design and Evaluation for Sustainable Consumption and Production Patterns

Masahiko Hirao

The University of Tokyo, Japan

Panel discussion (4:10pm - 4:30pm)

1-C2: Water footprint

Time: Tuesday, 04/Oct/2016: 3:10pm - 4:30pm

Location: Conference room (Middle) at 2F

Session Chair: Anne-Marie Boulay, CIRAI - Ecole Polytechnique, Canada

Session Chair: Kevin Harding, University of the Witwatersrand, Johannesburg, South Africa

1-C2: 1 (3:10pm - 3:30pm)

Production-based water footprints of power generation in Mongolia

Tomohiro Okadera¹, Eerdeni¹, Qinxue Wang¹, Masataka Watanabe²

¹National Institute for Environmental Studies, Japan;

²Chuo University, Japan

1-C2: 2 (3:30pm - 3:50pm)

Freshwater thermal pollution from the power sector: global regionalized and traded impacts

Catherine Elizabeth Raptis, Stephan Pfister, Christopher Oberschelp

ETH Zurich, Switzerland

1-C2: 3 (3:50pm - 4:10pm)

Water Stress Index and Water Scarcity Footprint Application to Land-use Policy for Food and Fuel Crops in Thailand

Thapat Silalertruksa^{1,2}, Shabbir H. Gheewala^{1,2}, Rattanawan Mungkung^{3,4}, Pariyapat Nilsalab^{1,2}, Naruete Lecksiwilai^{1,2}, Wanchat Sawaengsak^{1,2}

¹The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi, 126 Prachauthit, Bangmod, Tungkru, Bangkok 10140, Thailand; ²Center of Excellence on Energy Technology and Environment, PERDO, Bangkok, Thailand; ³Centre of Excellence on environmental strategy for GREEN business (VGREEN), Faculty of Environment, Kasetsart University, Bangkok, Thailand; ⁴Department of Environmental Technology and Management, Faculty of Environment, Kasetsart University, Bangkok, Thailand

Discussion (4:10pm - 4:30pm)

Tue 4 Oct

Wed 5 Oct

Thu 6 Oct



Presentation Lists: Oral Presentations

1-D2: Design for sustainability

Time: Tuesday, 04/Oct/2016: 3:10pm - 4:30pm

Location: AV Study room at 2F

Session Chair: Edgar Hertwich, Yale University, United States of America

Session Chair: Katsuhito Nakazawa, Fujitsu Laboratories Ltd., Japan

1-D2: 1 (3:10pm - 3:30pm)

Persuasive system design strategy and useful gamification elements for energy-saving behavior

Li-Hsing Shih, Yi Cin Jheng

National Cheng Kung University, Taiwan, Republic of China

1-D2: 2 (3:30pm - 3:50pm)

Functionality-wise evaluation method based on MIPS: A case study on frame structures

Satoshi Ota, Ichiro Daigo, Yoshikazu Goto

The University of Tokyo, Japan

1-D2: 3 (3:50pm - 4:10pm)

EVALUATION METHOD OF FUNCTION AND FUNCTIONALITY-WISE QUANTITY PERFORMED BY MATERIALS THOROUGH THEIR LIFE CYCLE

Daisuke Matsui, Ichiro Daigo, Yoshikazu Goto

THE UNIVERSITY OF TOKYO, Japan

1-D2: 4 (4:10pm - 4:30pm)

Integration of consumer satisfaction in assessing environmental impact: case of e-book reader

Eri Amasawa, Tomohiko Ihara, Keisuke Hanaki

The University of Tokyo, Japan

1-E2: Circular economy

Time: Tuesday, 04/Oct/2016: 3:10pm - 4:30pm

Location: Conference room B&C at 3F

Session Chair: Sonia Valdivia, Peruvian Life Cycle Network - Pontificia Universidad Catolica del Peru, Peru

Session Chair: Yoshikazu Shinohara, National Institute for Materials Science, Japan

1-E2: 1 (3:10pm - 3:30pm)

Traceability schemes for secondary metals from developing countries: ISO Guidance Principles

Sonia Valdivia

World Resources Forum, Switzerland

1-E2: 2 (3:30pm - 3:50pm)

A calculation of metal consumption toward 2100

Kohmei HALADA

National Institute for Materials Science, Japan

1-E2: 3 (3:50pm - 4:10pm)

Joining the loop: the mining industry's contribution to the circular economy

Glen David Corder, Artem Golev

University of Queensland, Australia

1-E2: 4 (4:10pm - 4:30pm)

Resilience in Material Supply Chains, With a Case Study from the 2010 Rare Earth Crisis

Benjamin Sprecher^{1,4}, Ichiro Daigo², Shinsuke

Murakami², Rene Kleijn⁴, Matthijs Vos³, Gert Jan Kramer⁴

¹Yale University; ²The University of Tokyo;

³Ruhruniversitat Bochum; ⁴CML (Leiden University, The Netherlands);

1-F2: Resource efficiency

Time: Tuesday, 04/Oct/2016: 3:10pm - 4:30pm

Location: Conference room D at 3F

Session Chair: Yuh-Ming LEE, National Taipei University, Taiwan, Republic of China

Session Chair: Yosuke Shigetomi, Nagasaki University, Japan

1-F2: 1 (3:10pm - 3:30pm)

Framework for analysing resource-efficient and effective solutions

Siri Willskytt, Daniel Böckin, Hampus André, Anne-

Marie Tillman, Maria Ljunggren Söderman

Chalmers University of Technology, Sweden

1-F2: 2 (3:30pm - 3:50pm)

What makes solutions within the manufacturing industry resource efficient and effective?

Daniel Böckin, Siri Willskytt, Hampus André, Anne-

Marie Tillman, Maria Ljunggren Söderman

Chalmers University of Technology, Sweden

1-F2: 3 (3:50pm - 4:10pm)

Development of an indicator set for measuring resource efficiency on micro-level via life cycle assessment

Nils Thonemann

University of Göttingen, Germany



Presentation Lists: Oral Presentations

1-F2: 4 (4:10pm - 4:30pm)

Kanban control mechanism for manufacturing/
remanufacturing systems with stochastic returns
Aya Ishigaki¹, Surendra M. Gupta²

¹Tokyo University of Science, Japan; ²Northeastern
University, USA

1-A3: Data and software

Time: Tuesday, 04/Oct/2016: 4:50pm - 6:10pm

Location: TERRSA Hall at 1F

Session Chair: Yasushi Furushima, Mizuho
Information & Research Institute, Inc., Japan
Session Chair: Guido Sonnemann, University of
Bordeaux, France

1-A3: 1 (4:50pm - 5:10pm)

Towards consistent allocation procedures for co-
production and recycling in LCA standards and
guidelines

**Dieuwertje Schrijvers¹, Philippe Loubet², Guido
Sonnemann¹**

¹University of Bordeaux, France; ²INP Bordeaux,
France

1-A3: 2 (5:10pm - 5:30pm)

Data-driven approach for sustainability science –
Open Data, Big data and Sustainability Indicators
Approach

Vivek Anand Asokan¹, Masaru Yarime^{1,2,3}

¹Graduate Program in Sustainability Science (GPSS),
Graduate School of Frontier Sciences, University
of Tokyo, Japan; ²Science, Technology, and
Innovation Governance (STIG) Program, Graduate
School of Public Policy, University of Tokyo, Japan;
³Department of Science, Technology, Engineering
and Public Policy (STeEP), University College
London, United Kingdom

1-A3: 3 (5:30pm - 5:50pm)

Ocelot: Open source linking software for system
models in LCA

Chris Mutel¹, Gregor Wernet², Guillaume Bourgault²

¹Paul Scherrer Institute, Switzerland; ²ecoinvent
centre, Switzerland

1-A3: 4 (5:50pm - 6:10pm)

inventories.io: A new format and network for
inventory data

Chris Mutel

Paul Scherrer Institute, Switzerland

1-B3: Circulation, regeneration and mitigation

Time: Tuesday, 04/Oct/2016: 4:50pm - 6:10pm

Location: Seminar room 2&3 at 2F

Session Chair: Gang Liu, University of Southern
Denmark, Denmark

Session Chair: Tsuyoshi Fujita, National Institute for
Environmental Studies, Japan

1-B3: 1

Development of infrastructure for reuse and
remanufacturing

Carl Johan Dalhammar, Leonidas Milios
Lund University, Sweden

1-B3: 2

Refurbishing the existing building stock - Labour,
Investment and other bottlenecks

Claudio Nägeli, Clara Camarasa, York Ostermeyer
Chalmers University of Technology, Sweden

1-B3: 3

Evaluation of the urban regeneration strategies
considering the future life style changes in building
sector

Miho Kamei, Keisuke Hanaki, Kiyo Kurisu
The University of Tokyo, Japan

1-B3: 4

Mitigation Potentials in the Chinese Commercial
Sector at Provincial Level up to 2030

**Rui Xing, Tatsuya Hanaoka, Yuko Kanamori,
Toshihiko Masui**

National Institute for Environmental Studies, Japan,
Japan

1-C3: Biodiversity and ecosystems

Time: Tuesday, 04/Oct/2016: 4:50pm - 6:10pm

Location: Conference room (Middle) at 2F

Session Chair: Taku Kadoya, National Institute for
Environmental Studies, Japan

Session Chair: Trakarn Prapaspongsa, Mahidol
University, Thailand

1-C3: 1 (4:50pm - 5:10pm)

Impacts of hydropower production on biodiversity:
overview and the way forward

Francesca Veronesi, Martin Dorber, Erik Olav Gracey
NTNU, Norway

Tue 4 Oct

Wed 5 Oct

Thu 6 Oct



Presentation Lists: Oral Presentations

1-C3: 2 (5:10pm - 5:30pm)

Biodiversity as the next strategic target

Mark Goedkoop

PRé, The Netherlands;

1-C3: 3 (5:30pm - 5:50pm)

