

出國報告(出國類別：開會)

參加「2023 年第 8 屆
亞洲環境與永續發展研討會」

服務機關：台灣中油股份有限公司

姓名職稱：周士閔環境保護師

派赴國家/地區：日本北海道札幌市

出國期間：112 年 11 月 2-6 日

報告日期：112 年 12 月 6 日

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ACESD 2023 議程

摘要

日本國際合作網絡(iNehc)及國際環境科學與發展期刊(IJESD)訂於 2023 年 11 月於日本北海道札幌市舉行亞洲環境與永續發展研討會(ACESD, Asia Conference on Environment and Sustainable Development)，提供各界討論環境永續發展之相關議題及趨勢。研討會聚焦空氣污染、水污染、廢棄物、生態保護、溫室氣體、能源使用等多面向之環境議題，並邀請 3 位專家學者就氣候變遷因應、再生能源使用專題演講，實際參與可以增進瞭解先進國家關切之重要環境議題及可採行之環境保護對策，有利本公司處理重要環境議題參考。

一、目的

參加 2023 年亞洲環境與永續發展研討會(ACESD, Asia Conference on Environment and Sustainable Development)，以預防或減輕開發行為對環境造成不良影響及永續發展之角度，瞭解先進國家關切之重要環境議題及可採行之環境保護對策，以作為本公司處理重要環境議題之參考。

二、過程

(一) 行程

2023 年亞洲環境與永續發展研討會(ACESD, Asia Conference on Environment and Sustainable Development)訂於 2023 年 11 月 3-5 日在日本北海道札幌市舉行(會場位置如圖 2.1-1)；依據 ACESD 網站發布議程預排定出國行程，實際議程參與陳列如表 2.1-1。

表 2.1-1 出國行程

日期	地點	主要工作內容
2023年11月2日(四)	臺灣桃園市 日本北海道札幌市	啟程，臺灣桃園機場至日本新千歲機場
2023年11月3日(五)	日本北海道札幌市	2023年第8屆亞洲環境與永續發展研討會 報到及連線測試
2023年11月4日(六)	日本北海道札幌市	2023年第8屆亞洲環境與永續發展研討會 現場參與
2023年11月5日(日)	日本北海道札幌市	2023年第8屆亞洲環境與永續發展研討會 資料彙整
2023年11月6日(一)	日本北海道札幌市 臺灣桃園市	返程，日本新千歲機場至臺灣桃園機場



圖 2.1-1 研討會會場(TKP 花園城市札幌車站前)位置
(圖片來源：TKP 花園城市札幌車站前網頁)

(二) 研討會紀要

亞洲環境與永續發展研討會(ACESD, Asia Conference on Environment and Sustainable Development)創辦於 2016 年，是涵蓋環境與永續發展領域的年度國際會議，旨在為研究人員、工程師、管理人員、學者以及專業人士提供分享新想法和研究成果的國際平臺。首屆 ACESD 於 2016 年在香港舉行，隨後 2017 年在日本東京、2018 年在新加坡、2019 年在日本橫濱，2020 及 2021 年以網路方式辦理，2022 年在日本京都舉行。

2023 年 ACESD 由日本國際合作網絡(iNehc)及國際環境科學與發展期刊(IJESD)主辦，橫濱國立大學、國立環境研究所、長崎大學、日本國際協力機構技術支持。會前邀稿論文領域包括但不限於：環境動力學、全球環境變化及生態系管理、水處理及回收、環境永續性、廢水及污泥處理、空氣污染控制等。會議實際議程摘要如表 2.2-1(詳附錄 1)。



圖 2.2-1 主持人 Mitsuo Yoshida 博士致詞 (照片來源：ACESD 秘書)

表 2.2-1 2023 年 ACESD 議程摘要

開幕		
專題演講 I	Integrating Green Infrastructure in Flood Risk Reduction to Adapt Climate Change	
專題演講 II	Challenges and System Solutions for Large-scale Deployment of Renewable Energy in the Context of Carbon Neutrality	
專題演講 III	Restoring Wetlands to Conserve Biodiversity and Promote Multiple Ecosystem Services	
現場簡報	現場海報	線上簡報
議程 1 Environmental Pollution Monitoring and Pollutant Treatment	議程 1 Monitoring and Treatment of Water Pollutants and Air Pollutants	議程 1 Environmental Science, Resource Recycling, and Sustainable Development
議程 2 Greenhouse Gas Emissions, Air Pollution Monitoring and Emission Reduction		
議程 3 Energy Chemical Engineering and Environmental Biotechnology		
議程 4 Solid Waste Management, Environmental Sustainability, and Sustainable Development	議程 2 Environmental Chemical Engineering Energy Management, and Sustainable Development	
議程 5 Resource Management and Ecosystem Protection		
議程 6 Renewable Energy, Energy Storage, and Energy-Saving Technologies		

註：參考 2023 年 ACESD 網站發布之議程彙整(依時間排序)



圖 2.2-2 日本橫濱國立大學 Keiji Ujikawa 教授開幕致詞



圖 2.2-3 現場與會人員合照 (照片來源：ACESD 秘書)

1. 專題演講 I：將綠色基礎設施融入減少洪水風險以適應氣候變遷
(Integrating Green Infrastructure in Flood Risk Reduction to Adapt Climate Change)

石渡幹雄(Mikio Ishiwatari)為日本國際協力機構災害管理與水資源管理高級顧問、東京大學前沿科學研究生院客座教授。一直從事減少災害風險、適應氣候變遷、水等方面的專案和研究工作，領導制定日本適應氣候變遷和社區為基礎的災害管理的援助政策。

本次演講重點為討論綠色基礎設施在保護社區免受氣候變遷加劇的洪水威脅方面的核心作用及挑戰。



圖 2.2-4 Mikio Ishiwatari 教授專題演講 (照片來源：ACESD 秘書)

2. 專題演講 II：碳中和背景下再生能源大規模部署的挑戰與系統解決方案
(Challenges and System Solutions for Large-scale Deployment of Renewable Energy in the Context of Carbon Neutrality)

魯璽(Xi Lu)為中國清華大學環境學院終身教授、碳中和研究院副院長，研究領域主要為建置再生能源複雜系統模式、城市及工業園區碳中和系統整合解決方案。

本次演講提出再生能源評估、多系統優化建置模式、生命週期和物質流分析等綜合解決方案，應對中國和其他國家碳中和背景下大規模部署再生能源的挑戰。



圖 2.2-5 Xi Lu 教授專題演講 (照片來源：ACESD 秘書)

3. 專題演講Ⅲ：恢復濕地以保護生物多樣性並促進多元生態系服務
(Restoring Wetlands to Conserve Biodiversity and Promote Multiple Ecosystem Services)

詹姆斯·T·安德森(James T. Anderson)為詹姆斯·C·肯尼迪水禽和濕地保護中心主任、生態學教授。

本次演講探討濕地生態學的基礎、歷史濕地損失、恢復，以及生物多樣性和生態系統服務如何響應濕地恢復。

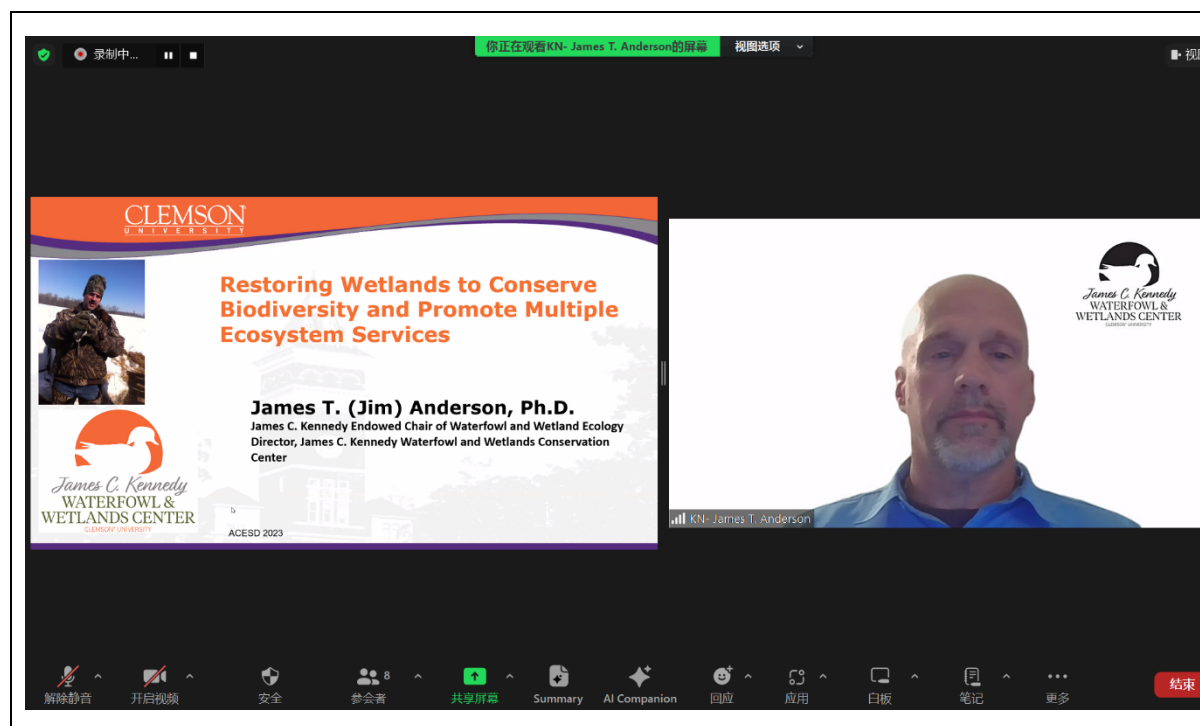


圖 2.2-6 James T. Anderson 教授專題演講 (照片來源：ACESD 秘書)

