ReSAGPAPR WG Newsletter

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Soil and Groundwater Pollution of Asian and Pacific Region

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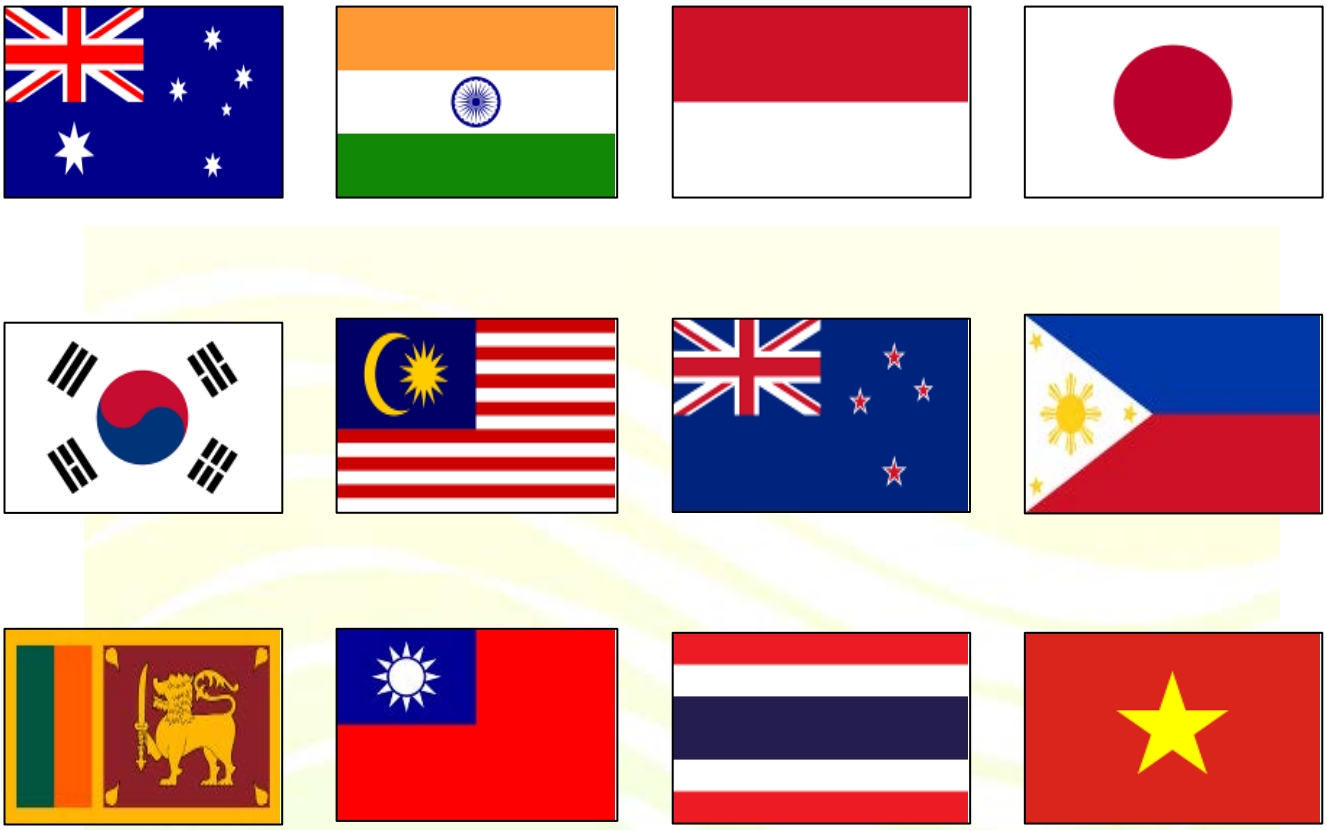
Member Countries



Chairman of ReSAGPAPR WG

Dr. Tsair- Fuh Lin

Chair, Working group on the Remediation of Soil and Groundwater Pollution of Asian and Pacific Region

Distinguished Professor, Department of Environmental Engineering, and
Vice President for Research and Development
National Cheng Kung University

Program of 2021 International Workshop on Developments in Contaminated Site Characterization and Remediation