Valuation of Thailand's Ecosystem Productivity

Piyanon Kaenchan^{1,2}, Shabbir H. Gheewala^{1,2}, Jeroen Guinée³

¹The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi, Thailand; ²Centre of Excellence on Energy Technology and Environment, PERDO, Bangkok Thailand; ³Institute of Environmental Sciences, Leiden University, the Netherlands

1-C3: 4 (5:50pm - 6:10pm)

Participative valuation of ecosystem services of aquatic ecosystems – 6 case study area across Europe

Philippe Ange Ker Rault

Alterra WUR, The Netherlands;

1-D3: Consumer behavior

Time: Tuesday, 04/Oct/2016: 4:50pm - 6:10pm

Location: AV Study room at 2F

Session Chair: Sanjeevan Bajaj, FICCI Quality Forum, India

Session Chair: Kiyo Kurisu, The University of Tokyo, Japan

1-D3: 1 (4:50pm - 5:10pm)

Consumers' acceptance of smart homes with new advanced technologies: Applying a social-psychological approach

Ayu Washizu¹, Satoshi Nakano²

¹Waseda University, Japan; ²The Japan Institute for Labour Policy and Training, Japan

1-D3: 2 (5:10pm - 5:30pm)

Analysis on Factors Affecting Consumer Evaluation of Life Cycle Environmental Information of Food Products

Naoki Yoshikawa, Koji Amano

Ritsumeikan University, Japan

1-D3: 3 (5:30pm - 5:50pm)

Promotion of environmental conscious consumption based on the understanding of people's heuristics

Dai Kimura, Kiyoshi Shibata

Chiba Institute of Technology, Japan

1-D3: 4 (5:50pm - 6:10pm)

Promoting Pro-Environmental Behaviors: how different they are performed? —A comparison of 3 cities; Bangkok, Tokyo and Seoul

Sarunnoud Phuphisith¹, Kiyo Kurisu², Keisuke Hanaki¹

¹Department of Urban Engineering, Graduate School of Engineering, The University of Tokyo, Tokyo, Japan.; ²Research Center for Advanced Science and Technology, The University of Tokyo, Tokyo, Japan

1-E3: Metal and mineral resources

Time: Tuesday, 04/Oct/2016: 4:50pm - 6:10pm

Location: Conference room B&C at 3F

Session Chair: Eiji Yamasue, Ritsumeikan University, Japan

Session Chair: Alicia Gauffin, KTH, Sweden

1-E3: 1 (4:50pm - 5:10pm)

A detailed assessment of indium supply potential from primary production

Timothy Werner, Gavin Mudd, Andrew Hoadley, Simon Jowitt, Ruth Lane

Monash University, Australia

1-E3: 2 (5:10pm - 5:30pm)

Enhancing Resource Efficiency of Metal Working Processes: What Does LCA Tell Us?

Liselotte Schebek, Alessio Campitelli, Beatrix Becker

Institute IWAR, Chair of Material Flow Management and Resource Economy Technische Universität Darmstadt, Germany

1-E3: 3 (5:30pm - 5:50pm)

Impact assessment of primary mineral resources: the role of borrowing and dissipative resource use

Rolf Frischknecht

treeze Ltd., Switzerland



Presentation Lists: Oral Presentations

1-E3: 4 (5:50pm - 6:10pm)

Calculation of Characterization Factors of Mineral Resource Consumption Considering Future Supply and Demand Changes — A Comparison between Iron and Copper—

Ryosuke Yokoi, Jun Nakatani, Yuichi Moriguchi
the University of Tokyo, Japan

1-F3: Estimating national eco-efficiency: what approaches can we take?

Time: Tuesday, 04/Oct/2016: 4:50pm - 6:10pm

Location: Conference room D at 3F

Session Chair: Seiji Hashimoto, Ritsumeikan University, Japan

Session Chair: Ester van der Voet, Leiden University, The Netherlands

1-F3: 1 (4:50pm - 5:10pm)

Resource Efficiency and Circular Economy: How to evaluate progress towards a more sustainable society?

Ester van der Voet, Lauran van Oers
Leiden University, The Netherlands;

1-F3: 2 (5:10pm - 5:30pm)

Developing methodology to evaluate decoupling economic growth from environmental impacts of resources and materials use in Japan – preliminary comparison

Chika Aoki-Suzuki^{1,2}, Daisuke Tanaka¹, Sébastien M.R. Dente¹, Shinsuke Murakami³, Chihiro Kayo⁴, Seiji Hashimoto¹

¹Graduate School of Science and Engineering Ritsumeikan University; ²Institute for Global Environmental Strategies; ³The University of Tokyo; ⁴University of Agriculture and Technology

1-F3: 3 (5:30pm - 5:50pm)

Environmental impacts of resources and materials use: A Case Study of biomass including time-series and decomposition analysis

Sébastien Michaël René Dente¹, Chihiro Kayo², Chika Aoki-Suzuki¹, Seiji Hashimoto¹

¹Ritsumeikan University, Japan; ²Tokyo University of Agriculture and Technology

1-F3: 4 (5:50pm - 6:10pm)

Reviewing LCA Database for Metallic Materials Production

Shinsuke Murakami¹, Seiji Hashimoto²

¹the University of Tokyo, Japan; ²Ritsumeikan University

1-A4: Young researchers meeting

Time: Tuesday, 04/Oct/2016: 6:30pm - 8:00pm

Location: TERRSA Hall at 1F

Session Chair: Shogo Eguchi, Kyushu University, Japan

1-A4: 1

Publishing in the International Journal of Life Cycle Assessment

Mary Ann Curran

BAMAC, Ltd., United States of America

Flash presentation competition

2-A1: Status of Asian LCI databases and movements toward global interoperability

Time: Wednesday, 05/Oct/2016: 9:00am - 10:20am

Location: TERRSA Hall at 1F

Session Chair: Kiyotaka Tahara, National Institute of Advanced Industrial Science and Technology (AIST), Japan

Session Chair: Koichi Shobatake, TCO₂ Co. Ltd., Japan

2-A1: 1 (9:00am - 9:15am)

Toward the interoperability of global LCI databases

Mark Goedkoop

PRé, The Netherlands;

2-A1: 2 (9:15am - 9:25am)

National LCI Development and applications

TASSANEewan CHOM-IN

National Metal and Materials Technology Center

2-A1: 3 (9:25am - 9:35am)

Current development of National LCI DB in Korea

Jangyul Cho, Nayoung Kim

Korea Environmental Industry & Technology Institute



Presentation Lists: Oral Presentations

2-A1: 4 (9:35am - 10:10am)

Current status of inventory databases in Japan
-Internationalization of IDEA and progress of JLCA database-

Kiyotaka Tahara¹, Koichi Shobatake², Masayuki Kanzaki³

¹National Institute of Advanced Industrial Science and Technology; ²TCO₂ Co. Ltd.; ³Japan Environmental Management Association for Industry

Discussion (10:10am - 10:20a)

2-B1: Consensus building in life cycle impact assessment: experiences, achievements and challenges

Time: Wednesday, 05/Oct/2016: 9:00am - 10:20am

Location: Seminar room 2&3 at 2F

Session Chair: Rolf Frischknecht, treeze Ltd., Switzerland

Session Chair: Llorenç Mila i Canals, UNEP, France

2-B1: 1 (9:00am - 9:20am)

The UNEP SETAC Life Cycle Initiative flagship project on Global guidance on environmental life cycle impact assessment indicators

Rolf Frischknecht¹, Olivier Jolliet²

¹treeze Ltd., Switzerland; ²University of Michigan, USA

2-B1: 2 (9:20am - 9:40am)

Improving global warming impact assessment in LCA: Results from a consensus finding workshop
Katsumasa Tanaka¹, Annie Levasseur², Francesco Cherubini³

¹National Institute for Environmental Studies, Tsukuba, Japan; ²CIRAIG, Polytechnique Montréal, Canada; ³Norwegian University of Science and Technology, Trondheim, Norway

2-B1: 3 (9:40am - 10:00am)

Health effects from indoor and outdoor exposure to fine particulate matter in life cycle impact assessment

Peter Fantke¹, Thomas E. McKone², Olivier Jolliet³, Bruce Vigon⁴

¹Technical University of Denmark (DTU), Denmark; ²University of California, School of Public Health, Berkeley (CA), USA; ³University of Michigan, Department of Environmental Health Sciences, Ann Arbor (MI), USA; ⁴Society of Environmental Toxicology and Chemistry (SETAC), Pensacola (FL), USA

2-B1: 4 (10:00am - 10:20am)

Global guidance on land use impacts on biodiversity indicators in LCA

Llorenç Mila i Canals¹, Assumpció Antón², Christian Bauer³, Camillo de Camillis⁴, Abhishek Chaudhary⁵, Michael Curran⁵, Ruth Freiermuth⁶, Tim Grant⁷, Ottar Michelsen⁸, Serenella Sala⁹, Danielle Maia de Souza¹⁰, Martha Stevenson¹¹, Ricardo F.M. Teixeira¹²

¹UNEP, France; ²IRTA, Spain; ³SIG Combibloc, Germany; ⁴FAO, Italy; ⁵ETH Zurich, Switzerland; ⁶Swiss Federal Office for the Environment, Switzerland; ⁷Life Cycle Strategies Ltd, Australia; ⁸Norwegian University of Science and Technology, Trondheim, Norway; ⁹Institute for Environment and Sustainability, European Commission – Joint Research Centre, Ispra, Italy; ¹⁰Faculty of Agricultural, Life and Environmental Sciences, University of Alberta, Edmonton, Canada; ¹¹WWF US, Washington DC, USA; ¹²Center of Excellence PLECO, Department of Biology, University of Antwerp, Wilrijk, Belgium

2-C1: Manufacturing

Time: Wednesday, 05/Oct/2016: 9:00am - 10:20am

Location: Conference room (Middle) at 2F

Session Chair: Yasushi Umeda, the University of Tokyo, Japan

Session Chair: Sangwon Suh, University of California Santa Barbara, United States of America

2-C1: 1 (9:00am - 9:20am)

Proposal of methodological extension of LCA to assess future technologies considering scale effect