三、具體成效

瞭解環境議題國際關注趨勢及各國研究發展重點，研討會論文相關內容可供本公司處理重要環境議題參考。

- (一) 2021 年 ACESD 主題，依序主要為環境污染及管理、水文及水資源管理、綠建築技術及城市規劃；2022 年主要為水文及水資源管理、固體廢棄物管理及廢棄物增值、氣候變遷調適及自然災害評估；2023 年主要為環境污染監測及污染物處理、固體廢棄物管理、環境永續性及永續發展、資源管理及生態系保護、溫室氣體排放、空氣污染監測及減量。彙整相關資料如表 3.1-1 及圖 3.1-1。

表 3.1-1 近 3 年 ACESD 論文主題

年度	論文主題
2021	21_1 Environmental Pollution and Management
	21_2 Environmental Chemical Engineering and Wastewater Treatment
	21_3 Hydrology and Water Resources Management
	21_4 Green Building Technology and Urban Planning
	21_5 Resource Management, Green Behavior and Sustainable Development
	21_6 Environmental Biology and Biodiversity Conservation
2022	22_1 Wastewater Treatment and Water Analysis
	22_2 Hydrology and Water Resources Management
	22_3 Solid Waste Management and Waste Valorization
	22_4 Air Quality Assessment and Air Pollution Management
	22_5 Climate Change Adaptation and Natural Disaster Assessment
	22_6 Environmental Remote Sensing and Land Cover Change Monitoring
	22_7 Environmental Health and Carbon Emission Management
	22_8 Clean Energy Technology and Energy Management
2023	23_1 Environmental Pollution Monitoring and Pollutant Treatment
	23_2 Greenhouse Gas Emissions, Air Pollution Monitoring and Emission Reduction
	23_3 Energy Chemical Engineering and Environmental Biotechnology
	23_4 Solid Waste Management, Environmental Sustainability, and Sustainable Development
	23_5 Resource Management and Ecosystem Protection
	23_6 Renewable Energy, Energy Storage, and Energy-Saving Technologies

註：2021 年及 2022 年參照刊登於大會論文集者，2023 年參照登載於議程之簡報者

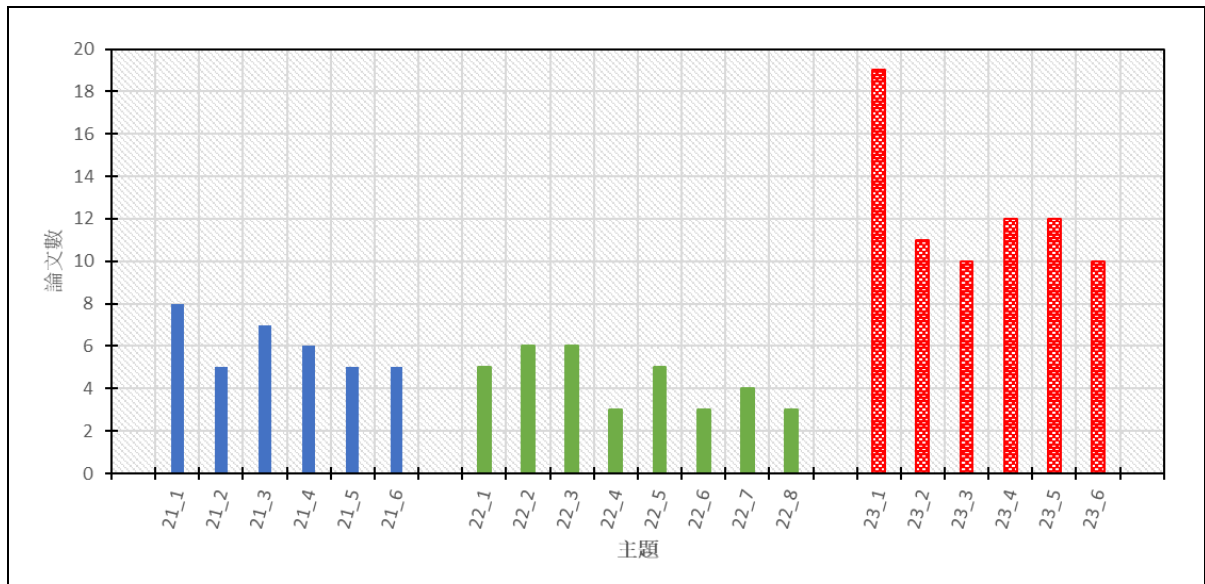


圖 3.1-1 近 3 年 ACESD 各主題論文發表(投稿)數量
(2021 年及 2022 年以刊登於大會論文集者統計，2023 年以登載於議程者統計)

(二) 2023 年 ACESD，環境污染監測及污染物處理相關主題投稿簡報數量由多至少依序為日本、中國、臺灣；固體廢棄物管理、環境永續性及永續發展相關主題投稿簡報數量以印尼為最多；資源管理及生態系保護相關主題投稿簡報數量以印尼、日本、臺灣最多；溫室氣體排放、空氣污染監測及減量相關主題投稿簡報數則以中國最多。彙整相關資料如圖 3.2-1。