Date: December 15 (Wed.)-16 (Thu.), 2021

Venue: 1st Lecture Room, International Conference Hall, Kuang-Fu Campus, National Cheng Kung University (No.1, University Road, Tainan City)

Day 1: 12:45 AM to 08:30 AM (GMT), December 15 (Wed.), 2021
08:45 AM to 04:30 PM (Taiwan Time), December 15 (Wed.), 2021

Time(GMT)	Topic	Presenter
12:45-01:00	Registration	
01:00-01:20	Opening Remarks & Group Photos Taiwan EPA: Deputy Minister – Hung-Teh, Tsai US EPA: Assistant Administrator of International and Tribal Affairs – Jane Nishida	
01:20-01:25	Introduction to the Workshop	
01:25-02:00	Electrical Hydrogeology: Can We Farm Microbes for Degradation?	Todd Halihan
02:00-02:35	Horizontal Wells for Site Characterization and Remediation	Lance Robinson
02:35-02:55	Tea Break	
02:55-03:15	The Importance of the Geological Model in Ground-truthing the Conceptual Site Model	Rick Cramer
03:15-03:40	Web-Application Based Digital Conceptual Site Model	Colin Plank
03:40-04:00	Day 1 Morning Session – Q&A	
04:00-05:00	Lunch	
05:00-05:30	Tailoring Reagents to Site Geochemistry and Hydrogeology	Mike Lee
05:30-06:00	Enhancing *In-Situ* Chemical Oxidation Using Multiple Amendments	Paul Dombrowski
06:00-06:20	Tea Break	
06:20-06:55	Reduction of Organochloride Pesticides	Alan Seech
06:55-07:25	Shallow Soil Blending to Improve Reagent Contact with Contaminants	John Haselow
07:25-08:10	Mass Flux	Mike Annable/ Marjan Joris
08:10-08:30	Day 1 Afternoon Session – Q&A	

Day 2: 12:45 AM to 09:00 AM (GMT), December 16 (Thu.), 2021
08:45 AM to 05:00 PM (Taiwan Time), December 16 (Thu.), 2021

Time(GMT)	Topic	Presenter
00:45-01:00	Registration	
01:00-01:35	Co-metabolism (with a focus on 1,4-Dioxane and Pesticides)	Paul Hatzinger
01:35-02:10	Dynamic Groundwater Recirculation (DGR)	Marc Killingstad
02:10-02:30	Tea Break	
02:30-03:15	Microbiological Tools (MBTs)	Dora Taggart
03:15-03:55	Closely-Coupled Source Zone Thermal Treatment and Plume Bio Treatment via Warm Water Recirculation	Rob D'Anjou
03:55-04:15	Day 2 Morning Session – Q&A	
04:15-05:15	Lunch	
05:15-05:50	Biogeochemically Enhanced Reductive Treatment of Chlorinated Organics and Metals	Dan Leigh
05:50-06:20	Thermally Enhancing Natural Biological and Hydrolysis Processes	Emily Crownover
06:20-06:55	Carbon Injection to Sequester and Treat Contamination	Dimin Fan
06:55-07:15	Tea Break	
07:15-07:50	Groundwater/Surface Water Interface	Ben Bentkowski
07:50-08:40	Use of Surfactants to Improve Remedial Outcomes	Ben Shiau
08:40-09:00	Day 2 Afternoon Session – Q&A	
09:00	Workshop Ends	

* The organizers reserve the rights to adjust the program.

International Workshop: Invited Speakers

Jane Nishida

Assistant Administrator for EPA's Office of International and Tribal Affairs (OITA)

She served as EPA's Acting Administrator from January 20, 2021 to March 11, 2021, before the confirmation of current EPA Administrator Michael S. Regan. She has also served as Director of the Office of Regional and Bilateral Affairs within OITA.

In her current capacity, she leads EPA's international and tribal portfolios, and is responsible for the full range of EPA's environmental policy development and program implementation in tribal lands and in sovereign nations outside of the United States. Nishida represents EPA within the United States Government and works closely with tribal governments, foreign governments, international organizations, and other key stakeholders on matters relating to the environment.