Kotaro Kawajiri, Toshihiko Goto, Yoshihiro Kon, Shunsuke Sakurai, Kenji Hata, Kiyotaka Tahara

National Institute of Advanced Industrial Science and Technology, Japan

2-C1: 2 (9:20am - 9:40am)

Linear Physical Programming Approach for an Advanced-Repair-To-Order-Disassembly-To-Order System in Multiple Periods

Aadit D Joshi¹, Surendra M Gupta¹, Aya Ishigaki², Tetsuo Yamada³

¹Northeastern University, United States of America; ²Tokyo University of Science, Japan; ³The University of Electro-Communications



Presentation Lists: Oral Presentations

2-C1: 3 (9:40am - 10:00am)

A comprehensive analysis in sustainable manufacturing of natural rubber: The case of a Sri Lankan crepe rubber processing mill
Pasan Dunuwila¹, VHL Rodrigo², Naohiro Goto¹
¹Toyohashi University of Technology, Japan; ²Rubber Research Institute of Sri Lanka

2-C1: 4 (10:00am - 10:20am)

Scenario Analysis for Technology Choices in Woody Biomass Energy Businesses
Yusuke Kishita¹, Noriaki Nakatsuka², Tatsuya Kurafuchi², Fumiteru Akamatsu²
¹The University of Tokyo; ²Osaka University

2-D1: Green ICT

Time: Wednesday, 05/Oct/2016: 9:00am - 10:20am
Location: AV Study room at 2F
Session Chair: Yoshinori Kobayashi, Toshiba Corporation, Japan
Session Chair: Steven Robert McGreevy, Research Institute for Humanity and Nature, Japan

2-D1: 1 (9:00am - 9:20am)

Environmental burdens of data centres – not only the use stage matters
Kirana Wolf, Marc-Andree Wolf
maki Consulting GmbH, Germany

2-D1: 2 (9:20am - 9:40am)

Estimating the Environmental Impact of ICT Services on the basis of Published Data
Tomomi Nagao, Minako Hara, Shinsuke Hannoe
NTT, Japan

2-D1: 3 (9:40am - 10:00am)

Environmental Assessment of ICT options within local authorities
Petra Hutner, Axel Tuma
University of Augsburg, Germany

2-D1: 4 (10:00am - 10:20am)

Method for assessing environmental rebound effects caused by ICT use
Xiaoxi Zhang, Minako Hara, Shinsuke Hannoe
NTT, Japan

2-E1: Stock and flow assessment

Time: Wednesday, 05/Oct/2016: 9:00am - 10:20am
Location: Conference room B&C at 3F
Session Chair: Yasunari Matsuno, Chiba University, Japan
Session Chair: Glen David Corder, University of Queensland, Australia

2-E1: 1 (9:00am - 9:20am)

Observation from Heaven-the Use of Nighttime Light
Feng Chi Hsu¹, Kimberly Baugh¹, Mikhail Zhizhin¹, Chris Elvidge²
¹University of Colorado at Boulder, United States of America; ²NCEI, National Oceanic and Atmospheric Administration

2-E1: 2 (9:20am - 9:40am)

Study of Anthropogenic Disturbance with Geomorphologic Change
Keisuke Yoshida, Keiji Ookuoka, Hiroki Taniakwa
Nagoya University, Japan

2-E1: 3 (9:40am - 10:00am)

The steel scrap reserves and losses per industrial sector in United States
Alicia Gauffin, Nils Å.I. Andersson, Anders Tilliander, Pär G. Jönsson
KTH, Sweden

2-E1: 4 (10:00am - 10:20am)

Assessment of Secondary Aluminum Reserves in Major Countries
Kyaw Nyunt Maung¹, Tomoharu Yoshida², Cherry Myo Lwin³, Gang Liu⁴, Daniel B. Muller⁵, Seiji Hashimoto⁶
¹Ritsumeikan University, Japan; ²Ritsumeikan University, Japan; ³Ritsumeikan University, Japan; ⁴University of Southern Denmark, Denmark; ⁵Norwegian University of Science and Technology, Norway; ⁶Ritsumeikan University, Japan

2-F1: Cost effectiveness in environmental management

Time: Wednesday, 05/Oct/2016: 9:00am - 10:20am
Location: Conference room D at 3F
Session Chair: AIICHIRO KASHIWAGI, OSAKA GAS CO., LTD., Japan
Session Chair: WICHAI CHATTINAWAT, Chiang Mai University, Thailand

Tue 4 Oct

Wed 5 Oct

Thu 6 Oct



Presentation Lists: Oral Presentations

2-F1: 1 (9:00am - 9:20am)

Comparison of case studies on cost-benefit analysis of green roof

Tomohiko Ihara

The University of Tokyo, Japan

2-F1: 2 (9:20am - 9:40am)

Cost and environmental optimization of by-product supply chains using CLCA

Ernst Johannes Prosmann, Romain Sacchi

Aalborg University, Denmark

2-F1: 3 (9:40am - 10:00am)

Sustainability of Energy Efficiency Investment to Local Manufacturing

Jun-Ki Choi

University of Dayton, United States of America

2-F1: 4 (10:00am - 10:20am)

Energy Auditing in the Asian Context: Impediments of Knowledge Externalities

Harald Ernst Otto

Polytechnic University of Marche, Italy

2-A2: Keynote panel discussion: Sustainable value chains and corporate values

Time: Wednesday, 05/Oct/2016: 10:40am - 12:20pm

Location: TERRSA Hall at 1F

Session Chair: Michiyo Morisawa, CDP, Japan

2-A2: 1

Big change in global responsible investment; From asset owner's point of view

Etsuya Hirose

QUICK Corp., Japan

2-A2: 2

ISO20400: a new international standard of "Sustainable Procurement"

Hidemi Tomita

Lloyd's Register Quality Assurance, Japan

Panel discussion

2-B2: Consensus building in life cycle impact assessment: experiences, achievements and challenges

Time: Wednesday, 05/Oct/2016: 10:40am - 12:20pm

Location: Seminar room 2&3 at 2F

Session Chair: Llorenç Mila i Canals, UNEP, France

Session Chair: Rolf Frischknecht, treeze Ltd., Switzerland

2-B2: 1 (10:40am - 11:00am)

The WULCA consensus for water scarcity footprints: Assessing impacts of water consumption based on human and ecosystem demands

Anne-Marie Boulay¹, Jane Bare², Lorenzo Benini³, Markus Berger⁴, Michael Lathulliere⁶, Alessandro Manzardo⁷, Manuele Margni¹, Masaharu Motoshita⁸, Montserrat Nunez⁹, Taikan Oki¹⁰, Amandine Valerie Pastor^{5,14}, Brad Ridoutt¹¹, Sebastien Worbe¹², Stephan Pfister¹³

¹CIRAIG-Ecole Polytechnique, Canada; ²US EPA,

Office of Research and Development, National Risk

Management Research Laboratory, Cincinnati, OH;

³European Commission, Joint Research Center –

Sustainability Assessment Unit, Ispra (VA), Italy;

⁴Technische Universität Berlin, Chair of Sustainable

Engineering, Berlin, Germany; ⁵Wageningen

University, Earth System Science, Wageningen, The

Netherlands; ⁶Institute for Resources, Environment

and Sustainability, University of British Columbia,

Vancouver, Canada; ⁷CESQA, University of Padua,

Department of Industrial Engineering, Italy;

⁸AIST, Research Institute of Science for Safety and

Sustainability, Japan; ⁹Irstea, UMR ITAP, ELSA-LCA

research group, Montpellier,

France; ¹⁰Institute of Industrial Science, The

University of Tokyo, Japan; ¹¹Commonwealth

Scientific and Industrial Research Organisation

(CSIRO), Agriculture Flagship, Australia; ¹²Veolia

Research & Innovation, France; ¹³ETH Zurich,

Institute of Environmental Engineering, Switzerland;

¹⁴IIASA, International Institute of Applied Systems

Analysis, Austria;

2-B2: 2 (11:00am - 11:20am)

Development of a consensus-based characterization model of water scarcity impact on human health

Masaharu Motoshita¹, Cecile Bulle², Jane Bare³, Bradley Ridoutt⁴, Stephan Pfister⁵, Anne-Marie Boulay²

¹AIST, Japan; ²CIRAIG, Canada; ³USEPA, United

States of America; ⁴CSIRO, Australia; ⁵ETH Zurich,

Switzerland

2-B2: 3 (11:20am - 11:40am)

Mainstreaming life cycle thinking through a consistent approach to footprints

Bradley Ridoutt¹, Stephan Pfister², Alessandro Manzardo³, Jane Bare⁴, Anne-Marie Boulay⁵, Francesco Cherubini⁶, Peter Fantke⁷, Rolf Frischknecht⁸, Michael Hauschild⁷, Andrew Henderson⁴, Olivier Jolliet⁹, Annie Levasseur⁵,

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Manuele Margni⁵, Thomas McKone¹⁰, Ottar Michelsen⁶, Llorenç Milà i Canals¹¹, Girija Page¹², Rana Pant¹³, Marco Raugel¹⁴, Serenella Sala¹³, Francesca Verones⁶

¹CSIRO, Melbourne, Australia; ²ETH Zurich, Switzerland; ³Università degli Studi di Padova, Italy; ⁴United States Environmental Protection Agency, Cincinnati, OH, USA; ⁵CIRAIG, Polytechnique Montreal, Montreal, Canada; ⁶Norwegian University of Science and Technology, Trondheim, Norway; ⁷Technical University of Denmark, Denmark; ⁸treeze Ltd., Uster, Switzerland; ⁹University of Michigan, Ann Arbor, MI, USA; ¹⁰University of California, Berkeley, CA, USA; ¹¹United Nations Environment Programme, Paris, France; ¹²University of Western Sydney, Australia; ¹³European Commission, Joint Research Centre, Ispra, Italy; ¹⁴Oxford Brookes University, Oxford, UK

2-B2: 4 (11:40am - 12:00pm)

Reaching consensus on cross-cutting issues in life cycle impact assessment (LCIA)