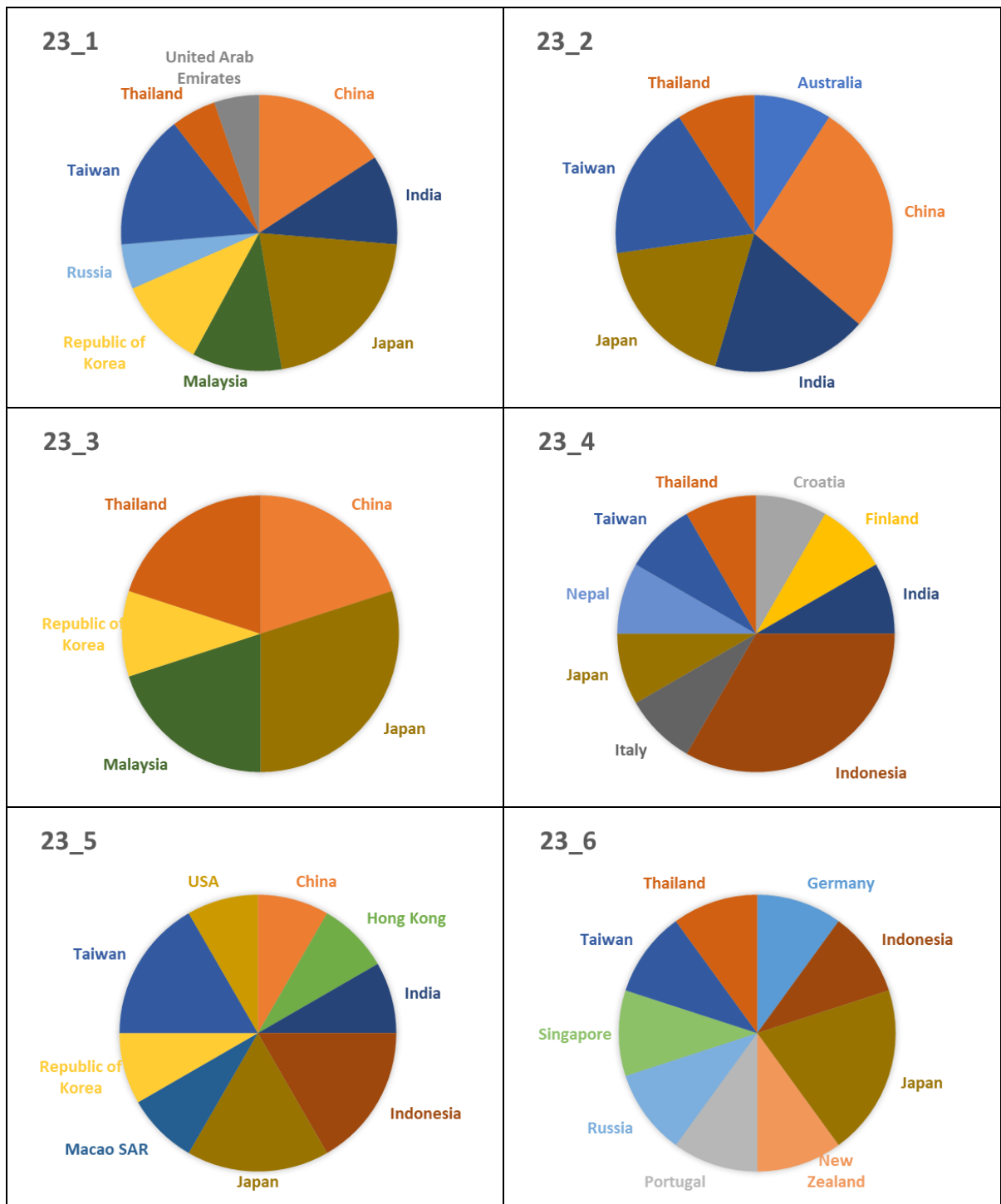
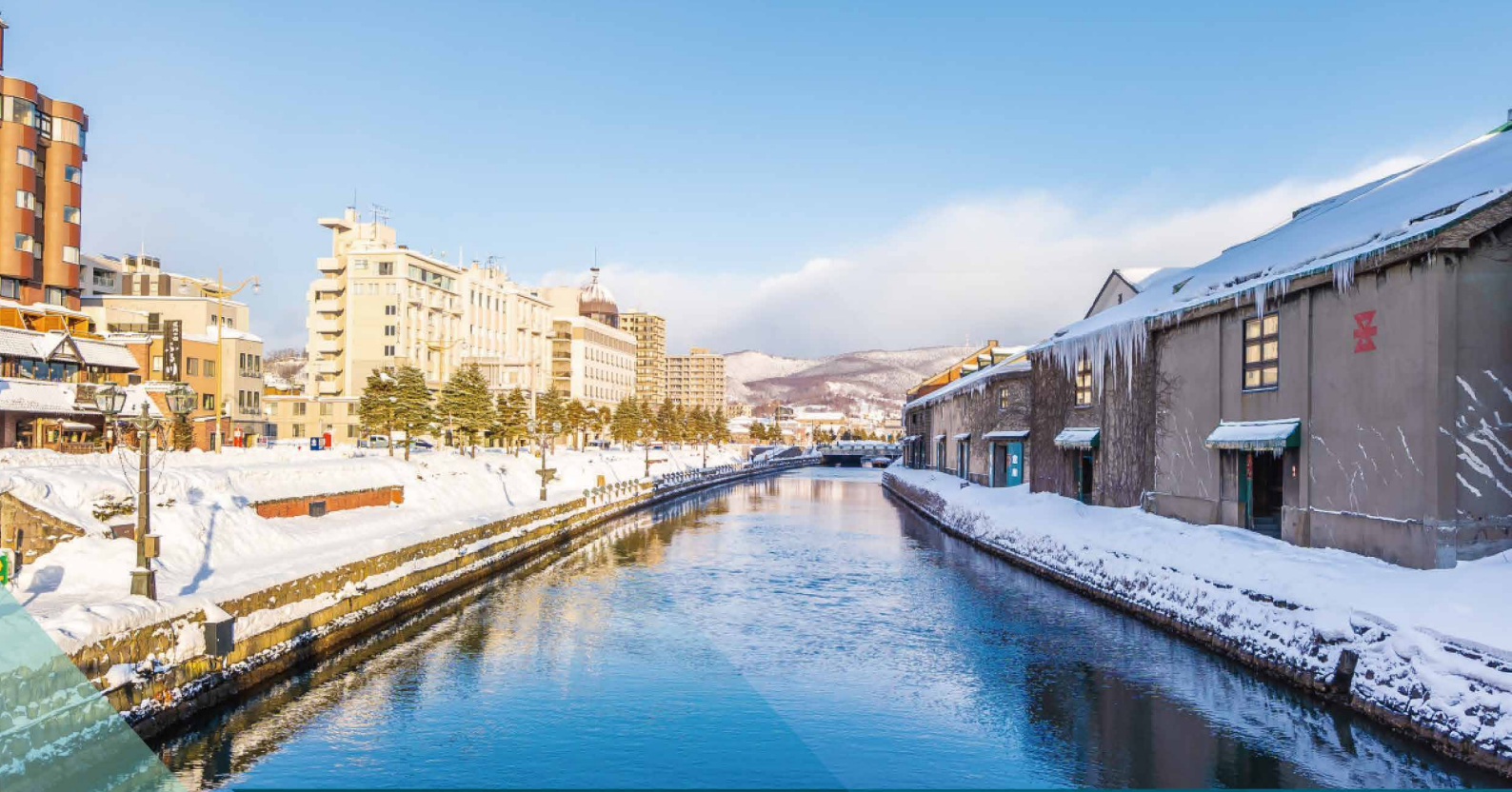


圖 3.2-1 2023 年 ACESD 各主題論文投稿者國別 (以登載於議程之簡報者統計)

四、心得及建議

- (一) 本次赴日本參加國際研討會，與會者能從會議中受益，並體會日本北海道札幌市的文化及自然之美。
- (二) 本次研討會僅提供議程資料(不含較詳細之論文摘要或論文內容)，建議與會者可先依據會議程序、簡報者、簡報題目、會場擬妥參與排程，俾於有限會議時間獲最大效益。
- (三) 本次研討會專題演講以濕地及綠色基礎設施之重要性，說明因應氣候變遷，人為可採行順應自然之環境保護措施，其理念與我國開發行為環境影響評估作業時應考量或採行之環境保護對策符合，相關策略作為可供本公司參考。
- (四) 本次研討會專題演講以再生能源大規模建置實務，說明建置過程應考量及注意事項，先行者所面臨的困難及解決方案，可供本公司執行相關作業時參考。
- (五) 本次研討會再生能源議題中，有一為漁電共生對永續水產養殖業帶來的機會與挑戰，強調永續發展轉型過程中溝通的重要性，該議題之剖析可供本公司類似處境因應參考。
- (六) 因應氣候變遷，近年國際減碳議題研討熱度增加(亦可見於本次參與之 ACESD)，建議各單位部門(主管)可多涉獵國際趨勢及可行方案，俾可於業務發展及執行作業中納入減碳考量。

CONFERENCE PROGRAM



ACESD 2023

2023 8TH ASIA CONFERENCE ON
ENVIRONMENT AND
SUSTAINABLE DEVELOPMENT

Sapporo, Japan
November 3-5, 2023

ICNEA 2023 2023 6TH INTERNATIONAL CONFERENCE ON
NEW ENERGY AND APPLICATIONS

Conference Program

2023 8th Asia Conference on Environment and Sustainable Development (ACESD 2023)

2023 7th International Conference on New Energy and Applications (ICNEA 2023)

Sapporo, Japan | November 3-5, 2023

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Note

Conference Venue

TKP ガーデンシティ札幌駅前/TKP Garden City Sapporo Ekimae

Address: 〒060-0002 2 Chome-19, Kita 2 Jonishi, Chuo Ward, Sapporo, Hokkaido, Japan
〒060-0002

北海道札幌市中央区北2条西2-19（アパホテル〈TKP 札幌駅前〉内）



Access to TKP ガーデンシティ札幌駅前

1. JR 函館本線 札幌駅 南口 徒歩 5 分
2. 札幌市営東西線 大通駅 札幌駅前通地下歩行空間 3 番出口 徒歩 2 分
3. 札幌市営南北線 さっぽろ駅 札幌駅前通地下歩行空間 3 番出口 徒歩 2 分



◆ More details, please visit: <https://www.kashikaigishitsu.net/facilitys/gc-sapporo/access/>

Conference Information and Tips

1) Onsite Registration

Registration desk (Reception table in M2F, 2nd Floor, TKP Garden City Sapporo Ekimae) → Inform the staff of your paper ID→ Sign-in→ Claim your conference kit.

2) Devices Provided by the Organizer

Laptops (with MS-Office & Adobe Reader) / Projectors & Screen / Laser Sticks

3) Materials Provided by the Presenter

Oral Session: Slides (pptx or pdf version). Format 16:9 is preferred.

Poster Session: A1 size

Official language: English.

4) Duration of Each Presentation

※ Keynote Speech: 45min, including Q&A / Oral Presentation: 15min, including Q&A/ Poster Presentation: 10min, including Q&A


5) Notice

※ Please wear your delegate badge (name tag) for all the conference activities. Lending your participant card to others is not allowed.