Nishida has thirty years of environmental experience working in federal and state government, and international and nongovernmental organizations. Prior to joining EPA in 2011, Nishida served as the Senior Environmental Institutions Specialist at the World Bank. From 1995 to 2002, she was appointed as the Secretary of Maryland's Department of the Environment. Additionally, she served as the Maryland Executive Director of the Chesapeake Bay Foundation. She also held positions as Legislative Officer in the Maryland Governor's Office and Committee Counsel in the Maryland General Assembly.

Nishida received a Bachelor of Arts in International Affairs from Lewis & Clark College in Portland, Oregon and a Juris Doctorate from Georgetown Law Center in Washington, D.C.

Todd Halihan

Dr. Halihan is a Professor and the Sun Company Clyde Wheeler Chair in Hydrogeology at Oklahoma State University, and Chief Technical Officer for Aestus, LLC.

Dr. Halihan's professional interests center in subsurface characterization using electrical hydrogeology and sustainable water supply. He has been an associate editor for Ground Water and has served as the Secretary-Treasurer of the U.S. Chapter of the International Association of Hydrogeologists. He served as the Chair of the Hydrogeology Division and the South-Central Section of the Geological Society of America. He served as the National Ground Water Association's 2018 McEllhiney Lecturer.

Dr. Halihan is the recipient of the Karin and Robert J. Sternberg Award for Excellence, the Partners in Conservation Award from the U.S. Department of Interior, and the Sterling L. Burks Award for environmental research. He is also a professional geophysicist (CA), professional driller (OK) and a PADI divemaster. He has provided input to stories on CBS, Fox News, NPR, CNBC, Popular Science, the New Yorker and the New York Times.

Lance Robinson

Lance Robinson is a researcher specializing in environmental governance, and social-ecological resilience in pastoralist systems. His PhD research among Kenyan pastoralists focused on the connection between social-ecological resilience and the approaches to participation used by formal sector agencies working with pastoralists. Since completing his PhD, his research work has centered around participatory and community-based approaches to environmental governance. He also has over ten years experience working with NGOs and as a consultant in Latin America, Africa and Asia.

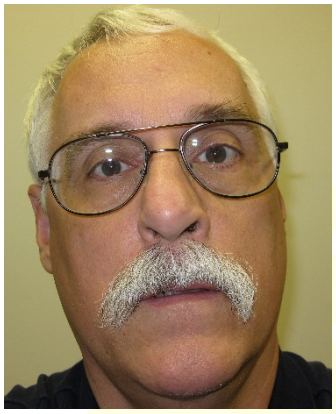
Rick Cramer

Rick has more than 30 years of experience providing strategic planning and technical direction for multidisciplinary environmental projects for a wide range of clients from the commercial, federal, and municipal arenas. Rick Cramer is a California licensed Professional Geologist (PG) with Burns & McDonnell out of their Brea, California office. Rick has a BS degree in geology from University of the Pacific and a MS degree in geology from University of California, Davis. He began his professional career in the petroleum industry, and introduced the Environmental Sequence Stratigraphy (ESS) approach to groundwater remediation projects.

Colin Plank

Mr. Plank has over 20 years of experience in the study of geomorphology, stratigraphy, sedimentology, and physical processes in both professional and academic settings. His experience as a senior stratigrapher on groundwater remediation projects across the country has led to expertise in evaluating aquifer continuity, heterogeneity, and geometry in a manner that is process-based and geologically defensible. Mr. Plank has been instrumental in developing and applying Environmental Sequence Stratigraphy (ESS), a system for stratigraphic interpretation based on petroleum industry techniques and now widely recognized as an industry best practice. Using ESS he emphasizes correlations between wells that are based on the use of appropriate modern depositional system analogues, observed relative grainsize trends, and preserved sediment structure in order to link packages of sediment deposited at the same time. In

2015 Mr. Plank received a Letter of Commendation from the Secretary of the Air Force for the impact of his stratigraphic work on site understanding and remediation results at Kirtland Airforce Base, NM.