Francesca Verones¹, Andrew D Henderson², Alexis Laurent³, Brad Ridout^{4,5}, Cassia Ugaya⁶, Stefanie Hellweg⁷

¹Industrial Ecology Programme, NTNU, Norway; ²US EPA; United States Environmental Protection Agency, Sustainable Technology Division, Systems Analysis Branch, National Risk Management Research Laboratory, Cincinnati, OH 45268, USA; ³Division for Quantitative Sustainability Assessment, Department of Management Engineering, Technical University of Denmark, 2800 Kgs. Lyngby, Denmark; ⁴Commonwealth Scientific and Industrial Research Organisation (CSIRO) Agriculture, Private Bag 10, Clayton South, Victoria 3169, Australia; ⁵University of the Free State, Department of Agricultural Economics, Bloemfontein 9300, South Africa; ⁶Federal University of Technology Paraná, CNPq fellow; ⁷Institute of Environmental Engineering, ETH Zürich, Zurich, Switzerland

2-B2: 5 (12:00pm - 12:20pm)

Development of LIME3 - a global scale environmental life cycle impact assessment method-

Norihiro Itsubo¹, Long long Tang², Ryota Ii³, Masaharu Motoshita⁴, Kenshi Matsuda³, Kazuko Yamaguchi⁵, Kayo Murakami⁶, Koichi Kuriyama⁷, Kentaro Yoshida⁸, Atsushi Inaba⁹

¹Tokyo City University; ²National institute for agro-environmental sciences; ³Pacific consultants; ⁴National institute of advanced industrial science

and technology; ⁵Mitsubishi UFJ research and consulting; ⁶Chikushi Jogakuin university; ⁷Kyoto university; ⁸Nagasaki university; ⁹Kogakuin university

2-C2: Industrial symbiosis

Time: Wednesday, 05/Oct/2016: 10:40am - 12:20pm

Location: Conference room (Middle) at 2F

Session Chair: Hiroki Tanikawa, Nagoya University, Japan

Session Chair: Carl Johan Dalhammar, Lund University, Sweden

2-C2: 1 (10:40am - 11:00am)

Regional Planning and Evaluation System for Industrial and Urban Symbiosis considering Land Use Changes

Yi Dou^{1,2}, Takuya Togawa¹, Minoru Fujii¹, Satoshi Ohnishi¹, Keijiro Okuoka², Hiroki Tanikawa², Tsuyoshi Fujita¹

¹National Institute for Environmental Studies, Japan; ²Nagoya University, Japan

2-C2: 2 (11:00am - 11:20am)

Evaluation and Allocation of Greenhouse gas (GHG) emission reductions of industrial symbiosis (IS) networks using life cycle approaches
Hyeong-Woo Kim^{1,2}, Satoshi Ohnishi², Minoru Fujii², Tsuyoshi Fujita², Hung-Suck Park¹

¹Univeristy of Ulsan, Korea, Republic of (South Korea); ²National Institute for Environmental Studies, Japan

2-C2: 3 (11:20am - 11:40am)

Indicator assessment (co-benefits) for low-carbon pathways in European cities

Clara Camarasa, Claudio Nägeli, York Ostermeyer
Chalmers University of Technology, Sweden

2-C2: 4 (11:40am - 12:00pm)

Causal Mechanism of Infrastructures Construction for Smart Industrial Park Promotion

Zhaowen Liu¹, Mingming Hu², Liang Dong³

¹Chongqing University, China; ²Leiden University, Institute of Environmental Sciences (CML); ³CML, Leiden University, The Netherlands



Presentation Lists: Oral Presentations

2-C2: 5 (12:00pm - 12:20pm)

The Carbon Partnership Performance in Construction industry (case study on POSCO E&C case)

Soo-man Jun¹, Ki-Hwan Kim¹, Daeun Lee², Ik Kim², Yoonyoung Hwang², Minjin Ha², Myeonghwa Kim²

¹POSCO E&C, Korea, Republic of (South Korea);

²SMaRT ECO Corporation, Korea, Republic of (South Korea)

2-D2: Sustainable agricultural production

Time: Wednesday, 05/Oct/2016: 10:40am - 12:20pm

Location: AV Study room at 2F

Session Chair: Naoki Yoshikawa, Ritsumeikan University, Japan

Session Chair: RATTANAWAN MUNGKUNG, Kasetsart University, Thailand

2-D2: 1 (10:40am - 11:00am)

Life Cycle Assessment of Oil Palm Nurseries and Plantations at Site-Specific Conditions: Case Studies from Indonesia

Vita Dhian Lelyana¹, Erwinsyah Erwinsyah¹, Kiyotada Hayashi²

¹Indonesian Oil Palm Research Institute, Indonesia;

²National Agriculture and Food Research Organization, Japan

2-D2: 2 (11:00am - 11:20am)

Scenario Analysis of Land Use Change and Carbon Flows from Palm Oil Production in Indonesia

Liselotte Schebek¹, Jan T. Mizgajski¹, Rüdiger Schaldach², Florian Wimmer², D. Andrew Wardell³

¹Technische Universität Darmstadt, Germany;

²University of Kassel, Germany; ³The Center for International Forestry Research (CIFOR), Indonesia

2-D2: 3 (11:20am - 11:40am)

The Sustainability of Malaysian Palm Oil - the Biomass Approach as one of Its Strategic Drivers
Foo Yuen Ng

Malaysian Palm Oil Council (MPOC), Malaysia

2-D2: 4 (11:40am - 12:00pm)

Life Cycle Assessment of Silica from Sugar Cane Dregs Dust

Bambang Mulyana Hermanto

Bogor Agricultural University, Indonesia

2-D2: 5 (12:00pm - 12:20pm)

Does higher crop productivity coincide with increased environmental impacts? Implications of correlated uncertainties in comparative life cycle assessment of rice production systems

Kiyotada Hayashi¹, Yoshifumi Nagumo², Akiko Domoto³

¹National Agriculture and Food Research

Organization; ²Niigata Agricultural Research

Institute; ³Mie Prefecture Agricultural Research Institute

2-E2: Material flow analysis for base metals

Time: Wednesday, 05/Oct/2016: 10:40am - 12:20pm

Location: Conference room B&C at 3F

Session Chair: Ichiro Daigo, The University of Tokyo, Japan

Session Chair: Artem Golev, The University of Queensland, Australia

2-E2: 1 (10:40am - 11:00am)

The mechanics of material flow represented by dynamic WIO

Shinichiro Nakamura¹, Yasushi Kondo¹, Kenichi Nakajima²

¹Waseda University, Japan; ²National Institute for Environmental Studies

2-E2: 2 (11:00am - 11:20am)

Decoupling Analysis based on "Flow and Stock" Indicators: Methodology and U.S. Aluminum Case Study

Weiqiang Chen¹, Chao Zhang², Gang Liu³

¹Chinese Academy of Sciences, China, People's

Republic of; ²Tongji University; ³Southern Denmark University

2-E2: 3 (11:20am - 11:40am)

Uncertainty and validation of dynamic MFA model
Daryna Panasiuk¹, Bertrand Laratte², Sebastien Remy^{1,3}

¹Institut de Recherche Technologique Matériaux Métallurgie et Procédés; ²ICD, CREIDD, Université

de technologie de Troyes, UMR 6281, CNRS; ³ICD, LASMIS, Université de technologie de Troyes, UMR 6281, CNRS



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2-E2: 4 (11:40am - 12:00pm)

Quality of secondary raw materials as a crucial impediment for establishing circular economic systems

Mauricio Cote Alarcon, Witold-Roger Poganietz
Karlsruhe Institute of Technology, Germany

2-E2: 5 (12:00pm - 12:20pm)

Dynamic Material Flow Analysis of Stainless Steel

Yasunari Matsuno¹, Masashi Kimura²

¹Chiba University, Japan; ²The University of Tokyo

2-F2: Bio-materials and bio-energy

Time: Wednesday, 05/Oct/2016: 10:40am - 12:20pm

Location: Conference room D at 3F

Session Chair: Yasuhiro Fukushima, Tohoku University, Japan

Session Chair: Venkata Krishna Kumar Upadhyayula, Umea University, Sweden

2-F2: 1 (10:40am - 11:00am)

CO₂ Emission of "Bio-based PET"

Toshiro SEMBA¹, Atsushi Inaba²

¹Iida Women's Junior College, Japan; ²Kogakuin University, Japan

2-F2: 2 (11:00am - 11:20am)

Practical Case Study: Life Cycle Sustainability Assessment of 2nd generation bio-refineries produced fumaric acid for downstream production of bio-plastics

Michael Bruns, Marten Stock, Mieke Klein
ifu Hamburg GmbH, Germany

2-F2: 3 (11:20am - 11:40am)

The LCA study of the gas cleaning system using HAS-Clay as an adsorbent for Bio-H₂ purification.