※ Please take good care of your valuables at any time during the conference. The conference organizer does not assume any responsibility for the loss of personal belongings of the participants during conference day.

※ **UTC+9. Please be aware of time difference between this and your region/country.**

7) Online Presentation Tips

	Meeting ID	Link
 Zoom Download	Room: 893 9530 3005	https://us02web.zoom.us/j/89395303005

Note:

We recommend that you install the Zoom platform on your computer before the conference starts. New users can participate in the Zoom meeting without registration.

Participants who are going to do an online presentation are required to join the rehearsal in Zoom on **Friday, November 3. Duration: 3min apiece. Feel free to leave after you finish the test.**

◆Name Setting

Keynote Speaker: KN-Name

Committee: Position-Name

Author: Paper ID-Name

Listener: Listener-Name

◆Useful Links

◇ [Conference Banner](#)

◇ [Zoom Background](#)

Welcome Message

On behalf of Conference Committees, we welcome you to attend 2023 8th Asia Conference on Environment and Sustainable Development(ACESD 2023) and 2023 7th International Conference on New Energy and Applications (ICNEA 2023) held in Sapporo, Japan during November 3-5, 2023, which is sponsored by iNehc, IJESD and technically supported by Yokohama National University, National Institute for Environmental Studies, Nagasaki University and Japan International Cooperation Agency.

ACESD 2023&ICNEA 2023 welcomes author submission of papers from any branch of Environment and Sustainable Development & New Energy and Applications, and their applications or other topic areas. The areas covered by the include, but not limited to: Environmental Science, Resource Recycling, and Sustainable Development, Monitoring and Treatment of Water Pollutants and Air Pollutants, Environmental Chemical Engineering, Energy Management, and Sustainable Development, Environmental Pollution Monitoring and Pollutant Treatment, Greenhouse Gas Emissions, Air Pollution Monitoring and Emission Reduction, Energy Chemical Engineering and Environmental Biotechnology, Solid Waste Management, Environmental Sustainability, and Sustainable Development, Resource Management and Ecosystem Protection, Renewable Energy, Energy Storage, and Energy-Saving Technologies.

The conference aims to provide an interactive communication platform for practitioners to learn about the most cutting-edge academic and industrial application trends, to share the latest scientific research and technological achievements, innovative ideas and scientific methods in the field of Environment and Sustainable Development & New Energy and Applications, to improve the level of academic research and industrial application in the field of intelligence so as to serve the global strategic deployment of new and old kinetic energy conversion, and promotes technology research, development, and application home and abroad.

We feel deeply grateful to all that have contributed to make this event possible: authors, the conference steering committee, the conference speakers, and the peer reviewers. Thanks are also extended to the conference administrative committee and the supporters for their tireless efforts throughout the course of the conference.

We hope that all participants benefit from the conference, and enjoy the architectural, cultural and natural beauty of Sapporo, Japan.

With Warmest Regards,

Conference Organizing Committee

Conference Committee

International Advisory Chair

Prof. Vincenzo Belgiorno, University of Salerno, Italy

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Prof. Pierluigi Siano, University of Salerno, Italy

Prof. Shin'ya Obara, Kitami Institute of Technology, Japan

Prof. Shiu-Wan Hung, National Central University, Taiwan

Prof. Violeta Mugica Alvarez, Universidad Autonoma Metropolitana-Azcapotzalco, Mexico

Prof. Yuk Feng Huang, Universiti Tunku Abdul Rahman, Malaysia

Prof. Zhe Chen, Aalborg University, Denmark

Prof. Eric J. Strauss, Michigan State University, USA

Prof. Dr. Sebastian Kot, Faculty of Management, Czestochowa University of Technology, Poland

Prof. Dr. Wong Kuan Yew, Universiti Teknologi Malaysia, Malaysia

Assoc. Prof. Attila Kertesz, University of Szeged, Hungary

Assoc. Prof. Cheerawit Rattanapan, Mahidol University, Thailand

Assoc. Prof. Dina Matthew, Instituto Politecnico de Tomar, Portugal
 Assoc. Prof. Dr. Nazaitulshila Rasit, Universiti Malaysia Terengganu, Malaysia
 Assoc. Prof. Gassan Hodaifa Meri, Pablo de Olavide University, Spain
 Assoc. Prof. Maegala Nallapan Maniyam, University Selangor, Malaysia
 Assoc. Prof. Małgorzata Szczepanek, UTP University of Science and Technology, Poland
 Assoc. Prof. Marcello Ruberti, University of Salento, Italy
 Assoc. Prof. Mohamed Alwaeli, Silesian University of Technology, Poland
 Assoc. Prof. Muslum Arici, Kocaeli University, Turkey
 Assoc. Prof. Paulo Mendonca, University of Minho, Portugal
 Assoc. Prof. Renata Dagiliūtė, Department of Environmental Sciences, Vytautas Magnus University, Lithuania
 Assoc. Prof. Sakul Hovanotayan, King Mongkut's Institute of Technology Ladkrabang, Thailand
 Assoc. Prof. Siti Rashidah Mohd Nasir, College of Engineering UiTM, Malaysia
 Assoc. Prof. Sofiah Hamzah, Universiti Malaysia Terengganu, Malaysia
 Assoc. Prof. Zafar Said, University of Sharjah, UAE
 Asst. Prof. Mohamed M. F. Darwish, Benha University, Egypt
 Asst. Prof. Ying-Chiao Wang, National Sun Yat-Sen University, Taiwan
 Asst. Prof. Bahareh Kamranzad, Kyoto University, Japan
 Dr. Adrian Tantau, Buchrest University of Economic Studies, Romania
 Dr. Alban Kuriqi, University of Lisbon, Portugal
 Dr. Angel Torriero, Deakin University, Australia
 Dr. Baba Imoro Musah, Xishuangbanna Tropical Botanical Garden (XTBG) & Chinese Academy of Sciences, China
 Dr. Bilal Khalid, KMITL Business School, Thailand
 Dr. Bo Yang, Kunming University of Science and Technology, China
 Dr. Borja Gonzalez Reguero, University of California, USA
 Dr. Caloiero Tommaso, National Research Council of Italy (CNR-ISAFOM), Italy
 Dr. Chawannat Jaroenphasemmesuk, Mahidol University, Thailand
 Dr. Chodchanok Attaphong, King Mongkut's Institute of Technology Ladkrabang, Thailand
 Dr. Duong Trung Kien, Electric Power University, Vietnam
 Dr. Fatine Ezbakhe, University of Geneva, Switzerland
 Dr. Hakim Che Harun, Universiti Malaysia Terengganu, Malaysia
 Dr. Jinsheng You, University of Nebraska, USA
 Dr. Luca Giupponi, University of Milan, Italy
 Dr. Manoj Khandelwal, Federation University Australia, Australia
 Dr. Mert Gulum, Karadeniz Technical University, Turkey
 Dr. Milvee Killolkumar Vyas, Government Commerce & Science College, India
 Dr. Nanjappa Ashwath, Central Queensland University, Australia
 Dr. Radu Godina, Universidade Nova de Lisboa, Portugal
 Dr. Renuga Verayiah, Universiti Tenaga Nasional, Malaysia
 Dr. Shabir Hussain, Prince Sultan University, Saudi Arabia
 Dr. Shadananan Nair, Centre for Earth Research and Environment Management, India
 Dr. Shehzar Shahzad Sheikh, National University of Science and Technology (NUST), Pakistan
 Dr. Soufiane Haddout, Ibn Tofail University, Morocco
 Dr. Sri Rum Giyarsih, Univ Gadjah Mada, Indonesia
 Dr. Vinod Phogat, South Australian Research & Development Institute, Australia
 Dr. Weeranut Intagun, Silpakorn University, Thailand
 Dr. Wongkot Wongsapai, Chiang Mai University, Thailand
 Dr. Wongkot Wongsapaia, Chiang Mai University, Thailand
 Dr. Xinhua Yin, University of Tennessee, USA
 Dr. Yahya Sheikhnejad, University of Aveiro, Portugal
 Dr. Z. Abu El-Rub, German Jordanian University, Jordan

Agenda Overview (UTC+9)


Friday, November 3, 2023		
Onsite Registration	10:00-17:00	Reception table in M2F, 2 nd Floor
Zoom Test for online presenters	14:00-15:00	<u>ZOOM ID: 893 9530 3005</u>


Zoom Test Timetable

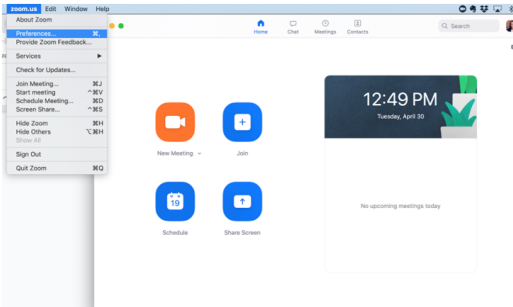
- Participants who are going to do an online presentation are required to join the rehearsal in Zoom on **Friday, November 3, 2023**. Duration: 3min apiece. Feel free to leave after you finish the test.
- We will test control panel including screen sharing, audio, video and “Raise Hand” feature, etc. Please get your presentation slides and computer equipment prepared beforehand.


