



ORGANISED BY:

Malaysia-Japan
Environmental Institute
of Technology
(MJEIT)

APLAS

KUALA LUMPUR 2024

THE 12TH ASIA-PACIFIC LANDFILL SYMPOSIUM

In Association With
AUN/SEED-Net Regional Conference12 - 14 NOVEMBER 2024
KUALA LUMPUR, MALAYSIACONFERENCE X FORUM X WORKSHOP
EXHIBITION X TECHNICAL TOUR

SUPPORTED BY:



PROGRAMME

*Programme is subject to changes by organiser

DAY 1 (12 NOVEMBER 2024)

8.00 am – 8.30 pm	OPENING SESSION <i>Venue: Grand Hall</i>
8.00 am – 8.45 am	Registration
8.50 am – 8.55 am	National Anthem: Negaraku Doa Recital
8.55 am – 9.10 am	<u>Welcoming Remarks</u> By Prof Ts Dr Ali Selamat, Deputy Vice Chancellor of Universiti Teknologi Malaysia By Prof. Dr. Kazuei Ishii, President of NPO-LSA, Japan By His Excellency Noriyuki Shikata, Ambassador- Designate of Japan to Malaysia
9.10 am – 9.20 am	<u>Launching of APLAS 2024</u> By Yang Berhormat Datuk Wira M Noor Azman Taib, Secretary General, Ministry of Housing & Local Government, Malaysia
9.20 am – 9.30 am	Launching Gimmick & Montage Souvenir Presentation Group Photo Session
9.30 am – 10.00 am	<u>Keynote 1: Waste Management and Circular Economy Policy in Japan</u> By Mr. Ko Matsuura, Assistant Director, Office for Promotion of Sound Material-Cycle Society, Environmental Regeneration and Material Cycles Bureau, Ministry of the Environment, Japan
10.00 am – 10.30 am	<u>Keynote 2: Solid waste management in Malaysia: What's Up?</u> By Mr. Zamri Abdul Rahman, Research & Technical Committee Head of Waste Management Association of Malaysia
10.30 am – 11.00 am	<u>Keynote 3: Perspective on the Role of Landfill Sites in the Circular Economy</u> By Prof. Dr. Kazuei Ishii, President of NPO-LSA, Japan
11.00 am – 11.30 am	Exhibition Visit & Morning Tea Break
11.30 am – 12.00 pm	<u>Keynote 4: Disaster Waste Management After the Great Earthquake (Online)</u> By Mr. Kazuyuki Numata, Deputy Director of the Environment Bureau, Sendai City, Japan
12.00 pm – 12.30 pm	<u>Keynote 5: JICA Global Waste Management Projects</u> By Mr. Yamamoto Tadayu, Senior Advisor of Global Environment Department, Japan International Cooperation Agency (JICA)

12.30 pm – 1.00 pm	<p><u>Keynote 6: Five-Year Review (FYR) of Klity Creek Rehabilitation and Secure Landfill of Tailing Waste</u></p> <p>By Prof. Emerit. Dr. Thares Srisatit, Honorary Advisor, Environmental Engineering Association of Thailand (EEAT), Thailand</p>
1.00 pm – 2.00 pm	Exhibition Visit & Lunch
2.00 pm – 3.40 pm	<p>BUSINESS EXPERTS' SESSION</p> <p>Venue: Grand Hall</p>
2.00 pm – 2.10 pm	<p>Introduction to Business Experts' Session</p> <p>Session Chair: Mr. Fumiyoshi Ohno, Chair of International Committee NPO-LSA, Japan Co-Chair: Dr. Farah Liana Mohd Redzuan, Sponsorship Chair APLAS 2024</p>
2.10 pm – 2.25 pm	<p>B2B Expert Sharing 1: Introduction of Kanadevia Technology for People and Planet</p> <p>By Mr. Keiji Aota Senior Manager, Water Treatment Design & Engineering Department, Kanadevia Corporation, Japan</p>
2.25 pm – 2.40 pm	<p>B2B Expert Sharing 2: Recycling and Challenges of Aging Society in Japan</p> <p>By Ms. Tomoe Kumagai, Consultant, EX Research Institute, Japan</p>
2.40 pm – 2.55 pm	<p>B2B Expert Sharing 3: Innovative Construction Practices and Solutions for Circular Economy Integration: Global Insights and Local Applications</p> <p>By Dr. Jovana Husemann, Head of Sustainability and Strategic Business Development, Naue Group, Germany</p>
2.55 pm – 3.10 pm	<p>B2B Expert Sharing 4: Disaster Waste Estimation and Treatment</p> <p>By Mr. Ganiev Jakhongirbek, Expert, Civil Engineering Department, Okumura Corporation, Japan</p>
3.10 pm – 3.25 pm	<p>B2B Expert Sharing 5: Geomembrane Technology</p> <p>By Mr. Iba Michio, Manager, Construction Materials Department, Mitsuboshi Belting Ltd., Japan</p>
3.25 pm – 3.40 pm	<p>B2B Expert Sharing 6: Nippon Koei's Consulting Services in Solid Waste Management (SWM) Sector</p> <p>By Mr. Koki Takano, Circular Economy Promotion Department, Nippon Koei Co., Ltd., Japan</p>
3.40 pm – 4.10 pm	Exhibition Visit & Tea Break
4.15 pm – 6.00 pm	<p>EVENING PARALLEL SESSION</p> <p>Venue: Gallery 1, Gallery 2</p>
4.15 pm – 6.00 pm	<p>Parallel Session 1: Sustainable Waste Management Strategies</p> <p>Venue: Gallery 1</p> <p>Session Chair: Dr. Abhisit Bhatsada, King Mongkut's University of Technology Thonburi (KMUTT) Session Co-Chair: Mr. Muhammad Bukhari Rosly, Universiti Teknologi Malaysia (UTM)</p> <ul style="list-style-type: none"> Invited 1: Modelling the Low Heating Value of Bio-Dried Refuse-Derived Fuel and Advancing Sustainable Waste Management through Enhanced Energy Recovery By Abhisit Bhatsada, Komsilp Wangyao, Tanik Itsarathorn