Shohei Kuroda, Kenji Koido, Kiyoshi Dowaki
Tokyo University of Science, Japan

2-F2: 4 (11:40am - 12:00pm)

Reduction GHG Emission from Biodiesel Production Chain through Technologies Implementation

Hermawan Prasetya¹, Yandra Arkeman², Erliza Hambali³, Ikhwanuddin Mawardi⁴, Rizaldi Boer⁵

¹Center for Specific Region Technologies, BPPT, Indonesia; ²Bogor Agricultural University; ³SBRC, IPB, Bogor, Indonesia; ⁴Center for Assessment and Application of Environmental Technologies, BPPT, Indonesia; ⁵CCROM, IPB, Bogor Indonesia

2-F2: 5 (12:00pm - 12:20pm)

Environmental Benefit Assessment on Bioenergy Production in Terms of the Water-Energy-Land Nexus in Taiwan

Li-Heng Chen, I-Chun Chen, Hwong-Wen Ma
National Taiwan University, Taiwan, Republic of China

2-A3: Sustainability performance and investment

Time: Wednesday, 05/Oct/2016: 1:20pm - 3:00pm

Location: TERRSA Hall at 1F

Session Chair: Michiyasu NAKAJIMA, Kansai University, Japan

Session Chair: Andreas Möller, Leuphana University Lueneburg, Germany

2-A3: 1 (1:20pm - 1:40pm)

Information Disclosure on Sustainability Performance to Corporate Stakeholders

Bernd WAGNER¹, Michiyasu NAKAJIMA²

¹University of Augsburg, Germany; ²Kansai University, Japan

2-A3: 2 (1:40pm - 2:00pm)

New Corporate Information on Sustainability Performance, especially on Natural Capital Accounting in Japanese Companies

Michiyasu NAKAJIMA, Shoji Oka

Kansai University, Japan

2-A3: 3 (2:00pm - 2:20pm)

The Development of Corporate Performance Information on Sustainability: Practice in Japanese Company

Asako KIMURA, Michiyasu NAKAJIMA

Kansai University, Japan

2-A3: 4 (2:20pm - 2:40pm)

A proposition of disclosing social responsibility for investors in stock markets: Experimental economics approach

Kenju Akai, Hideki Takei, Nariki Nishino

The University of Tokyo, Japan

2-A3: 5 (2:40pm - 3:00pm)

Social Preference and Responsible Investment under Uncertainty

Nariaki Nishino, Haruaki Tamura, Kenju Akai

The University of Tokyo, Japan



Presentation Lists: Oral Presentations

2-B3: Sustainable cities and communities

Time: Wednesday, 05/Oct/2016: 1:20pm - 3:00pm

Location: Seminar room 2&3 at 2F

Session Chair: Hung-Suck Park, Univieristy of Ulsan, Korea, Republic of (South Korea)

Session Chair: Yutaka Genchi, National Institute of Advanced Industrial Science and Technology, Japan

2-B3: 1 (1:20pm - 1:40pm)

Energy autarky and civic activism: LCA results as decision support

Roberta Stefanie Graf¹, Michael Baumann², Rafael Horn², Laura Brethauer², Jan Paul Lindner¹

¹Fraunhofer IBP, Germany; ²University of Stuttgart, Chair of Building Physics, Germany

2-B3: 2 (1:40pm - 2:00pm)

A Conceptual Design of Incentive System for E-waste Collection in Emerging Countries

Jessica Hanafi, Gloria F. J. Kartikasari, Enda D. Layuk Allo

Department of Industrial Engineering, Faculty of Science and Technology, Universitas Pelita Harapan, Indonesia

2-B3: 3 (2:00pm - 2:20pm)

Electronic and electric equipment waste separation in Thailand: A Life cycle assessment of a community's activities.

Pornnapa Sutawong¹, Det

Wattanachaiyingcharoen¹, Norihiro Itsubo², Ksemson Suvannarat¹

¹Naresuan Univerity, Thailand; ²Tokyo City University, Japan

2-B3: 4 (2:20pm - 2:40pm)

Policies for increased re-use and recycling in the Swedish plastics value chain

Leonidas Milios

Lund University, Sweden

2-B3: 5 (2:40pm - 3:00pm)

Effects of Residential Conditions on Elderly Persons who need Long-term Care in 1,200 Japanese Municipalities

Kentaro Suzuki¹, Toshiharu Ikaga¹, Shuzo Murakami², Shun Kawakubo³

¹Keio University, Japan; ²Institute for Building Environment and Energy Conservation, Japan;

³Hosei University, Japan

2-C3: Social and sustainability assessment

Time: Wednesday, 05/Oct/2016: 1:20pm - 3:00pm

Location: Conference room (Middle) at 2F

Session Chair: Jun Nakatani, The University of Tokyo, Japan

Session Chair: Mark Goedkoop, PRé, The Netherlands

2-C3: 1 (1:20pm - 1:40pm)

A Stepwise Method for Life Cycle Sustainability Assessment

Mingming Hu, Liang Dong

Leiden university, The Netherlands

2-C3: 2 (1:40pm - 2:00pm)

Social Life Cycle Impact Assessment of Desktops Considering the Use Phase

Winco K C Yung, Karpagam Subramanian

Hong Kong Polytechnic University, Hong Kong S.A.R. (China)

2-C3: 3 (2:00pm - 2:20pm)

The sustainability assessment of biodiesel for Japanese local governments

Renzhuo Wang, Makoto Nohtomi

Graduate School of Environment and Energy Engineering Waseda University

2-C3: 4 (2:20pm - 2:40pm)

Application of Equator Principle to Social Impact Assessment of Offshore Wind Power Development

Shih-Jung Liao, YUH-Ming Lee

National Taipei University, Taiwan, Republic of China

2-C3: 5 (2:40pm - 3:00pm)

Sustainability Assessment of Public Residential Buildings in Hong Kong based on LCSA

Yahong Dong

Technological and Higher Education Institute of Hong Kong, Hong Kong S.A.R. (China)

2-D3: Sustainable value chain of agricultural products

Time: Wednesday, 05/Oct/2016: 1:20pm - 3:00pm

Location: AV Study room at 2F

Session Chair: Kiyotada Hayashi, National

Agriculture and Food Research Organization, Japan

Session Chair: Liselotte Schebek, Technische

Universität Darmstadt, Germany



Presentation Lists: Oral Presentations

2-D3: 1 (1:20pm - 1:40pm)

Evaluation of Lifecycle of Packaged Strawberries Considering the Damage Reduction during Simulated Transportation

Akihiro Izumi¹, **Nobutaka Nakamura²**, **Kiyotada Hayashi²**, **Nobuo Kanazawa³**, **Kouki Sotta⁴**, **Toshio Yokoyama⁵**, **Yoichi Uchida⁶**, **Junichi Nakahashi⁷**, **Masahiro Yamanaka⁸**, **Masashi Hamba¹**, **Koichi Shobatake⁹**, **Yoshihito Yasaka⁹**, **Takeo Shiina¹⁰**

¹Plastic Waste Management Institute, Japan; ²National Agriculture and Food Cooperative Association; ³Japan Plastic Food Container Association; ⁴Fruits Yamanashi Agricultural Cooperative Association; ⁵The Japan Plastics Industry Federation; ⁶Vinyl Environmental Council; ⁷Asahi Kasei Corporation; ⁸Japan Polyethylene Corporation; ⁹TCO₂ Co.Ltd.; ¹⁰Graduate School of Horticulture, Chiba University

2-D3: 2 (1:40pm - 2:00pm)

Life cycle and land use assessment as a tool for enhancing sustainable agricultural value chains: Case study on major biomass products for food, feed and fuel in Thailand

Trakarn Prapasongsa¹, **Shabbir H. Gheewala^{2,3}**

¹Department of Civil and Environmental Engineering, Mahidol University, Nakhon Pathom, Thailand; ²The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi, Bangkok, Thailand; ³Centre of Excellence on Energy Technology and Environment, PERDO, Bangkok, Thailand

2-D3: 3 (2:00pm - 2:20pm)

LCA of Pandan Wangi Rice for Sustainable Food Supply Chain in Indonesia

Yandra Arkeman¹, **Suprihatin Suprihatin¹**, **Kiyotada Hayashi²**

¹Bogor Agricultural University, Indonesia; ²NARO (National Agricultural Research Organization), Tsukuba, Japan

2-D3: 4 (2:20pm - 2:40pm)

Exploring the Potential of Biogas Production in Argentina: Case Study on Livestock Manure and Agricultural Residues

Florencia Inés Venier, **Helmut Yabar**, **Yoshiro Higano**
University of Tsukuba, Japan

Discussion (2:40pm - 3:00pm)

2-E3: Critical metals

Time: Wednesday, 05/Oct/2016: 1:20pm - 3:00pm

Location: Conference room B&C at 3F

Session Chair: Benjamin Sprecher, Yale University, United States of America

Session Chair: Witold-Roger Poganietz, Karlsruhe Institute of Technology, Germany

2-E3: 1 (1:20pm - 1:40pm)

Informal e-waste recycling and its metal recovery in the Philippines

Atsushi Terazono¹, **Masahiro Oguchi¹**, **Shunsuke Kuzuhara²**, **Ruji P. Medina³**, **Florencio C. Jr. Ballesteros⁴**

¹National Institute for Environmental Studies, Japan; ²Sendai National College of Technology; ³Technological Institute of the Philippines; ⁴University of the Philippines Diliman

2-E3: 2 (1:40pm - 2:00pm)

Exploring urban mining challenges – case of critical resources recovery from WEEE

Komal Habib

University of Southern Denmark, Denmark

2-E3: 3 (2:00pm - 2:20pm)

Hotspot analysis for global dissipative losses of 25 metals and metalloids

Christoph Helbig, **Andrea Thorenz**, **Axel Tuma**

Resource Lab, University of Augsburg, Germany

2-E3: 4 (2:20pm - 2:40pm)

Environmental assessment of rare earth elements recycling: The case of recycling of end-of-life permanent magnets

Dionysios Kontoulis, **Karel Van Acker**, **Tom Vander**

Hoogerstraete, **Sofía Riaño Torres**

KU Leuven, Belgium

2-E3: 5 (2:40pm - 3:00pm)

Avoiding environmental impacts of light rare earth production through NdFeB magnet recycling – a global estimate

Rita Schulze^{1,2}, **Matthias Buchert¹**

¹Oeko-Institut e.V., Germany; ²TU Darmstadt, Germany



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Thu 6 Oct

2-F3: The future of energy-critical minerals
Time: Wednesday, 05/Oct/2016: 1:20pm - 3:00pm
Location: Conference room D at 3F
Session Chair: Benjamin C. McLellan, Kyoto University, Japan
Session Chair: Elsa Margaret Dominish, University of Technology Sydney, Australia

2-F3: 1 (1:20pm - 1:40pm)
Critical Metals for 21st Century Energy Technologies: Assessing Global Resources and Grounds for Optimism
Gavin Mudd, Simon Jowitt, Timothy Tyson Werner, Zhehan Weng
Monash University, Australia

2-F3: 2 (1:40pm - 2:00pm)
Resources requirements for a Hydrogen Economy - Examining Alternatives
Benjamin C. McLellan
Kyoto University, Japan