14:00-14:30	A021 A152-A A029-A A128 A013 A071-A A158-A A086
14:30-15:00	Alternative time for participants who are unavailable at allocated time. Other online participants, includes but not limited to keynote speaker, session chair, committee member, listener.


Zoom Guidance

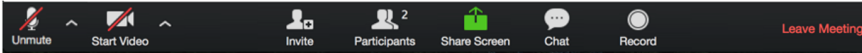
 You can join the meeting without sign-in process. Just put the meeting ID and join us.

 URL: <https://zoom.us/download>



 Each meeting has a unique 9, 10, or 11-digit number called a **meeting ID** that will be required to join a Zoom meeting.

 For any questions on the meeting day, you can text privately to “Assistant” for help.



Audio muted and video off (both indicated by a red slash).

Click to open the Participants box. This will allow you to “Raise Hand”.

To share screen or contents.

Click to open the Chat box. This will allow you to chat with Hosts and Participants.

Saturday, November 4, 2023	
Opening Ceremony & Keynote Speech	Meeting Room: C3E, 3rd Floor ZOOM ID: 893 9530 3005
Chairman: <u>Dr. Mitsuo Yoshida</u> , International Network for Environmental and Humanitarian Cooperation, Nonprofit Inc., Japan	
09:00-09:05	Opening Remarks <u>Prof. Keiji Ujikawa</u> , Yokohama National University, Japan
09:05-09:50	Keynote Speech I: Integrating Green Infrastructure in Flood Risk Reduction to Adapt Climate Change <u>Prof. Mikio Ishiwatari</u> , The University of Tokyo, Japan
09:50-10:35	Keynote Speech II: Challenges and System Solutions for Large-scale Deployment of Renewable Energy in the Context of Carbon Neutrality <u>Prof. Xi Lu</u> , Tsinghua University, China
10:35-11:05	Group Photo & Coffee Break
11:05-11:50	Keynote Speech III: Restoring Wetlands to Conserve Biodiversity and Promote Multiple Ecosystem Services <u>Prof. James T. Anderson</u> , James C. Kennedy Waterfowl and Wetlands Conservation Center, Belle W. Baruch Institute of Coastal Ecology and Forest Science, Clemson University, USA
11:50-13:00	Lunch: C3E, 3 rd Floor

Time	Venue	Onsite Parallel Sessions
13:00-15:30	M4G, 4 th Floor	Onsite Session 1: Environmental Pollution Monitoring and Pollutant Treatment <i>Chairperson: Assoc. Prof. Kah Hon LEONG, Universiti Tunku Abdul Rahman, Malaysia</i> A118, A026-A, A054-A, A046, A056-A, A088, A044-A, A104-A, A003, A038-A, A126
	M4D, 4 th Floor	Onsite Session 2: Greenhouse Gas Emissions, Air Pollution Monitoring and Emission Reduction <i>Chairperson: Assoc. Prof. Min-Hao Yuan, China Medical University, Taiwan</i> A055-A, A135-A, A094-A, A137, A147, A095, A125-A, A154, A425, A016-A, A043-A
	C4I, 4 th Floor	Onsite Session 3: Energy Chemical Engineering and Environmental Biotechnology <i>Chairperson: Prof. K.J.Tseng, Singapore Institute of Technology, Singapore</i> A416, A417, A022, A124-A, A001-A, A035-A, A404, A428-A A406, A427
	M3F, 3 rd Floor	Poster Session 1: Monitoring and Treatment of Water Pollutants and Air Pollutants <i>Chairperson: Prof. Keiji Ujikawa, Yokohama National University, Japan</i> <i>Co-chair: Dr. Mohammad Hakim Che Harun, Universiti Malaysia Terengganu, Malaysia</i> A413, A007-A, A097-A, A120, A121, A138-A, A018-A, A063-A
15:30-16:00	Afternoon Coffee Break: C4I, 4 th Floor	
16:00-19:00	M4G, 4 th Floor	Onsite Session 4: Solid Waste Management, Environmental Sustainability, and Sustainable Development <i>Chairperson: Dr. Mitsuo Yoshida, International Network for Environmental and Humanitarian Cooperation, Nonprofit Inc., Japan</i> A015-A, A106, A079, A102-A, A127, A155, A101-A, A134-A, A082-A, A073-A, A033, A112-A

	M4D, 4 th Floor	Onsite Session 5: Resource Management and Ecosystem Protection <i>Chairperson: Prof. Izabela Irena RZEZNICKA, Shibaura Institute of Technology, Japan</i> A008, A042-A, A069-A, A150-A, A105, A066-A, A093-A, A130, A129, A019-A, A068-A, A162-A
	C4I, 4 th Floor	Onsite Session 6: Renewable Energy, Energy Storage, and Energy-Saving Technologies <i>Chairperson: Dr. Ling-Chun Hung, National Cheng Kung University, Taiwan</i> A084-A, A119, A419, A023-A, A426, A429, A4002-A, A087 A100-A, A141
	M3F, 3 rd Floor	Poster Session 2: Environmental Chemical Engineering, Energy Management, and Sustainable Development <i>Chairperson: Assoc. Prof. Ir. Dr. Sofiah Hamzah, Universiti Malaysia Terengganu, Malaysia</i> A053-A, A090-A, A103, A050, A132, A064-A, A057-A, A418
19:00-20:30	Dinner Time: C5A+C5B, 5th Floor	

Time	ZOOM Meeting Room	Online Parallel Session
13:00-15:00	ZOOM ID: 893 9530 3005	Online Session 1: Environmental Science, Resource Recycling, and Sustainable Development <i>Chairperson: Prof. Shin Lee, University of Seoul, Korea</i> A021, A152-A, A029-A, A128, A013, A071-A, A158-A, A086

Keynote Speaker I (UTC+9)

Saturday, November 4, 2023

9:05-9:50

C3E, 3rd Floor

ZOOM ID: [893 9530 3005](#)



[Prof. Mikio Ishiwatari](#)
The University of Tokyo, Japan

Speech Title: Integrating Green Infrastructure in Flood Risk Reduction to Adapt Climate Change

Abstract: Rapid urbanization, population growth, and the severe effects of climate change are increasing the threat of flooding and require comprehensive and innovative approaches. Relying solely on traditional engineering solutions such as dams and levees has proven insufficient to mitigate flood damage. Recognizing that adaptation to climate change is essential, this keynote presentation will focus on efforts to integrate green infrastructure that leverages natural functions into flood risk reduction. Several countries have pioneered programs focused on enhancing investments in flood risk reduction and integrating adaptation to climate change. A closer examination of recent initiatives in flood-prone regions, including the United States, European countries, and Japan, reveals an evolving flood risk reduction landscape.

Japan, in particular, has taken a proactive approach by developing a comprehensive flood protection policy known as “River Basin Disaster Resilience and Sustainability by All.” This new policy encompasses flood prevention, exposure reduction, and disaster resilience. Notably, it mobilizes all stakeholders within a river basin, including national and local governments, the private sector, residents, and water users, to unite in promoting disaster resilience and sustainability. At the heart of this policy is the key concept of green infrastructure. By incorporating green infrastructure, Japan aims to address not only flood risks, but also broader ecological and economic concerns. Integrating green infrastructure will protect ecosystems, strengthen local economies, and create a more sustainable and attractive national land. The 2015 National Land Plan advocates the multifaceted benefits of the natural environment and incorporates both hard and soft aspects of infrastructure development and land use. In addition, an environmentally oriented river program initiated in 1990 has been successful in preserving Japan's scenic landscapes and riverine habitats. Innovative initiatives demonstrate Japan's achievements in reducing flood risks while remaining in harmony with the environment. Projects such as the Kaminishigo River Project in Fukuoka and the redevelopment project in Futakotamagawa, Tokyo exemplify the integration of urban development and environmental awareness. Efforts in the Chitose River basin in Hokkaido highlight the potential for flood protection while nurturing an endangered ecosystem. Along with these successes, however, come pertinent challenges. Implementing green infrastructure requires evidence of its effectiveness in risk reduction and highlights the need for solid policymaking. Identifying the benefits of green infrastructure and balancing them with costs remains a challenge. Addressing these challenges will require a multidisciplinary and collaborative approach that includes the active participation of various government agencies and communities. This keynote will delve into these important aspects, examine lessons learned, and discuss the central role of green infrastructure in protecting communities from flood threats exacerbated by climate change.