Michael D. Lee

Dr. Michael D. Lee is Vice-President of Research and Development at Terra Systems, Inc. (TSI) of Claymont, DE, USA, a consulting and service firm specializing in the development and application of technologies for the bioremediation of surface and subsurface contaminants. He has a Doctor of Philosophy (1986) and Master of Science (1983) degrees in Environmental Science and Engineering from Rice University and a Bachelor of Science degree in Biology from University of Louisiana at Monroe (1980). Dr. Lee has over 35 years of experience in the field of bioremediation with expertise in applying in situ anaerobic bioremediation of chlorinated solvents and metals, implementing in situ aerobic bioremediation of hydrocarbons and other contaminants in groundwater and waste impoundments, conducting biodegradation and chemical oxidation treatability studies, and assessing natural attenuation of organic contaminants. He has been HAZWOPER certified since 1988. Dr. Lee was a technical lead for the first successful demonstration of bioaugmentation to promote the complete anaerobic biodegradation of trichloroethene and cis-1,2-dichloroethene for the Remediation Technologies Development Forum at Dover Air Force Base. Terra Systems was a participant in the Source Area BioREmediation (SABRE) project in the United Kingdom that demonstrated in the laboratory and field the anaerobic bioremediation of dense non-aqueous phase trichloroethene. He has conducted laboratory microcosm, column studies, and field demonstrations of the anaerobic bioremediation of chlorinated solvents and chemical oxidation at over hundred sites. He jointly holds the patent on the use of emulsified soybean oil to support complete reductive dechlorination of chlorinated solvents. He develops new emulsified vegetable oil (EVO), EVO and zero valent iron, and other bioremediation products for TSI. Dr. Lee has published over 100 articles in peer-reviewed journals, conference proceedings, or books.

Paul Dombrowski

Paul M. Dombrowski, P.E., is a Part-Time Lecturer at Tufts University in the Department of Civil and Environmental Engineering Department and a Senior Remediation Engineer at ISOTEC Remediation Technologies, Inc. He has over 17 years in the environmental industry with experience in hazardous waste site investigation and remediation, with experience in engineering consulting for 12+ years with AECOM and with a certified Small Business remediation services firm (ISOTEC).

Paul Dombrowski's area of expertise is in remediation of contaminated soil and groundwater with a focus in designing and implementing in-situ remediation technologies. He has direct experience designing and/or implementing a broad range of in situ groundwater and soil treatment technologies at more than 100 sites using chemical oxidation, enhanced bioremediation, zero valent iron, injectable activated carbon, surfactants, permeable reactive barriers, thermal remediation, and combined remedies.

Mr. Dombrowski also has experience with PFAS investigations, design and build for water/wastewater projects, and research experience in arsenic and metals geochemistry. At Tufts University Paul teaches Site Remediation Technologies (CEE 143). He has taught Senior Capstone, has co-advised master's degree students, and served on master's thesis committees.

Alan Seech

Alan is a soil chemist and serve as the senior manager of technology applications for Evonik in southern California.

John Haselow

John Haselow received a PhD in Chemical Engineering from Purdue University in 1988. He has 25+ years experience in the environmental field. From 1988 to 1995, Dr. Haselow was a research engineer/manager at the Savannah River National Laboratory in Aiken, South Carolina. In 1995, Dr. Haselow founded Redox Tech, a specialty environmental remediation company, which is headquartered in Cary, North Carolina. Dr. Haselow has been involved in over 1000 environmental remediation projects involving chemical oxidation, bioremediation, metals stabilization, and thermal recovery.

Michael D. Annable

Dr. Annable has been a faculty member in the Department of Environmental Engineering Sciences at the University of Florida since 1992. He received his Ph.D. from Michigan State University working on soil vapor extraction of multi-component non-aqueous phase liquids. His current research interests are in physical-chemical processes related to field scale application of innovative technologies for subsurface remediation. Studies have been conducted at field sites including, Hill AFB Utah, CFB Borden Ontario, Dover AFB Delaware, NASA KSC Florida and the Sages dry-cleaner site in Jacksonville Florida. Results from these field studies are being used to define the relationship between contaminant mass removal and mass flux / plume response. Research is also being conducted on new

methods for measuring contaminant flux and groundwater flow in aquifers. Research on the use of innovative tracers for characterizing fluid distributions and interfaces is being conducted at both laboratory and field scales. The use of tracers for characterizing site conditions is currently being applied at both hazardous waste sites and to assess agricultural water quality problems. Dr. Annable has published more than 75 journal articles and currently serves as an Associate Editor for the Journal of Contaminant Hydrology.