2-F3: 3 (2:00pm - 2:20pm)
Lithium and the mineral-energy nexus
Damien Giurco, Elsa Dominish, Sven Teske, Nick Florin
University of Technology Sydney, Australia

2-F3: 4 (2:20pm - 2:40pm)
Impact of ore degradation from energy perspective
Akiyuki Masuda, Taiga Takasu, Shinsuke Murakami
The University of Tokyo, Japan

2-F3: 5 (2:40pm - 3:00pm)
Wealth from Waste: Pathways for Metals in a Circular Economy
Damien Giurco¹, Elsa Dominish¹, Melissa Jackson¹, Nick Florin¹, Akbar Rhamdhani²
¹University of Technology Sydney, Australia;
²Swinburne University of Technology, Australia

3-A1: Life cycle engineering and management
Time: Thursday, 06/Oct/2016: 10:00am - 11:20am
Location: TERRSA Hall at 1F
Session Chair: Rajesh Kumar Singh, thinkstep India, India
Session Chair: Ryo Yokoyama, TDK Corporation, Japan

3-A1: 1 (10:00am - 10:20am)
Identifying innovation opportunities with LCA
Eric Mieras, Mark Goedkoop
PRe Sustainability, The Netherlands

3-A1: 2 (10:20am - 10:40am)
Diffusion of Environmental Innovations in Developing Countries: Analysis of the Impact of FDI, R&D and Geographical Proximity
Helmut Yabar
University of Tsukuba, Japan

3-A1: 3 (10:40am - 11:00am)
Challenges for Knowledge Engineering in Environmental Life Cycle Assessment
Caroline SABLAYROLLES, Jean-Pierre BELAUD, Claire VIALLE, Guillaume BUSSET, Abdellatif BARAKAT, Patrice BUCHE
University of Toulouse (France), France

3-A1: 4 (11:00am - 11:20am)
Disruptive Technologies: Surviving Technology Valley of Death with Improved Sustainable Performance (Case Studies from Nano and Biotech Industry)
Venkata Krishna Kumar Upadhyayula¹, Nabil Souihi¹, Mats Tysklind¹, Venkataramana Gadhamshetty²
¹Umea University, Sweden; ²South Dakota School of Mines and Technology, SD, USA

3-B1: Nutrients, water and ecosystem services in agriculture
Time: Thursday, 06/Oct/2016: 10:00am - 11:20am
Location: Seminar room 2&3 at 2F
Session Chair: Masanori Saito, Tohoku University, Japan
Session Chair: Yandra Arkeman, Bogor Agricultural University, Indonesia

3-B1: 1 (10:00am - 10:20am)
Projection of global nitrogen footprints under the future condition of food production and consumption
Takuma Takiuchi¹, Yuya Ono¹, Azusa Oita², Keigo Noda¹, Kazuo Oki¹, Taikan Oki¹
¹The university of Tokyo, Japan; ²Yokohama National University, Japan; takiuchi@rainbow.iis.u-tokyo.ac.jp



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Tue 4 Oct

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3-B1: 2 (10:20am - 10:40am)

Scenarios of Global Phosphorus Flows from Agriculture and Domestic Wastewater
Cherry Myo Lwin¹, Mari Murakami², Kento Tamura³, Seiji Hashimoto⁴
¹Ritsumeikan University, Japan; ²Ritsumeikan University, Japan; ³Ritsumeikan University, Japan; ⁴Ritsumeikan University, Japan

3-B1: 3 (10:40am - 11:00am)

Assessing Water Scarcity in Malaysia: A Case Study of Rice Production
Marlia Mohd Hanafiah¹, Nor Fadillah Ghazali¹, Muhammad Muaz Aminordin¹, Shabbir, H. Gheewala², Pariyapat Nilsalab²
¹Universiti Kebangsaan Malaysia, Malaysia; ²King Mongkut's University of Technology Thonburi, Bangkok, Thailand; mhmarlia@ukm.edu.my

3-B1: 4 (11:00am - 11:20am)

A framework to incorporate experimental data into life cycle impact assessment on ecosystem services in agroecosystems
Wirong Chanthorn, Anchana Thancharoen
Kasetsart University, Thailand

3-C1: Environmental accounting and audit

Time: Thursday, 06/Oct/2016: 10:00am - 11:20am
Location: Conference room (Middle) at 2F
Session Chair: Asako Kimura, Kansai University, Japan
Session Chair: Bernd Wagner, University of Augsburg, Germany

3-C1: 1 (10:00am - 10:20am)

The Environmental Costs Analysis of Cement Industry in Thailand
TASSANEEWAN CHOM-IN, ATHIWATR JIRAJARIYAVECH, WANWISA THANUNGKANO, NONGNUCH POOLSAWAD, JITTI MUNGKALASIRI
National Metal and Materials Technology Center, Thailand

3-C1: 2 (10:20am - 10:40am)

Sustainable Design Methodology of Integrated Quality Inspection for Multi-Echelon Supply Chain Under Material Flow Cost Accounting
WICHAI CHATTINNAWAT
Chiang Mai University, Thailand

3-C1: 3 (10:40am - 11:00am)

Material Flow Cost Accounting as a Decision Support Instrument
Martina B. Prox^{1,3}, Andreas Moeller²
¹ifu Hamburg GmbH, Germany; ²Leuphana University; ³Forum for Sustainability through Life Cycle Innovation (FSLCI)

3-C1: 4 (11:00am - 11:20am)

Energy Auditing in the Asian Context: Neglected Channels of Knowledge Spillovers
Harald Ernst Otto
Polytechnic University of Marche, Italy

3-D1: Environmental information communication

Time: Thursday, 06/Oct/2016: 10:00am - 11:20am
Location: AV Study room at 2F
Session Chair: Nariaki Nishino, The University of Tokyo, Japan
Session Chair: Anne-Marie Tillman, Chalmers University of Technology, Sweden

3-D1: 1 (10:00am - 10:20am)

Examine the verification/certification of GHG emissions in a lifecycle approach
Masayuki Kanzaki¹, Kenichi Asakawa², Satoko Itoh¹, Hanako Negishi¹, Akira kataoka¹
¹Japan Environmental Management Association for Industry; ²Japan Quality Assurance Organization

3-D1: 2 (10:20am - 10:40am)

A review of food LCA smartphone apps: the challenge of socially embedded information
Steven Robert McGreevy¹, Atsushi Inaba²
¹Research Institute for Humanity and Nature, Japan; ²Kougakuin University, Japan

3-D1: 3 (10:40am - 11:00am)

SOCIETY READINESS TOWARD MODIFICATION OF MUNICIPAL SOLID WASTE MANAGEMENT SYSTEM INTO SEPARATION-BASED SYSTEM (Study Case: Padang City, Indonesia)
Nova Ulhasanah, Naohiro Goto
Toyohashi University of Technology, Japan

3-D1: 4 (11:00am - 11:20am)

Environmental evaluation method of packaging considering food loss and consumer behavior
Naoki Yokokawa, Emi Kikuchi-Uehara, Hirokazu Sugiyama, Masahiko Hirao
The University of Tokyo, Japan



Presentation Lists: Oral Presentations

3-E1: Recycling from waste

Time: Thursday, 06/Oct/2016: 10:00am - 11:20am

Location: Conference room B&C at 3F

Session Chair: Seung-Jin Lee, University of Michigan-Flint, United States of America

Session Chair: Yasuhiro Hirai, Kyoto University, Japan

3-E1: 1 (10:00am - 10:20am)

Changing chlorine metabolism of a nation - case study on chlorine recovery from PVC wastes in Japan

Jiaqi Lu¹, Shogo Kumagai¹, Yasuhiro Fukushima², Hajime Ohno², Tomohito Kameda¹, Toshiaki Yoshioka¹

¹Graduate School of Environmental Studies, Tohoku University; ²Graduate School of Engineering, Tohoku University

3-E1: 2 (10:20am - 10:40am)

Inventory analysis of recycling methods of polyvinyl chloride in building materials

Takayuki Iso, Tsuyoshi Seike, Yongsun Kim, Atsushi Ito, Yusaku Harada

The University of Tokyo, Japan

3-E1: 3 (10:40am - 11:00am)

On the recovery and reuse of N-methyl-2-pyrrolidone from waste streams in the production of resins for the microelectronics industry

Mariano Javier Savelski, C. Stewart Slater

Rowan University, United States of America

3-E1: 4 (11:00am - 11:20am)

Life Cycle Assessment of Beneficial Use of Calcium Carbide Sludge for Cement Production in China

Yu LIU, Zhihong WANG, Zuoren NIE

Beijing University of Technology, China, People's Republic of

3-F1: Energy supply

Time: Thursday, 06/Oct/2016: 10:00am - 11:20am

Location: Conference room D at 3F

Session Chair: Roberta Stefanie Graf, Fraunhofer IBP, Germany

Session Chair: Ryota Ii, Pacific Consultants Co., Ltd., Japan

3-F1: 1 (10:00am - 10:20am)

The Climate Impact of Large-Scale Excess Heat Utilization – A Case of Complex System Interactions
Erik O Ahlgren¹, Akram Fakhri Sandvall¹, Tomas Ekvall²

¹Chalmers University of Technology, Sweden; ²IVL Swedish Environmental Research Institute

3-F1: 2 (10:20am - 10:40am)

Prospective LCA of Emerging Energy Technologies: Case Study of Organic Photovoltaic Solar Cells

Michael Tsang¹, Dario M. Bassani², Guido Sonnemann¹

¹University of Bordeaux, France; ²CNRS, France

3-F1: 3 (10:40am - 11:00am)

Emerging photovoltaic technologies: Life Cycle Assessment of organic photovoltaics and perovskite solar cells

Steffi Weyand, Liselotte Schebek

Institute IWAR, Chair of Material Flow Management and Resource Economy, Technische Universität Darmstadt, Germany

3-F1: 4 (11:00am - 11:20am)

Life Cycle Inventory Analysis of Intercontinental Transport of Carbon-Free Hydrogen