	<ul style="list-style-type: none"> • Evaluation and Willingness to Pay for Household Hazardous Waste Management in a District of Bandung City By Mochammad Chaerul, Nadya Husna Nuralfiya • Incentivizing Waste Management: Results-Based Scheme in Selected Barangays within the Five Drainage Areas in Metro Manila, Philippines By Anne Louise T. Tolesa, Kristine Ann M. Luna, Guinevere S. Constantino, Reynaldo R. Medina • Stratified Sampling Enhanced by Remote Sensing Product Data: An Approach for Solid Waste Project and Research Surveys By Elprida Agustina, Emenda Sembiring, Anjar Dimara Sakti • The Current Situation of the Liquid-Bio Fertilizer Supply Chain from Feedstock to Application to Farms By Shun Otsuka, Kazuei Ishii, Satoru Ochiai, Geun-Yong Ham, Jumana Al-Mallahi
	<p style="text-align: center;">Parallel Session 2: Circular Economy in Waste Management Venue: Gallery 2</p> <p style="text-align: center;">Session Chair: Prof. Dr. Emenda Sembiring, Institute Teknologi Bandung (ITB) Session Co-Chair: Ms. Nurhamieza Md Huzir, Universiti Teknologi Malaysia (UTM)</p> <ul style="list-style-type: none"> • Invited 2: Current State of Solid Waste Management Access for Circular Economy Readiness By Emenda Sembiring • The Development of a Sustainable End-of-Life Vehicle Processing Operation in Kiribati By Alice Leney, Gerdi Raimon • Study on Recycling of By-product Salt by Bipolar Membrane Electrodialysis Device By Jiaying Liu, Lingjie Yu, Kazuo Tameda, Sotaro Higuchi • Circular Economy of PET Bottles in Malaysia through Life Cycle Assessment By Bryan Wei Ren Wah, Liew Peng Yen, Takeshi Mizunoya, Lian See Tan, Helmut Yabar • Solid Wastes Management of Monastery by Circular Economy By Wanpen Wirojanagud, Mayuree Teyarachaakul, Pitsanu Pannaracha, Torpong Kreetachart • Benefit-Cost Analysis for Plastic Waste Treatment Using Modular Pyrolysis Technology in Rural Areas of Bali Province By Benno Rahardyan, M Syams Apriandas Harli
6.00 pm	End of Day 1
6.00 pm – 8.30 pm	Networking Dinner