Mikio Ishiwatari is Senior Advisor on Disaster Management and Water Resources Management at Japan International Cooperation Agency, and Visiting Professor, Graduate School of Frontier Sciences, The University of Tokyo. He has been engaged in the projects and research works of disaster risk reduction (DRR), climate change adaptation, and water. He led formulation of the Japanese assistance policies of climate change adaptation and community-based disaster management. He worked at the World Bank as Senior Disaster Risk Management Specialist, and produced the “Learning from Megadisaster: Lessons from the Great East Japan Earthquake”. He worked at various positions at the Ministry of Land, Infrastructure, and Transport, Japan for 17 years. He formulated and supervised national projects of flood risk management

and highways in Iwami District as Director of Hamada River and Road Office, and was responsible for research and technology development as Senior Deputy Director for River Technology and Information. He worked as Urban Development Specialist at the Asian Development Bank. He was a member of “Committee on Building Resilience to Natural Disasters” of the Japan Science Society; and experienced members of “Advisory Council of Development Assistance in Climate Change Adaptation” of Ministry of Land Infrastructure, Transport and Tourism, Japan, “Steering Committee of Water and Climate Change of Asia-Pacific Water Forum”, and other committees of government organizations. He holds a PhD in international studies and MSc in Urban Engineering from the University of Tokyo.

Keynote Speaker II (UTC+9)

Saturday, November 4, 2023

9:50-10:35

C3E, 3rd Floor

ZOOM ID: [893 9530 3005](#)



[Prof. Xi Lu](#)
Tsinghua University, China

Speech Title: Challenges and System Solutions for Large-scale Deployment of Renewable Energy in the Context of Carbon Neutrality

Abstract: Renewable energy, such as wind and solar energy, is expected to experience exponential growth under global climate actions and play an increasingly crucial role in China's synergy control of carbon emission mitigation and pollution reduction. Compared with fossil energy, renewable power generation exhibits significant time volatility, spatial heterogeneity, and high mineral intensity in manufacturing. How to efficiently utilize high-proportion renewable power and mitigate potential environmental risks along the industrial chain becomes a scientific and technological problem. An integrated solution is proposed here in terms of renewable energy assessment, multi-system optimization modeling, life cycle, and material flow analysis to address the challenges for large-scale deployment of renewable energy in the context of carbon neutrality in China and other countries.

Xi Lu, Tenured Professor in School of Environment, Assistant dean of Institute for Carbon Neutrality, Tsinghua University. Dr. Lu received his PhD in John A. Paulson School of Engineering and Applied Sciences at Harvard University in 2010. After then, he continued in working at Harvard as a postdoctoral fellow, research associate and lecturer until joining Tsinghua in 2015. His research interests emphasize study of the technical, economic, and environmental dimensions of zero carbon energy sources in transitioning to a carbon neutral society. His primary research area concentrates on modeling complex systems of renewable energy, and integrated solutions of carbon neutral systems for cities and industrial parks. He published over 15 papers in Science, PNAS, Nature Energy, Joule, Nature Sustainability and Nature Communications on these topics. He won the National Science Fund for Excellent Young Scholars in 2017 and the National Science Fund for Distinguished Young Scholars in 2020.

Keynote Speaker III (UTC+9)

Saturday, November 4, 2023

11:05-11:50

C3E, 3rd FloorZOOM ID: [893 9530 3005](#)

Prof. James T. Anderson

James C. Kennedy Waterfowl and Wetlands Conservation Center, Belle W. Baruch Institute of Coastal Ecology and Forest Science, Clemson University, USA

Speech Title: Restoring Wetlands to Conserve Biodiversity and Promote Multiple Ecosystem Services

Abstract: Wetlands are some of the planet's most biologically diverse and productive ecosystems. They provide multiple ecosystem services, including water purification, flood control, shoreline stabilization, carbon sequestration, and biodiversity conservation. Wetlands are transitional areas between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Preserving natural wetlands is a priority; however, wetland mitigation is essential to an integrated wetland conservation policy. Wetland mitigation occurs when a wetland is converted to a non-wetland, a new wetland is created, or a former wetland is restored to mitigate the loss of wetland function. This presentation will delve into the basics of wetland ecology, historical wetland losses, restoration, and how biodiversity and ecosystem services respond to wetland restoration. Wetland restoration has improved over time, although older wetlands also perform better than younger wetlands, indicating wetlands need time to develop correctly.

Dr. James T. (Jim) Anderson is Director of the James C. Kennedy Waterfowl and Wetlands Conservation Center, the James C. Kennedy Endowed Professor of Waterfowl and Wetland Ecology, and a faculty member in the Department of Forestry and Environmental Conservation at Clemson University. Before Clemson, he was a Wildlife and Fisheries Resources Professor and the Davis-Michael Professor of Forestry and Natural Resources at West Virginia University. His research centers on the ecology of wetland and riparian systems and wetland-dependent wildlife. He earned a B.S. in Wildlife (University of Wisconsin-Stevens Point), an M.S. in Range and Wildlife Management (Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville), and a Ph.D. in Wildlife Science (Texas Tech University). He has authored over 250 publications and mentored more than 60 graduate students. He has received numerous awards for research, teaching, and service.

Onsite Session 1 (UTC+9)

Saturday November 4, 2023

13:00-15:45

M4G, 4th Floor

Environmental Pollution Monitoring and Pollutant Treatment

Chairperson: Assoc. Prof. Kah Hon LEONG, Universiti Tunku Abdul Rahman, Malaysia

A118 13:00-13:15	Proximity analysis using GIS to understand BTEX exposure and its risk assessment Sruthi Jayaraj , Indian Institute of Technology, Madras, India
A026-A 13:15-13:30	Determination of Mercury Accumulated in Blood of Khorat Snail-eating Turtle (Malayemys khoratensis) Monthakarn Mokarat , Department of Environmental Science, Faculty of Science, Khon Kaen University, Thailand
A054-A 13:30-13:45	Gray Water Footprint Assessment of Sugarcane Farming: Evaluation of Urea and Controlled-Release Fertilizer for Groundwater Contamination Due to Nitrate RHK Rathnappriya , Kagoshima University, Japan
A046 13:45-14:00	Study of Graphitic Carbon Nitride and Bismutite Photocatalysts for Efficient Sunlight Driven Removal of Carbamazepine Kah Hon LEONG , Universiti Tunku Abdul Rahman, Malaysia
A056-A 14:00-14:15	Effect of the super absorbent polymers (SAPs) as a soil amendment for soil erosion control under simulated rainfall conditions Pranith Ruwanpathirana , Kagoshima University, Japan
A088 14:15-14:30	Effect of Ca-treated Cypress Biochar in Heavy Metals (Pb, Zn, Cu) Accumulation in Giraffe Heads (Lamium amplexicaule L.) Kei Nakagawa , Nagasaki University, Japan
A044-A 14:30-14:45	Smartphone-enabled quantification of copper ions in water-solutions for communities living in the vicinity of heavy metals mining sites in Africa Izabela Irena RZEZNICKA , Shibaura Institute of Technology, Japan
A104-A 14:45-15:00	Synthesis of Highly Active Electrocatalyst for Electrochemical Oxidation of Naproxen Nhat Huy Luan , Tunghai University, Taiwan
A003 15:00-15:15	Parametric Study Of Coagulant Recovery from Water Treatment Sludge Towards Water Circular Economy Sofiah Hamzah , Universiti Malaysia Terengganu, Malaysia
A038-A 15:15-15:30	Utilization of sewage sludge biochar as a sustainable efficient carbon catalyst for persulfate activation to degrade organic contaminants Nurul Alvia Istiqomah , Korea University, South Korea
A126 15:30-15:45	Environmental Activism of the Communities of Tibetan Buddhism Oyuna Dorzhigushaeva , East Siberia State University of Technology and Management, Russia,

Onsite Session 2 (UTC+9)