Yuki Kudoh, Mai Inoue, Naomi Kitagawa, Kiyotaka Tahara

National Institute of Advanced Industrial Science and Technology, Japan

3-B2: Promoting transdisciplinary science toward sustainable use of biodiversity and ecosystem services

Time: Thursday, 06/Oct/2016: 11:40am - 1:00pm

Location: Seminar room 2&3 at 2F

Session Chair: Keiichiro Kanemoto, Shinshu University, Japan

Session Chair: Francesca Veronesi, NTNU, Norway

3-B2: 1 (11:40am - 12:00pm)

Introduction to TSUNAGARI: the need to establish transdisciplinary science toward conservation and sustainable use of biodiversity and ecosystem services in Asia

Masahiro Nakaoka

Hokkaido University, Japan

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3-B2: 2 (12:00pm - 12:20pm)

Mapping the Environmental Footprint of Nations

Keiichiro Kanemoto¹, Daniel Moran²¹Kyushu University, Japan; ²NTNU, Norway**3-B2: 3 (12:20pm - 12:40pm)**Identifying the Species Threat Hotspots from
Global Supply Chains**Daniel Moran¹, Keiichiro Kanemoto²**¹NTNU, Norway; ²Kyushu University**3-B2: 4 (12:40pm - 1:00pm)**Environmental pressure footprints vs. impact
footprints: which is the better proxy?**Francesca Veronesi¹, Daniel Moran¹, Konstantin****Stadler¹, Keiichiro Kanemoto², Richard Wood¹**¹NTNU, Norway; ²Kyushu University, Japan**3-C2: Scope 3 and green value chain****Time: Thursday, 06/Oct/2016: 11:40am - 1:00pm****Location: Conference room (Middle) at 2F**Session Chair: Jessica Hanafi, Universitas Pelita
Harapan, IndonesiaSession Chair: Leonor Patricia Güereca, Universidad
Nacional Autonoma de Mexico, Mexico**3-C2: 1 (11:40am - 12:00pm)**Quantifying scope 3 greenhouse gas emissions
of a telecommunication company using CDP
information**Rolf Frischknecht, Laura Tschümperlin**

treeze Ltd., Switzerland

3-C2: 2 (12:00pm - 12:20pm)SCOPE3 of Kogakuin University Focusing on
Student's Activities**Natsumi Inoue¹, Ryuji Nakano¹, Sho Murata¹,****Atsushi Inaba¹, Koji Tanaka²**¹Kogakuin University, Japan; ²e.s.feed, Japan**3-C2: 3 (12:20pm - 12:40pm)**Application of geostatistic and Life Cycle
Assessment to map GHG emissions and land-use
change risk in cocoa supply chains**Giancarlo Raschio¹, Sergiy Smetana¹, Volker Heinz¹,****Alexander Mathys²**¹German Institute of Food Technologies DIL,
Germany; ²Laboratory of Sustainable Food
Processing, ETH Zürich**3-C2: 4 (12:40pm - 1:00pm)**How to interpret and utilize quantified Scope 3
emissions: From Japanese companies' case studies**Masahiko SHIBATA**

Mizuho Information & Research Institute, Inc., Japan

3-D2: Hotspots analysis**Time: Thursday, 06/Oct/2016: 11:40am - 1:00pm****Location: AV Study room at 2F**Session Chair: Yasushi Kondo, Waseda University,
JapanSession Chair: James Archie Fava, thinkstep, United
States of America**3-D2: 1 (11:40am - 12:00pm)**Development of Hotspot Analysis Method using
Japanese LCA methods and databases**Norihiro Itsubo¹, Kiyotaka Tahara², Yasushi Kondo³**¹Tokyo City University, Japan; ²National Institute
of Advanced Industrial Science and Technology;³Waseda University**3-D2: 2 (12:00pm - 12:40pm)**Hotspots Analysis – What do we know and how
can it be used to improve sustainability of product
systems**James Archie Fava¹, Mark Barthel²**¹thinkstep, United States of America; ²Keel, United
Kingdom**3-D2: 3 (12:40pm - 12:50pm)**Feasibility of hotspot analysis as a screening
method in Eco Mark programme**Hirota Sano¹, Haruo Suzuki², Norihiro Itsubo²**¹Japan Environment Association, Japan; ²Tokyo City
University**3-D2: 4 (12:50pm - 1:00pm)**EcoLeaf programme and the environmental
hotspot analysis**Akira Kataoka¹, Masayuki Kanzaki¹, Norihiro****Itsubo², Kiyotaka Tahara³**¹Japan Environmental Management Association for
Industry (JEMAI); ²Tokyo City University;³National Institute of Advanced Industrial Science
and Technology (AIST)



Presentation Lists: Oral Presentations

3-E2: Modeling of recycling

Time: Thursday, 06/Oct/2016: 11:40am - 1:00pm

Location: Conference room B&C at 3F

Session Chair: Yuichi Moriguchi, The University of Tokyo, Japan

Session Chair: Rubén Aldaco, Cantabria University, Spain

3-E2: 1 (11:40am - 12:00pm)

An Element-Based Optimization for Recycling of Waste Glass and Ceramic Materials

Ichiro Daigo¹, Tomoki Okada¹, Daisaku Okamoto², Yoshikazu Goto¹

¹The University of Tokyo, Japan; ²InfoCore Co., Ltd., Japan; daigo@material.t.u-tokyo.ac.jp

3-E2: 2 (12:00pm - 12:20pm)

Using empirical data in top-down and bottom-up approaches to modelling in-use stocks and flows: A case study of mobile phones in Australia

Artem Golev¹, Xuan Zhu², Tim Werner², Ruth Lane², Kazuyo Matsubae³

¹The University of Queensland, Australia; ²Monash University, Australia; ³Tohoku University, Japan

3-E2: 3 (12:20pm - 12:40pm)

The sustainability of regional e-waste management systems: Monitor technology case studies

Seung-Jin Lee, Joyce S. Cooper

University of Michigan-Flint, United States of America

3-E2: 4 (12:40pm - 1:00pm)

Development of eco-industrial design and evaluation model based on regional temporal and spatial dynamic analysis on material and energy metabolism

Liang Dong

CML, Leiden University, The Netherlands; School of Geography and Remote Sensing, Nanjing University of Information Science & Technology, China

3-F2: Energy demand

Time: Thursday, 06/Oct/2016: 11:40am - 1:00pm

Location: Conference room D at 3F

Session Chair: Yuki Kudoh, National Institute of Advanced Industrial Science and Technology, Japan

Session Chair: Harald Ernst Otto, Polytechnic University of Marche, Italy

3-F2: 1 (11:40am - 12:00pm)

Life Cycle Assessment of Vehicle Lightweighting: A Comparison of Use-Phase Energy Savings between ICEVs and EVs

Hyung Chul Kim, Timothy J Wallington

Ford Motor Company, United States of America

3-F2: 2 (12:00pm - 12:20pm)

Usage-dependent evaluation of electromobility

Roberta Stefanie Graf¹, Michael Held¹, Stefan Eckert², Simone Weidner²

¹Fraunhofer IBP, Germany; ²thinkstep AG

3-F2: 3 (12:20pm - 12:40pm)

When to consume electricity? View from cost and carbon emission: case in Germany

Jun Kono, York Ostermeyer

Chalmers University of Technology, Sweden

3-F2: 4 (12:40pm - 1:00pm)

Environmental assessment of residential fuel cell in different stages of family life

Akito Ozawa², Yoshikuni Yoshida¹

¹The University of Tokyo, Japan; ²National Institute of Advanced Industrial Science and Technology

3-B3: Promoting transdisciplinary science toward sustainable use of biodiversity and ecosystem services

Time: Thursday, 06/Oct/2016: 2:00pm - 3:20pm

Location: Seminar room 2&3 at 2F

Session Chair: Masahiro Nakaoka, Hokkaido University, Japan

Session Chair: Daniel Moran, NTNU, Norway

3-B3: 1 (2:00pm - 2:20pm)

Broad-scale, fine-resolution spatial analyses on biodiversity, functions and human threats in coastal ecosystems: how to link them with global economic analyses?

Kenji Sudo¹, Masahiro Nakaoka¹, Keiichiro Kanemoto², Daniel Moran³

¹Hokkaido University, Japan; ²Kyushu University;

³Norwegian University of Science and Technology



Presentation Lists: Oral Presentations

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3-B3: 2 (2:20pm - 2:40pm)

Comparing the life cycle impact of different fishing techniques in Thailand

Francesca Veronesi¹, Alya Francesca Bolowich¹, Keigo Ebata², Anukorn Boutson³, Takafumi Arimoto⁴, Satoshi Ishikawa⁵

¹NTNU, Norway; ²Kagoshima University, Japan; ³Kasetsart University, Bangkok, Thailand; ⁴Tokyo University of Marine Science and Technology, Japan; ⁵Research Institute for Humanity and Nature (RIHN), Kyoto, Japan

3-B3: 3 (2:40pm - 3:00pm)

Challenge to harmonize sustainable fishery with environmental conservation in oligotrophic coastal ecosystems

Masakazu Hori, Masahito Hirota, Mitsutaku Makino

Fisheries Research and Education Agency, Japan

Discussion (3:00pm - 3:20pm)

3-C3: Organizational LCA

Time: Thursday, 06/Oct/2016: 2:00pm - 3:20pm

Location: Conference room (Middle) at 2F

Session Chair: Annekatrin Lehmann, Technische Universität Berlin, Germany

Session Chair: Masahiko Shibata, Mizuho Information & Research Institute, Inc., Japan

3-C3: 1 (2:00pm - 2:20pm)

Organizational LCA: status and results of the road testing phase

Julia Martínez-Blanco^{1,2}, Llorenç Milà i Canals³, Atsushi Inaba⁴, Annekatrin Lehmann¹, Matthias Finkbeiner¹

¹Technische Universität Berlin, Germany; ²Inèdit Innovació SL, Barcelona, Spain; ³UNEP-DTIE, Paris, France; ⁴Kogakuin University, Tokyo, Japan