DAY 1 (12 NOVEMBER 2024)	
<i>Tentative Programme for Networking Dinner</i>	
6.00 PM – 8.30 pm	NETWORKING DINNER <i>Venue: Grand Hall</i>
6.00 pm – 6.30 pm	<i>Arrival of Guest of Honours</i>
6.30 pm – 6.35 pm	<u>Welcome Speech</u> By Assoc. Prof. Ir. Dr. Nurulakmar Abu Husain, Dean, Malaysia-Japan International Institute of Technology (MJIT), Universiti Teknologi Malaysia
6.35 pm – 6.40 pm	<u>Cultural Presentation of Silat by Pentas MJIT</u>
6.40 pm – 6.50 pm	<u>Awards Presentation & Token of Appreciation for Sponsors</u> By Assoc. Prof. Ir. Dr. Nurulakmar Abu Husain <u>APLAS 2026 Handover Ceremony</u> Kuala Lumpur to Sapporo <u>Acceptance Speech</u> By Prof. Dr. Kazuei Ishii, President, NPO-LSA Japan
6.50 pm – 8.30 pm	<i>Dinner & Performance by Pentas MJIT</i>

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DAY 2 (13 NOVEMBER 2024)	
8.30 am – 11.00 pm	OPENING SESSION <i>Venue: Grand Hall</i>
8.00 am – 8.50 am	<i>Registration</i>
8.50 am – 9.00 am	<u>Opening Remarks</u> By Ts. Dr. Abd Halim Md Ali, Co-Chair of APLAS 2024 By Mr. Hideki Shimazu, JICA Expert, AUN-Seed Net Secretariat
9.00 am – 10.30 am	<u>Special Session: Science-Technology-Innovation Coordination Platform</u> <i>Moderator:</i> Ts. Dr. Ruwaida Jamian, Registration Chair APLAS 2024 <i>Speakers:</i> 1) Dr. Taro Sonobe, STI Coordinator, Japan-ASEAN Science, Technology and Innovation 2) Mr. Hideki Shimazu, JICA Expert, AUN-Seed Net Secretariat 3) Ms. Emi Kaneko, Director at Japan Science and Technology Agency, Singapore 4) Mr. Yoshitaka Inagaki, Senior Representative, JICA Malaysia 5) Invited Malaysian Agencies <u>SATREPS Project</u> Success Story: Ts. Dr. Sathiabama T Thirugnana, UTM OTEC

10.30 am – 11.00 am	Exhibition Visit & Morning Tea Break
11.00 am – 1.00 pm	MORNING PARALLEL SESSION Venue: Grand Hall, Gallery 1, Gallery 2
11.00 am – 1.00 pm	<p style="text-align: center;">Parallel Session 3: Innovative Approaches to Sustainable Landfilling Venue: Grand Hall</p> <p style="text-align: center;">Session Chair: Assoc. Prof. Dr. Liew Peng Yen, Universiti Teknologi Malaysia (UTM) Session Co-Chair: Dr. Hafizah Farhah Saipan@Saipol, Universiti Teknologi Malaysia (UTM)</p> <ul style="list-style-type: none"> • Invited 3: Neutralization of Landfilled Incinerator Ash Layer Using High Carbon Dioxide Dissolved Solution and Crystal Growth on the Surface of Incinerator Ash Particles By Kentaro Miyawaki, Haruyuki Fukai and Ayana Matsumoto • Study on Early Stabilization of Sea Surface Landfill by Airlift Pump Method By Lingjie Yu, Kazuo Tameda, Jiaying Liu, Shigematsu Mikiji, Sotaro Higuchi • Instructions Manual for Final Disposal Site Maintenance By Fumiyoshi Ohno, Isamu Norimatsu and Kazuei Ishii, Tomoe Kumagai • Maintaining Stability of Landfill using Geosynthetics to Reduce Geo-risk Towards Community Intan Nor Zuliana Baharuddin and Christian Nieheus • Surface Temperature of Different Geomembranes Under Hot Climate in Malaysia and Their Significance Landfill Liner Design and Installation Noor Hafizah Abdul Halim, Colin Lim and Hermann Ng
	<p style="text-align: center;">Parallel Session 4: Waste Transformation and Valorization Technologies Venue: Room 1</p> <p style="text-align: center;">Session Chair: Assoc. Prof. Dr. Komsilp Wangyao, King Mongkut's University of Technology Thonburi (KMUTT) Session Co-Chair: Dr. Ahmad Faiz Mohammad, Universiti Teknologi Malaysia (UTM)</p> <ul style="list-style-type: none"> • Invited 4: Influence of Temperature Evolution on Moisture Removal Efficiency During Wet-Refuse-Derived Fuel Production: Experimental Insights for Process Optimization and Scaling By Komsilp Wangyao, Abhisit Bhatsada, Panida Payomthip, Eka Wahyanti, Tanik Itsarathorn, Ye Nyi Nyi Lwin • Characterization of Sustainable Graphitic Carbon from Food Waste via Microwave Irradiation Technique By Nuraqilah Hishammuddin, Siti Shawalliah Idris, Norazah Abd Rahman, Noor Fitrah Abu Bakar, Siti Norazian Ismail, Alina Rayahu Mohamed, Nur Hidayati Othman • Sustainable Biodiesel Production from Waste Cooking Oil Using Diatomite as a Catalyst Nurhamieza Md Huzir, Pramila Tamunaidu, Yogeswary Vadivelu, Muhammad Bukhari Rosly, Azlan Nur Rasyid Amin