Saturday November 4, 2023

13:00-15:45

M4D, 4th Floor

Greenhouse Gas Emissions, Air Pollution Monitoring and Emission Reduction

Chairperson: Assoc. Prof. Min-Hao Yuan, China Medical University, Taiwan

A055-A 13:00-13:15	Examination of N ₂ O Emissions from Nitrogen Fertilizer Applied Red, Yellow Soil in Okinawa, Japan: A Comparison Between Controlled-Release and Conventional Fertilizers W.B.M.A.C. Bandara , Kagoshima University, Japan
A135-A 13:15-13:30	Quantifying Greenhouse Gas Emissions and Nitrogen Losses of Rice-Paddy in Tai Lake Region of China Yufan Gao , Duke Kunshan University, Suzhou, China
A094-A 13:30-13:45	Carbon Distribution and Dynamics under Brittle Straw Incorporation and Different Water Management Schemes: A Microcosm Incubation Study Jerickson Dela Cruz , National Chung Hsing University, Taiwan
A137 13:45-14:00	Study on carbon emission pattern derived from electricity data for rural area—a case study of Yushan island Zhixin Li , School of Architecture, Tsinghua University, China
A147 14:00-14:15	Physical and chemical characterization of particulate matters in fly ash from the coal-fired power plant in Thailand Phisit Khemawoot , Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand
A095 14:15-14:30	Assessment of the impact of COVID-19 Lockdown on the Spatio-temporal distribution of PM _{2.5} in Thailand Cathleen Ariella Simatupang , Mahidol University, Thailand & Macquarie University, Australia
A125-A 14:30-14:45	Visible Light Photocatalysis using Fe ₂ O ₃ /TiO ₂ /Biochar for removal of landfill emissions Arjun Ravikumar , Indian Institute of Technology, Madras, India
A154 14:45-15:00	Soil Carbon Sequestration in Ponds of Gordon Euryale Seed in the Pear River Delta Guodong Yuan , Guangdong Provincial Key Laboratory of Environmental Health and Land Resource, Zhaoqing University, China
A425 15:00-15:15	Application of agrivoltaics towards decarbonization in the Philippines Ruth Anne Gonocruz , National Institute of Advanced Industrial Science and Technology (AIST), Japan
A016-A 15:15-15:30	Assessing the Impact of Lithium Chloride on Maize (<i>Zea mays</i> L.) Seedling: Implications for Environmental Toxicity and Crop Production Hemen Sarma , Department of Botany, Bodoland University, India
A043-A 15:30-15:45	Preparation of a Low-Temperature NH ₃ -SCR Catalyst Using Materials from Spent Zn-Mn Alkaline Batteries Jenyu Jan , Institute of Environmental Engineering, National Yang Ming Chiao Tung University, Taiwan

Onsite Session 3 (UTC+9)

Saturday November 4, 2023

13:00-15:30

C4I, 4th Floor

Energy Chemical Engineering and Environmental Biotechnology

Chairperson: Prof. K.J.Tseng, Singapore Institute of Technology, Singapore

A416 13:00-13:15	Thermochemical Pretreatment of Eucalyptus Wood for Bioethanol Production by Simultaneous Saccharification and Fermentation Nopparat Suriyachai , University of Phayao, Thailand
A417 13:15-13:30	Economic analysis of SOFC combined cycle with CCS accompanied by methanation and methanol production Zhao Han , Kitami Institute of Technology, Japan
A022 13:30-13:45	Biochemical Changes During Fermentation and Biological Activities of Fermented Fruit Wastes Nam Weng Sit , Universiti Tunku Abdul Rahman, Malaysia
A124-A 13:45-14:00	On the applicability of hydrochar mediated anaerobic digestion towards enhanced performance and biogas recovery Manal Ali , Department of Civil and Environmental Engineering, Tokyo Institute of Technology, Japan
A001-A 14:00-14:15	Production of Protease from <i>Aspergillus Niger</i> in Solid State Fermentation for Enzymatic Treatment of Aquaculture Sludge Nazaitulshila Binti Rasit , Universiti Malaysia Terengganu, Malaysia
A035-A 14:15-14:30	Ammonia generation from protein substrates under toxic ammonia concentration Masoud Makian , Inha University, South Korea
A404 14:30-14:45	Numerical Simulation of Jamin Damage in Drilling Process Keming Sheng , China university of petroleum (Beijing), China
A428-A 14:45-15:00	Improved production of acetate from CO ₂ through humin-assisted microbial Biec Nhu Ha , Nagoya University, Japan
A406 15:00-15:15	Polyamino acid grafted modified nano biochar as an environmentally friendly shale inhibitor in water-based drilling fluid Qiannan Wang , China university of petroleum (Beijing), China
A427 15:15-15:30	Investigation of Mixing Ratio for Blended Biomass Pellet from Cassava Rhizome and Bagasse on Physical Characteristic and Energy Cost Analysis Weeranut Intagun , Silpakorn University, Thailand

Onsite Session 4 (UTC+9)

Saturday November 4, 2023

16:00-19:00

M4G, 4th Floor

Solid Waste Management, Environmental Sustainability, and Sustainable Development

Chairperson: Dr. Mitsuo Yoshida, International Network for Environmental and Humanitarian Cooperation, Nonprofit Inc., Japan

A015-A 16:00-16:15	A Small-scale Recycling of Plastic technology Amod Karmacharya , Bhoomithan Nepal, Nepal
A106 16:15-16:30	Profiling Waste Management and Modeling Circular Economy Transition of Dairy Cattle Farmer Groups in Pacitan Indonesia Ambar Pertiwinigrum , Universitas Gadjah Mada, Indonesia
A079 16:30-16:45	Hyperspectral Imaging for e-waste material identification Trunal Patil , STIIMA-CNR (Institute of Intelligent Industrial Technologies and Systems for Advanced Manufacturing, National Research Council of Italy) and University of Brescia, Italy
A102-A 16:45-17:00	Analysis of Sustainable Coastal Cities in Indonesia Dewi Saraswati , IPB University, Indonesia
A127 17:00-17:15	A Comparative Study of the Sustainable Efficiency and Technical Efficiency of Upstream Cacao Production in Thailand Sudlop Ratanakuakangwan , Chulalongkorn University, Thailand
A155 17:15-17:30	Key Performance Indicators (KPIs) for Sustainability Assessments of Fishing Vessels operating in the Adriatic Sea Tatjana Haramina , Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb, Croatia
A101-A 14:30-14:45	Environmental Vulnerability and Rural Sustainable Development: The case of Indonesia Rahmatun Fauza , IPB University, Indonesia
A134-A 17:45-18:00	Traditional Local Knowledge & Practices as a Tool for Enhancing Global Environmental Sustainability Lotta Viikari , University of Lapland, Finland
A082-A 18:00-18:15	Assessing the sustainability of rural land development through the perspective of environmental efficiency Hsing-Fu Kuo , National Quemoy University, Taiwan
A073-A 18:15-18:30	Enhancing Forestry Sector Taxation Policies for Sustainable Development: Addressing Disputes and Challenges Titi Muswati Putranti , Universitas Indonesia, Indonesia
A033 18:30-18:45	CSV alliance model of SMEs considering local clusters in Japan Naoto Shirasawa and Yuna Seo , Tokyo University of Science, Japan
A112-A 18:45-19:00	Recycling of e-waste plastics by using supercritical fluids Amrita Preetam , Indian Institute of Technology Delhi, India

Onsite Session 5 (UTC+9)

Saturday November 4, 2023

16:00-19:00

M4D, 4th Floor

Resource Management and Ecosystem Protection

Chairperson: Prof. Izabela Irena RZEZNICKA, Shibaura Institute of Technology, Japan

A008 16:00-16:15	Mapping Wetland Habitat Changes Using Remote Sensing in Mai Po and Inner Deep Bay, Hong Kong from 1986 to 2020 Ivan H. Y. Kwong , The Chinese University of Hong Kong, Hong Kong
A042-A 16:15-16:30	Study on reducing urban heat island effect through resident greening activities Beijia SANG , Shibaura Institute of Technology, Japan
A069-A 16:30-16:45	Multiscale Characteristics and Drivers of the Bundles of Ecosystem Service Budgets in the Su-Xi-Chang Region, China Jinhua Chen and Qi Fu , Soochow University, China
A150-A 16:45-17:00	Throughfall chemistry of a tea plantation in northeastern Taiwan Teng-Chiu Lin , National Taiwan Normal University, Taiwan
A105 17:00-17:15	Disentangling the Complexity of Human, Biodiversity Loss, and Climate Change Interlinkages in Tropical Region Muhammad Reza Rahmaditio , Bogor Agricultural University, Indonesia
A066-A 17:15-17:30	Interaction between CO ₂ -induced pH reduction, fish handling, and chemical cues in marine medaka behavior Alexandre Lebel , University of Saint Joseph, Macao SAR
A093-A 14:30-14:45	Framework of Water-energy-food-sectors (WEFX) nexus from literature review Chen Chen , Kyoto University, Japan
A130 17:45-18:00	Robinson Bayou Basin Improvement Study Ryan Yelton , Ecological Resource Consultants Inc., USA
A129 18:00-18:15	Enhancing the climate resilience of semiarid river systems and their catchments Jasper Knight , University of the Witwatersrand, South Africa
A019-A 18:15-18:30	Biosurfactant-Based Remediation of Crude Oil-Contaminated Soil: A Promising Approach Nazim Fordid Islam , Department of Botany, N.N. Saikia College, Titabar, Assam, India
A068 18:30-18:45	Preparation of an Oxygen-Vacant Bimetal-Doped TiO ₂ Catalyst by a Two-Step Impregnation Method for Enhanced NH ₃ -SCR Activity and Selectivity Wei-Che Hung , Institute of Environmental Engineering, National Yang Ming Chiao Tung University, Taiwan
A162-A 18:45-19:00	The Role of Indigeneous People Movement in the Restoration of Java Forests Bernadia Linggar Yekti Nugraheni, Amrizarois Ismail, and Shresta Purnamasari , Soegijapranata Catholic University, Indonesia