Marjan Joris

I am a geologist by education and fascinated by the processes in the subsurface. As an account manager, I look for solutions for you and help determine how flux measurements can be an added value. My technical background in environmental consultancy comes in handy here.

Paul Hatzinger

Dr. Paul Hatzinger is the Director of the Biotechnology Development and Applications Group at APTIM. Paul holds a BS degree from St. Lawrence University and both MS and PhD degrees from Cornell University. Co-metabolism of traditional and emerging contaminants has been an area of interest throughout his 25-year career in R&D. Paul's research group at APTIM has been instrumental in improving our understanding of co-metabolic degradation processes and developing field approaches to utilize these processes for contaminant remediation. He has authored more than 90 peer-reviewed

papers and book chapters and has served as the principal investigator on research grants from NSF, EPA, DOE, AFCEC, SERDP, ESTCP, NESDI, and USACE.

Marc Killingstad

Marc Killingstad is a Technical Expert/Groundwater Hydrologist and is currently the Director of the Hydrogeology Community of Practice for Arcadis, providing high-level hydrogeologic support for groundwater remediation projects as well as promoting innovation and ensuring technical consistency across Arcadis' technical network. In his 20+ years of practice, he has acquired extensive experience and knowledge in applying state-of-the-art concepts and principles of quantitative hydrogeology to support site investigation and remedial design work in a wide variety of geologic settings throughout North America, South America, Africa, Australia, and Europe.

Sam Rosolina

As Director of Research and Development, Sam works with each of the laboratories within Microbial Insights and collaborates with experts across multiple industries to continually drive innovation forward. Throughout the development of new molecular biological tools, his focus is a balance of hard science, accessible methods, and actionable data. He received his B.A. in Chemistry from Berea College and went on to complete a Ph.D. in Analytical Chemistry at the University of Tennessee. Throughout his Ph.D. research, Sam focused on analysis of trace-level environmental toxins including

heavy metals and toxic gases. Detection and quantification of trace contaminants in complex mixtures and media is an especially challenging field requiring not only the development and optimization of innovative new analytical methods but also the establishment of highly rigorous QA/QC procedures for initial and continuing method validation.

Dora Taggart

Since joining Microbial Insights in 2001, Dora Taggart has advanced the field of Molecular Biological Tools, including pioneering work in qPCR analysis and stable isotope probing. Dora continues to propel MI forward by collaborating with leading researchers in academia and federal agencies to keep MI at the forefront of the industry. As CEO, Dora has become a global ambassador for MBTs, regularly presenting as an invited speaker at environmental and corrosion conferences, leading hundreds of technical workshops worldwide, and co-authoring guidance documents with groups like the Interstate Technology Regulatory Council (ITRC) EMD team and ER Wiki (Remediapedia) to support appropriate use and interpretation of MBTs. In 2011, Dora was named the most valuable team member for the ITRC EMD team. Dora received her degree in Biomedical Engineering from Vanderbilt University.

Robert D'Anjou

Robert D'Anjou serves as Technical Director for GEO Environmental Remediation Company. Having over a decade of professional experience in the Environmental &