	<ul style="list-style-type: none"> • Effect of Aluminosilicate-Based Additives on the Physicochemical Properties of Palm Fiber and Shell Ash By Muhammad Afiq Daniel Azmi, Nor Ruwaida Jamian, Abd Halim Md Ali, Khairunnisa Mohd Paad, Vekes Balasundram, Dewika M., Ammar Mohd Rashid, Mohd Rashid Mohd Yusof • Green Waste-Synthesized Gold Nanoparticles/ Nanofluid for Solar Harvesting Technology By Siti Rahmah Aid, Eleen Dayana Mohamed Isa, Yutaka Asako, Ooi Chia Yee • Development of Durable Superhydrophobic Coatings with Enhanced Surface Roughness for Carbon Steel Substrates By Nurul Nabila Mohd Din, Norhasnidawani Johari, Mohd Aidy Faizal Johari, Noor Azlina Hassan, Abd Halim Md Ali, Rizal Arifin
	<p style="text-align: center;">Parallel Session 5: Innovative Waste Treatment and Disposal Venue: Gallery 2</p> <p style="text-align: center;">Session Chair: <i>Dr. Geun-Yong Ham, Hokkaido University (HU)</i> Session Co-Chair: <i>Dr. Farah Liana Mohd Redzuan, Universiti Teknologi Malaysia (UTM)</i></p> <ul style="list-style-type: none"> • Invited 5: Estimating the Allowable High Loading of Waste Products to Anaerobic Digestion for Food Waste By Geun-Yong Ham, Taichi Endo, Kazuei Ishii, Satoru Ochiai • Comparative Analysis of Heat Balance Models in the Solar Greenhouse Biodrying System By Katitep Ngamket, Kazuei Ishii, Geun-Yong Ham, Satoru Ochiai • Rubber Seed Shell Based Activated Carbon as Potential Biosorbent for the Removal of Heavy Metals from Aqueous Solution By Muhammad Bukhari Rosly, Nomie Marini binti Aminallah, Abd Halim Md Ali, Muhammad Hazwan Hamzah, Ahmad Hazwan Azhari, Shahirah Shamsulbahrin, Mohamad Akmal Abdul Rahim • Conversion of Oil Palm By-Products as Carrier Materials in Expanded Bed Process By Wai Loan Liew, Mohd Azraai Kassim, Khalida Muda, Soh Kheang Loh, Nur Syamimi Zaidi • Co-Pyrolysis of EFB and UPCO over Nickel Oxide Loaded HZSM-5: A Comparative Co-Pyrolysis Study via Thermogravimetric Analyser and Fixed-Bed Reactor By Vekes Balasundram, Norhuda Abdul Manaf, Norazana Ibrahim, Ruzinah Isha, Suchithra Thangalazhy Gopakumar, Le Kim Hoang Pham • UAV Photogrammetry in Waste Disposal: Evaluating Density and Capacity Expansion By Parichat Suknark, Sirintornthep Towprayoon, Sompote Youwai, Chart Chiemchaisri, Komsilp Wangyao
1.00 pm – 2.00 pm	Exhibition Visit & Lunch
2.00 pm – 3.30 pm	AFTERNOON PARALLEL SESSION Venue: Grand Hall, Gallery 1, Gallery 2
2.00 pm – 3.30 pm	<p style="text-align: center;">Parallel Session 6: Island Waste Management Venue: Grand Hall</p> <p style="text-align: center;">Session Chair: <i>Ir. Ts. Dr. Norhasnidawani Johari, Universiti Teknologi Malaysia (UTM)</i> Session Co-Chair: <i>Dr. Liew Wai Loan, Universiti Teknologi Malaysia (UTM)</i></p>