Onsite Session 6 (UTC+9)

Saturday November 4, 2023

16:00-18:30

C4I, 4th Floor

Renewable Energy, Energy Storage, and Energy-Saving Technologies

Chairperson: Dr. Ling-Chun Hung, National Cheng Kung University, Taiwan

A084-A 16:00-16:15	Vertical Integration and Energy Innovation: A Case in the Mining Sector Madhuri Pal , Kyoto University, Japan
A119 16:15-16:30	Impact of Electricity Mix on the Eco-friendliness of Electric Vehicles Febelyn Reguyal , The University of Auckland, New Zealand
A419 16:30-16:45	Study of a Hakodate hydrogen supply chain using offshore and onshore wind power in the south of Hokkaido, taking into account the load of the tramway Riku Murofushi , Kitami Institute of Technology, Japan
A023-A 16:45-17:00	The opportunities and challenges aquavoltaics create for sustainable aquaculture fishery in Taiwan Ling-Chun Hung , National Cheng Kung University, Taiwan
A426 17:00-17:15	Modeling of The Thermomechanical Effect of Cold-Water Injection on Geothermal Well Injectivity Afdhal Baravanni , Institut Teknologi Bandung, Indonesia
A429 17:15-17:30	Development of Hetero-Junction Cells with a DLC film anti-reflection layer Tanawit Srisantirut , King Mongkut's Institute of Technology Ladkrabang, Thailand
A4002-A 14:30-14:45	Interesting hydrogen storage and mechanistic aspects of chromium trioxide added magnesium hydride D. Pukazhselvan , University of Aveiro, Portugal
A087 17:45-18:00	Design Considerations for Distributed Electrical Energy Storage in Sustainable Urban Environment K.J.Tseng , Singapore Institute of Technology, Singapore
A100-A 18:00-18:15	The Pitfalls of District Heating – An Exploratory Study of Homeowners' Assessment of Energy-Efficient Heating Systems in Germany Karen Wesely , TU Dortmund University, Germany
A141 18:15-18:30	Implementation of Environmental Ethics in the Advancement of Sustainable Development: the Experience of Japan Anastasia Nasibulina , East Siberia State University of Technology and Management, Russia

Poster Session 1 (UTC+9)

Saturday November 4, 2023

13:00-14:20

M3F, 3rd Floor

Monitoring and Treatment of Water Pollutants and Air Pollutants

Chairperson: Prof. Keiji Ujikawa, Yokohama National University, Japan

Co-chair: Dr. Mohammad Hakim Che Harun, Universiti Malaysia Terengganu, Malaysia

1# A413 13:00-13:10	Adsorption Equilibrium Characteristics of Phenol and Lead on Bamboo Chitosan Composite Bead Kim Dong Seon , Chonnam National University, Republic of Korea
2# A007-A 13:10-13:20	Hydrothermal Synthesis of Eco-hydroxyapatite from Limestone Sludge for Adsorption of Pb ²⁺ from Wastewater Kae-Long Lin , Department of Environmental Engineering, National Ilan University, Taiwan
3# A097-A1 13:20-13:30	Activated Carbon Regeneration Technology Using DC Thermal Plasma Soo-Min Lee , Cheorwon Plasma Research Institute, Republic Of Korea
4# A120 13:30-13:40	One-step Synthesis of Magnetic Biochar from Durian Shell via K ₂ FeO ₄ Activation for Lead Removal Orrawan Pewpa , Prince of Chumphon Campus, Thailand
5# A121 13:40-13:50	Characterization and Application of Biochar Derived from Snake Fruit Peel for Lead Adsorption Wisit Maneesri , Prince of Chumphon Campus, Thailand
6# A138-A 15:50-14:00	A preliminary investigation into chloroxylenol, a popular antimicrobial ingredient in hygiene and disinfection products, in rivers of Hong Kong Deejay Suen-yui MAK , Tung Wah College, Hong Kong
7# A018-A 14:00-14:10	Water Quality Monitoring System by Using Low Cost Arduino Mohammad Hakim Che Harun , Universiti Malaysia Terengganu, Malaysia
8# A063-A 14:10-14:20	A Study on Potential Approaches to Remove High Boiling-Point VOCs Emitted from an Automotive Painting Process Byeong-Gyu Park , Konkuk University, Republic of Korea

Poster Session 2 (UTC+9)

Saturday November 4, 2023

16:00-17:20

M3F, 3rd Floor

Environmental Chemical Engineering, Energy Management, and Sustainable Development

Chairperson: Assoc. Prof. Ir. Dr. Sofiah Hamzah, Universiti Malaysia Terengganu, Malaysia

1# A053-A 16:00-16:10	Fostering Human Well-being Through Sustainable Energy Development Using Intervention Cognitive Approach to Prevent Climate Change in Indonesia Emma Amalia Ulfa and Said Sidik , PT PLN Indonesia Power, Indonesia
2# A090-A 16:10-16:20	Exploring Seasonal Variability of the Correlation between Satellite-Derived Land Surface Temperature and Ground-Air Temperature Data for Air surface temperature Mapping in Korea Rey Jalbuena , Dong-A University, South Korea
3# A103 16:20-16:30	Strategic Variables of Green Economy Transformation toward Sustainable Development in Indonesia Thres Sanctyeka , Bogor Agricultural University, Indonesia
4# A050 16:30-16:40	Investigate the effectiveness of Vaastu Features using Computational Fluid Dynamics Kirishanth Thanabalasingam and Dulini Yasara Mudunkotuwa , University of Sri Jayewardenepura, Sri Lanka
5# A132 16:40-16:50	Unraveling YouTube Stances on Global Warming: An In-depth Analysis of Skeptics and Believers Minjong Cheon , Korea Institute of Science and Technology, Republic of Korea
6# A064-A 16:50-17:00	Development of a Moisture Pretreatment Device for the Accurate Quantitation of Water-Soluble Volatile Organic Compounds in Air Sang-Woo Lee , Konkuk University, Republic of Korea
7# A057-A 17:00-17:10	Development of moisture removal technology for precise measurement of trichloroethylene concentration Da-Hyun Baek , Konkuk University, Republic of Korea
8# A418 17:10-17:20	Equipment Sizing of a SOFC Triple Combined Cycle and a Hydrogen Fuel Generation System Shafirah Khairina Budiawan , Kitami Institute of Technology, Japan

Online Session 1 (UTC+9)

Saturday November 4, 2023

13:00-15:00

ZOOM ID: [893 9530 3005](https://us03zoom.us/j/89395303005)

Environmental Pollution Monitoring and Pollutant Treatment

Chairperson: Prof. Shin Lee, University of Seoul, Korea

A021 13:00-13:15	Life Cycle Assessment of the Production of Concrete Masonry Units in the United Arab Emirates, Mohammed H. Alzard , Department of Civil and Environmental Engineering, UAE University, Al Ain, United Arab Emirates
A152 13:15-13:30	Exploring Closed-Loop Recycling Potential for Yttria-Stabilized Zirconia Thermal Spray Waste Powders Chun-An Yu , National Cheng Kung University, Taiwan
A029-A 13:30-13:45	Can digitalization release the abatement potential of CO2 emissions? Evidence from a quasi-natural experiment in China Lan Xu , Chongqing University, China
A128 13:45-14:00	Measuring the Environmental Impact of Coarse Cereals Production in Madhya Pradesh: A Comparative Analysis using Life Cycle Assessment Nihal Singh Khangar , Indian Institute of Technology Indore, Madhya Pradesh, India
A013 14:00-14:15	Marketization, Industrial Structure Upgrading and Carbon Emission Intensity: Evidence from China Yingying Qi , Sichuan University, China
A071-A 14:15-14:30	Assessing the Impact of Place-based Policy on Environmental Performance at the Firm Level--Evidence from China's National Demonstration Eco-Industrial Parks Qi Cheng , Chongqing University, China
A158-A 14:30-14:45	Tin Recovery from Refractory bricks through Fusion and Leaching with Alkali Hydroxides and Carbonates Hung-Wei Wan , National Cheng Kung University, Taiwan
A086 14:45-15:00	The Relative Effectiveness of Alternative Financial Incentive Policies in Enhancing the Role of Renewable Energy Aid Gumin Jung , University of Seoul, Korea

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