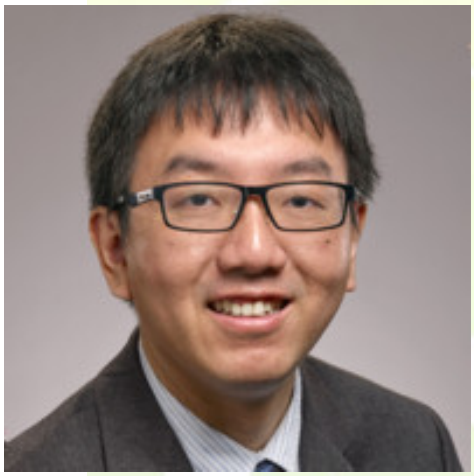
Geosciences fields, focusing strongly on In Situ Thermal Remediation (ISTR) and Combined In Situ Remediation technologies. His experience includes over 30 thermal remediation projects as Technical Director, spanning ERH, TCH, and Combined Thermal Remedies. Rob brings a uniquely strong, well-rounded, background in research design, scientific theory, and remediation system engineering – facilitating unique solutions to complex remediation problems. His strong academic background in biogeochemistry and professional career in thermal remediation technologies are helping drive innovation in the development of heat-enhanced biodegradation applications.

Dan Leigh

Dan Leigh is the Technology Applications Manager for In Situ Reductive Technologies at Evonik Active Oxygens, LLC. He is a registered geologist and hydrogeologist with more than 35 years of experience in contaminated site evaluation and remediation; over 30 of which has been focused on treatment of chlorinated organics and metals. He has designed and conducted assessment and remediation projects across the United States and Internationally. Dan has authored publications and technical presentations spanning the areas of geology, atoll island and coastal hydrogeology, geochemistry, natural attenuation, chemical reduction, aerobic, anaerobic, and co-metabolic bioremediation, bioaugmentation, mechanochemical destruction of organics, and in situ biogeochemical treatment of chlorinated organics and metals. He was the Principal Investigator for the US Air Force BAA program Biogeochemical Processes Technology Evaluation Research and Development grant in 2010. He continues to evaluate and develop methods that improve the application and effectiveness of these technologies.

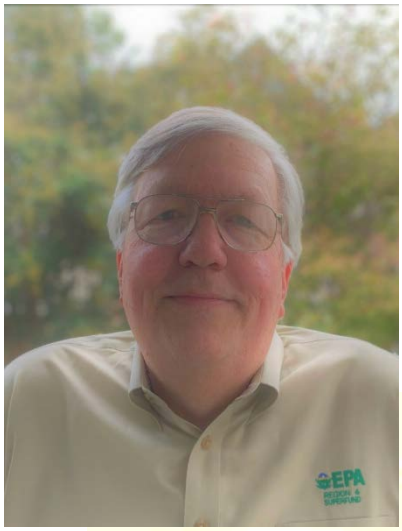
Emily Crownover

Emily Crownover is a managing principal engineer at TRS, overseeing engineers supporting thermal remediation projects through site design, construction, operations, and research and development. She joined TRS after obtaining her Ph.D. in Bioengineering from the University of Washington-Seattle. She manages the research and development program at TRS, focusing on research including PFAS treatment in water and soil, 1,4-dioxane remediation, and low temperature heating to enhance degradation pathways.



Dimin Fan

Dr. Fan is an Environmental Scientist with Geosyntec Consultants based in Columbia, Maryland. He has over ten years of experience in researching & developing, evaluating, and applying innovative technologies and solutions for soil and groundwater remediation across academia, regulatory agency, and private sector. His expertise mainly includes the fundamental and applied aspects of both active and passive iron-based remediation technologies. Before he joined Geosyntec, he was an ORISE research fellow with USEPA Superfund Office for three years where he conducted evaluation on in situ activated carbon based technology. He obtained his PhD from Oregon Health & Science University. He currently serves as PI or co-PI on multiple SERDP and ESTCP funded projects focusing on in situ remediation using activated carbon-based amendments.



Ben Bentkowski

Ben Bentkowski is a Senior Hydrogeologist in the Scientific Support Section in the Superfund and Emergency Management Division of EPA Region 4 in Atlanta, GA. He has been with the Agency 14 years in the role of scientific support for the hydrogeology of investigations and remedial actions and is also the Regional Vapor Intrusion coordinator. Ben participates in several national workgroups including the Groundwater Forum and is an instructor for the CERCAL Education Center's High-Resolution Site Charicterization training course.

Prior to joining EPA, Ben provided geology, hydrogeology, project and program management skills to various Federal contracting vehicles while employed at consulting companies based in Atlanta from 1986 to 2007. Prior to that he was involved in petroleum exploration in Kansas, Oklahoma and Libya.