- **Invited 6: Development of a Waste Management Authority for Kiribati**
By Gerdi Raimon, Alice Leney
- **Technical Cooperation on Waste Management in the Pacific Region**
By Soeda Shungo
- **Rehabilitation, Monitoring and Extension of Landfills in an Atoll Environment**
By Alice Leney, Harry Langle
- **Study on the Quantitative Analysis of the Work-Loads in Waste Hand-Sorting**
By Satoru Ochiai, Guen-Yong Ham, Kazuei Ishii, Toru Furuichi
- **The Waste Landfill Data Collection and Management Using the Kobo toolbox Application – Pacific Islands Case Study**
By Faafetai Sagapolutele Uitime

Parallel Session 7: Environmental Assessment in Waste Management
Venue: Room 1

Session Chair: Assoc. Prof. Dr. Benno Rahardyan, Institut Teknologi Bandung (ITB)
Session Co-Chair: Ts. Dr. Nor Ruwaida Jamian, Universiti Teknologi Malaysia (UTM)

- **Invited 7: Study of Bandung City Food Waste Global Warming Potential**
By Benno Rahardyan, Nada Zharfania Zuhaira, Yeggi Darnas, I Made Wahyu Widyarsana
- **Integrating Environmental Risk Assessment and Integrated Risk-Based Approach in Landfill Risk Evaluation**
By Tuani Lidiawati Simangunsong, Indah Rachmatiah Siti Salami, I Made Wahyu Widyarsana
- **Environmental Risk Assessment of Sarimukti Waste Landfill Postfire in Indonesia**
By I Made Wahyu Widyarsana, Nisrina Maulidya
- **Impact of Runoff, Wind, and Floods on the Macroplastic Mobilization Terrestrial Environment: Systematic Review**
By Attar Hikmahtiar Ramadan, Emenda Sembiring, Benno Rahardyan, Hadi Kardhana
- **Evaluation of Waste Management Due the Mount Merapi Cold Lava Flash Flood Disaster in Agam Regency (Case Study in the Affected Sub-Districts)**
By Gusrin Sudirja Pasaribu, Benno Rahardyan

Parallel Session 8: Community-Based Waste Management
Venue: Gallery 2

Session Chair: Dr. Kristine Ann Martinez Luna, Woodfields Consultants, Inc.
Session Co-Chair: Dr. Siti Rahmah Aid, Universiti Teknologi Malaysia (UTM)

- **Invited 8: Women in Action: The Role of Women in Sustainable Solid Waste Management in Metro Manila, Philippines**
By Kristine Ann M. Luna, Anne Louise T. Tolesa, Guinevere S. Constantino, Reynaldo R. Medina
- **Waste Management Behavior in Indonesia: A Systematic Review**
By Yebi Yuriandala, Emenda Sembiring, Benno Rahardyan

	<ul style="list-style-type: none"> • Designing Targeted Behaviour Change Program by Utilizing Barrier Analysis of Household Waste Segregation Behaviour in Urban Jakarta. Comparison between: PHINLA Project in East-North Jakarta and Kepulauan Seribu By Franz Sinaga, Theo F Manurung, Alfa Miranti Kuntaryo, Wingky Vikri Saputri • Evaluating Single-Use Plastic-Free Market Campaigns: A Case Study of Pasar Awam Taman Universiti, Johor Bahru By Muhamad Safwan Ishak, Mohamad Fauzi Ahmad, Wan Nurul Mardiah Wan Mohd Rani, Jamilia Mohd Marsin, Abdullah Hisam Omar • Reaching Inaccessible Communities: Proposed Community-Based Solid Waste Management Sub-System in Metro Manila, Philippines By Guinevere S. Constantino, Kristine Ann M. Luna, Anne Louise T. Toleza, Reynaldo R. Medina
3.30 pm – 4.00 pm	Exhibition Visit & Tea Break
4.00 pm – 5.00 pm	CLOSING SESSION Venue: Grand Hall
4.00 pm – 5.00 pm	Awards & Closing Ceremony <u>Best Presentation Awards</u> By Assoc. Prof. Ir. Dr. Nurulakmar Abu Husain, Dean, Malaysia-Japan International Institute of Technology (MJIT), Universiti Teknologi Malaysia <u>Closing Remarks</u> Thank you from Dr Pramila Tamunaidu, Chair of APLAS 2024
5.00 pm	End of Day 2

PROGRAMME	
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DAY 3 (14 NOVEMBER 2024)	
Tentative Programme for Technical Visit	
8.30 am – 3.00 pm	Technical Visit Venue: FIKS Putrajaya
8.30 am – 9.00 pm	Registration
9.00 am – 12.00 pm	Technical Visit to Fasiliti Inovasi Kitar Semula (FIKS), Putrajaya
12.00 pm – 2.00 pm	Lunch
3.00 pm	End of Day 3

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