3-C3: 2 (2:20pm - 2:40pm)

Application of Organizational Life Cycle Assessment to define materiality in environmental initiatives of azbil Group

Ayako Nagayama, Shigeo Kimura, Hiromu Hatano
Azbil Corporation, Japan

3-C3: 3 (2:40pm - 3:00pm)

A Case Study of Organizational Life Cycle Assessment in a University in Indonesia

Jessica Hanafi, Laurence, Priskila Christine Rahayu
Universitas Pelita Harapan, Indonesia

3-C3: 4 (3:00pm - 3:20pm)

Assessing the depth of impacts in supply chains for sustainability management in organizations
Masaharu Motoshita¹, Matthias Finkbeiner², Jun Nakatani³, Atsushi Inaba⁴

¹AIST, Japan; ²Technische Universität Berlin, Germany; ³The University of Tokyo, Japan; ⁴Kogakuin University, Japan

3-D3: Hotspots analysis

Time: Thursday, 06/Oct/2016: 2:00pm - 3:20pm

Location: AV Study room at 2F

Session Chair: Norihiro Itsubo, Tokyo city university, Japan

Session Chair: James Archie Fava, thinkstep, United States of America

3-D3: 1 (2:00pm - 2:20pm)

Waste Input-Output (WIO) and Its Application to Hotspots Analysis

Yasushi Kondo¹, Koichi Tachio², Shinichiro Nakamura¹

¹Waseda University, Japan; ²Japan Environmental Sanitation Center

3-D3: 2 (2:20pm - 2:40pm)

Development of Inventory Database for Hotspot Analysis based on IDEA

Kiyotaka Tahara¹, Asako Takada¹, Chiharu Fujii¹, Shigeru Kihira², Koichi Shobatake³

¹National Institute of Advanced Industrial Science and Technology (AIST), Japan; ²S&R Co.,Ltd.; ³TCO₂ Co. Ltd.

3-D3: 3 (2:40pm - 3:00pm)

Case studies of Hotspot analysis using the Environmental Footprint Databases

Haruo Suzuki¹, Toshihiko Arima¹, Yuki Ichisugi¹, Satomi Suguri¹, Yasushi Kondo², Kiyotaka Tahara³, Asako Takada³, Norihiro Itsubo¹

¹Tokyo City University, Japan; ²Waseda University, Japan; ³National Institute of Advanced Industrial Science and Technology, Japan

Discussion (3:00pm - 3:20pm)



Presentation Lists: Oral Presentations

3-E3: Waste treatment and recycling

Time: Thursday, 06/Oct/2016: 2:00pm - 3:20pm

Location: Conference room B&C at 3F

Session Chair: Shinsuke Murakami, the University of Tokyo, Japan

Session Chair: Tak Hur, Konkuk University, Korea, Republic of (South Korea)

3-E3: 1 (2:00pm - 2:20pm)

Life Cycle Assessment of Aluminium Recycling

Process: Case of Shredder Cables

Guilhem Grimaud^{1,2}, Nicolas Perry², Bertrand Laratte³

¹MTB Recycling, France; ²Arts & Métiers ParisTech, France; ³University of Technology of Troyes, France

3-E3: 2 (2:20pm - 2:40pm)

Development of Eco-design methodology for disposable diapers and their marketing strategy

Myeonghwa Kim, Ik Kim

SMARTECO, Korea, Republic of (South Korea)

3-E3: 3 (2:40pm - 3:00pm)

Greenhouse gas reduction effects by food loss prevention from business sectors

Junya Yano, Ritsuki Yanagawa, Yasuhiro Hirai, Shin-ichi Sakai

Kyoto University, Japan

Discussion (3:00pm - 3:20pm)

3-F3: Future prospects of energy

Time: Thursday, 06/Oct/2016: 2:00pm - 3:20pm

Location: Conference room D at 3F

Session Chair: Shinsuke Kondoh, AIST, Japan

Session Chair: Damien Giurco, University of Technology Sydney, Australia

3-F3: 1 (2:00pm - 2:20pm)

Life-cycle environmental and resource implications of low-carbon energy technologies

Sangwon Suh¹, Joseph Bergesen¹, Edgar Hertwich⁴, Michael Taptich³, Thomas Gibon²

¹University of California Santa Barbara, United States of America; ²Norwegian University of Science and Technology; ³University of California Berkeley, United States of America; ⁴Yale University, United States of America

3-F3: 2 (2:20pm - 2:40pm)

Life Cycle Greenhouse Gas and Water Consumption Potential Assessment Based on Thailand

Alternative Energy Development Plan

Worayut Saibuatrong¹, Thumrongrut

Mungcharoen², Viganda Varabuntoonvit¹

¹Chemical Engineering Department, Faculty of Engineering, Kasetsart University, Bangkok 10900, Thailand; ²Energy and Environment Cluster and Director of Sustainable Environment Program, National Science and Technology Development Agency (NSTDA), Pathum Thani 12120, Thailand

3-F3: 3 (2:40pm - 3:00pm)

Simulation-based scenario analysis of regional energy system considering future technology implementation

Yasunori Kikuchi^{1,2}, Kotaro Ouchida¹, Yuichiro

Kanematsu¹, Kazutake Oosawa^{1,3}, Tatsuya Okubo¹

¹The University of Tokyo; ²Kyushu University;

³Wakayama prefectural government

Discussion (3:00pm - 3:20pm)



Poster Presentations

2-A4: Poster session

Time: Wednesday, 05/Oct/2016: 3:10pm - 5:10pm
Location: TERRSA Hall at 1F

2-A4: 1

Towards a global energy performance certification of buildings: a new approach based on Life Cycle Energy Assessment

Rubén Aldaco, Maria Margallo, Jara Laso, Isabel Garcia-Herrero, Marta Rodrigo, Mario Mañana Canteli, Angel Irabien

Cantabria University, Spain

2-A4: 2

Development and Application of a Multi-Objective Optimization Tool for Renewable Energy Mix in Municipalities

Keiko Hori¹, Takanori Matsui¹, Satoshi Ono², Kenichi Fukui¹, Takashi Hasuike³, Takashi Machimura¹

¹Osaka University, Japan; ²Kagoshima University, Japan; ³Waseda University, Japan

2-A4: 3

Toward an economy of sustainable energy in the chlor-alkali industry: impact of European Union carbon emission trade directive

Rubén Aldaco, Razvan Pascal, Raquel Onandia, Maria Margallo, Isabel Garcia-Herrero, Angel Irabien

Cantabria University, Spain

2-A4: 4

Social Risk Identification with New Energy System using Input-Output Analysis: A Case Study of Hydrogen Fueling Stations in Japan

Shunichi Hienuki, Kazuhiko Noguchi, Atsumi Miyake

Yokohama National University, Japan

2-A4: 5

Rethinking the contribution of waste water treatment to decentralised energy systems by using anaerobic digestion

Witold-Roger Poganietz, Helmut Lehn, Mónica Vergara Araya, Franka Steiner

Karlsruhe Institute of Technology, Germany

2-A4: 6

Combined heat and power supply from WTE facilities in low-carbon Japan

Yurie Shirakawa, Ryota Ii

Pacific Consultants Co., Ltd., Japan

2-A4: 7

A survey on land use impact assessment within agricultural LCA

Longlong Tang¹, Ai Leon¹, Kazunori Kohyama¹, Norihiro Itsubo²

¹National Institute for Agro-Environmental Sciences, Japan; ²Tokyo City University

2-A4: 8

Quantifying wind energy impacts on biodiversity in LCA: addressing the challenge

Tiago Laranjeiro¹, **Francesca Veronesi**¹, **Roel May**²

¹Industrial Ecology Programme, Norwegian University of Science and Technology (NTNU), Trondheim, Norway; ²Norwegian Institute for Nature Research, Trondheim, Norway

2-A4: 9

Sustainability Assessment of Eco-Tourism in the Coastal Area— Case Study of Liugu Island in Southern Taiwan

Yu-Jing Yang, Yuh-Ming Lee

National Taipei University, Taiwan, Republic of China

2-A4: 10

Environmental impact assessment of pulp paper and stone paper

Tatsuya Sakanishi¹, Masaharu Motoshita², Kiyotaka Tahara², Atsushi Inaba¹

¹Kogakuin University, Japan; ²National Institute of Advanced Industrial Science and Technology

2-A4: 11

The impact of green roofs on the risk of heat stroke and sleep disturbance in Jakarta

Kentaro Maeda¹, Kazuki Yamaguchi², Setyo Darmanto Nisrina³, Varquez Alvin Christopher Galang³, Yukihiro Kikegawa⁴, Manabu Kanda³, Tomohiko Ihara¹

¹the University of Tokyo, Japan; ²Tokyo Electric Power Company Research Institute; ³Tokyo Institute of Technology; ⁴Meisei University

2-A4: 12

What is an elementary flow in life cycle sustainability assessment?

Katsuyuki Nakano, Naoki Shibahara, Toshifumi Nakai, Masayuki Kanzaki

Japan Environmental Management Association for Industry (JEMAI), Japan



Poster Presentations

2-A4: 13

Substance Flow Analysis and Social Impact Assessment of Nutrient Distributions in Watersheds – Case Study of the Feitsui Reservoir
Pi Fang Hung, Yuh Ming Lee
National Taipei University, Taiwan, Republic of China

2-A4: 14

Material Flow Analysis and Social Impact Assessment of Waste-to-Bioenergy Application of Refuse Recycling
Chien-Yu Hong, Yuh-Ming Lee
National Taipei University, Taiwan, Republic of China

2-A4: 15

Analysis of hydrogen utilization by life cycle assessment focusing on fuel cell
Taira Nagaishi¹, Kenji Koido¹, Mitsuo Kameyama², Kiyoshi Dowaki¹
¹Tokyo University of Science, Japan; ²Japan Blue Energy CO. Ltd.

2-A4: 16

Interval estimation and uncertainty analysis of solid waste from food and beverage service sector in Hue city, Vietnam
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