Ben graduated from Florida Atlantic University with a BS in Geology and earned a Masters in Geology from Oklahoma State University. He is the past president of the Atlanta Geological Society and recently took his grandchildren on a successful ammonite hunt.

Ben Shiau

Dr. Shiau has over 25 years of research experience in designing groundwater remediation

systems. He has designed surfactant systems for several field demonstrations of surfactant enhanced subsurface remediation (SESR) at DOD sites (Hill AFB, NAVY Alameda Point, McClellan AFB, Tinker AFB), and countless industrial or UST sites throughout the U.S. His experience also includes the development of innovative permeable reactive barrier (PRB) system for treating inorganic contaminants such as nitrate and Cr(VI) for the U.S. EPA, Robert S. Kerr Environmental Research Center, Ada, OK. Dr Shiau has served as a Reviewer for: Environmental Science and Technology, Journal of Environmental Engineering (ASCE), Ground Water, Langmuir, Water Research, Waste Management, Environmental Research Brief (USEPA).

Interesting Sidelights: International Workshop

Opening Remarks:

Taiwan EPA: Deputy Minister – Hung-Teh Tsai

US EPA: Assistant Administrator of International and Tribal Affairs – Jane Nishida

Group Photo with Distinguished Guests from

US, Australia, Indonesia, Japan, and New Zealand

Workshop in Progress

Workshop in Progress

Workshop in Progress

Program of the 10th Business Meeting of ReSAGPAPR

Date: December 17 (Friday), 2021

Venue: 9F University Room, Shangri-La's Far Eastern Plaza Hotel, Tainan

Prof. Dr. Tsair-Fuh Lin, Chair of WG ReSAGPAPR

Time (GMT)	Duration	Agenda	Moderator
04:00-04:10	10 min.	Registration and Social Networking	
04:10-04:25	15 min.	Welcome and Introduction	Dr. Tsair-Fuh Lin, Chair
04:25-04:35	10 min.	Director General's Remark: Dr. Hui-Chen Chien, Soil and Groundwater Remediation Fund Management Board, Environmental Protection Administration, Executive Yuan, Republic of China (Taiwan)	
04:35-04:40	5 min.	Group Photo	
04:40-04:55	15 min.	1. Recap of 6th Term (2020-2021) Activities 2. Comments on International Workshop on Developments in Contaminated Site Characterization and Remediation 3. Protections for Soil and Groundwater in Committee Members' Countries 4. Events on World Soil Day	Dr. Tsair-Fuh Lin, Chair / Dr. Hao-Chun Hung
04:55-05:10	15 min.	Discussions on 2022 Work Plan	
05:10-05:50	40 min.	Country Report: Japan (28 minutes for presentation, 10 minutes for discussion)	
05:50-06:00	10 min.	Elect the Chairperson for the Next Video Conferencing and Next Country Report / Closing	Dr. Tsair-Fuh Lin, Chair
06:00	--	End of Meeting	

Meeting Minutes of the 10th Business Meeting of ReSAGPAPR

* This meeting was conducted via videoconferencing.

Date: December 17 (Friday), 2021

Time: 12:00 pm – 02:15 pm (Time in Taiwan)

Chair: Prof. Tsair-Fuh Lin / Taiwan

Members present: Australia / Mr. Andrew Pruszinski
India / Dr. Harendra Kharkwal
Indonesia / Mrs. Mutiara Siadari
Korea / Mr. Sungjun Hong
Malaysia / Ms. Ijan Khushaida Binti Mohd Jan
New Zealand / Mr. Bruce Croucher
Taiwan / Prof. Tsair-Fuh Lin & Dr. Hao-Chun Hung
Thailand / Dr. Chayawee Wangcharoenrung
Vietnam / Ms. Nguyễn Hoàng Ánh
Japan / Mr. Teruyoshi Hayamizu (Prerecorded Country Report Video)

In attendance: Indonesia / Ms. Gita Andani
Korea / Mr. Wanho Joo
Taiwan / Dr. Chih Huang & Dr. Chihtse Wang

Minutes:

1. Comments and suggestions on International Workshop on Developments in Contaminated Site Characterization and Remediation
   - In-person meeting is preferred by members rather than online. Members will be able to follow the lectures more easily.
   - Members hope to have a further study on those recorded videos.
   - Many presentations on technical issues are useful, but if some presentations are allocated to policy, administration, management, or social issues, it might be useful for experts with different expertise.
2. Presentation 1: Activities of GEPC and Regulatory Measures against Groundwater Pollution and Soil Contamination in Japan (Presented by Mr. Teruyoshi Hayamizu)
3. Presentation 2: Environmental Protection of Soil and Groundwater in Taiwan (Presented by Dr. Hao-Chun Hung)

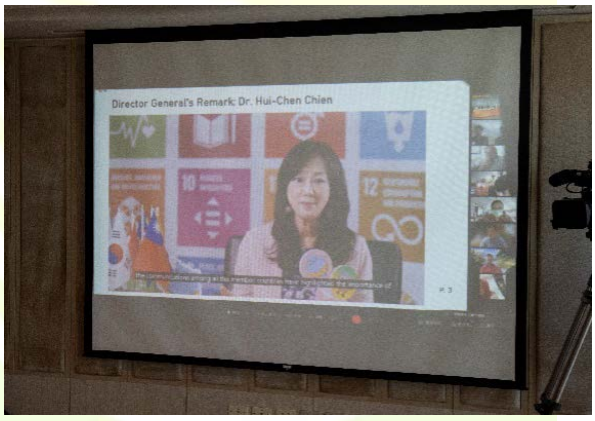
4. Protections for Soil and Groundwater in Committee Members' Countries
   - Australia: The massive grant of nearly 2 million Australian dollars from the federal government to support a group of soil scientists shows that the country realizes the importance of soil protection, especially farmland.
   - Indonesia: The revised government regulations of 2021 are now available online (In Indonesian). Remediation of the contaminated soil has been carried out in some industrial and non-industrial areas of the country. A webinar will be held on December 21-22 2021. Members are welcomed to attend.
   - New Zealand: New Zealand builds S-map website to provide precise and accurate soil information to support sustainable management of soil resources online. Besides, they developed the soil contents and implemented annual soil monitoring. They are also working on regulations to maintain soil quality, especially in areas near cities and towns.
   - Thailand: The more than 130 regulated items for soil and groundwater announced by the Ministry of Industry are being asked to reevaluate now. Thailand is looking at other countries' soil and groundwater protection standards to modify their regulations. The reliability of soil samples analysis conducted by consulting companies and/or analytical laboratories in Thailand are being scrutinized.
5. The theme for World Soil Day (December 5th) 2021: Halt soil salinization, boost soil productivity.
   - Korea: There were some commemorative events to celebrate World Soil Day. They also displayed the event's information on social media platforms and held a commemoration for World Soil Day on YouTube.
   - Taiwan: Taiwan EPA prepared daily quizzes on Facebook from December 1st to 5th, 2021. Those who answered correctly could get GreenPoints, and could then redeem the points for goods in convenience stores.
6. Other topics:
   - Chairperson for the next meeting: Mr. Bruce Croucher from New Zealand
   - Country Report in the next meeting: Thailand / New Zealand
   - Members from Australia, New Zealand and Thailand mentioned that they plan to hold some events related to soil and groundwater remediation in 2022, and members from other countries will be invited; however, the plans and exact dates may depend on the condition of COVID-19.
7. Adjournment: 14:15 (Time in Taiwan)

Interesting Sidelights: The 10th Business Meeting of ReSAGPAPR

Venue Decoration

Meeting in Progress

Chair, Dr. Tsair-Fuh Lin



Dr. Hui-Chen Chien, delegate of Taiwan EPA

Dr. Hao-Chun Hung, delegate of Taiwan EPA

Dr. Chihtse Wang, delegate of Stantec Consulting Services Inc., Taiwan Branch

Dr. Chih Huang, delegate of Taiwan Association of Soil and Groundwater Environmental Protection

Meeting in Progress