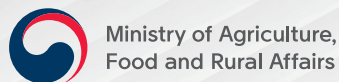


# 2019 SEOUL INWEPF & PAWEES International Conference

[New, Green and Smart Paradigm of Agricultural Water]

International Conference: 5-7 November, 2019

Venue : INTERCONTINENTAL SEOUL COEX



Ministry of Agriculture,  
Food and Rural Affairs



The Korean Society of  
Agricultural Engineers



Korea Rural Community  
Corporation



2019 SEOUL  
INWEPF & PAWEES  
International Conference

**5~7 November, 2019**

Homepage : [2019inwepf-paweess.org](http://2019inwepf-paweess.org)

## 1. Introduction

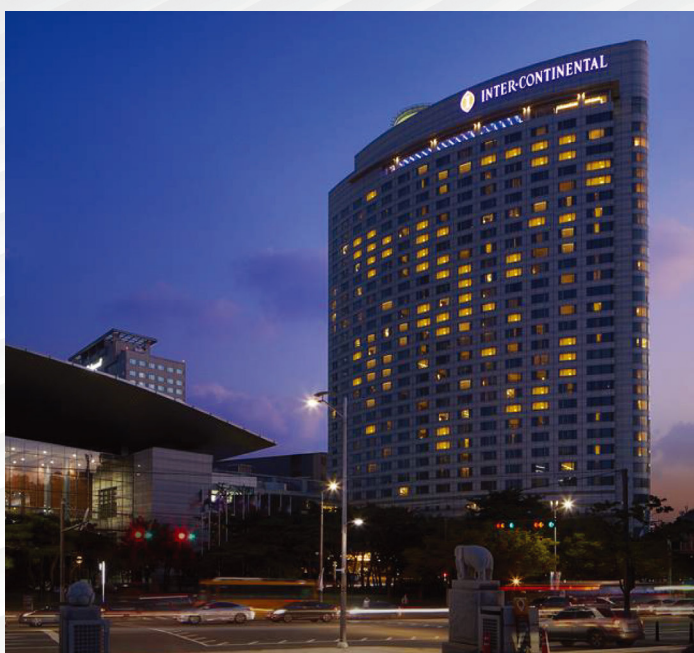
International Network for Water and Ecosystem in Paddy Fields (INWEPF) and International Society of Paddy and Water Environment Engineering (PAWEES) jointly hold 2019 Seoul INWEPF-PAWEES International Conference (hereinafter referred to as "2019 Seoul Conference") with the theme of "New, Green and Smart Paradigm of Agricultural Water" in Seoul, the capital city of Republic of Korea, from 5 to 7 November, 2019. The 2019 Seoul Conference aims to bring together the INWEPF and the PAWEES members, including policymakers, scholars, experts, and students from the governments, academic and research institutions, and international organizations of the participating countries. The 2019 Seoul Conference promotes party discussions towards solutions for the development of sustainable paddy farming while protecting nature and conservation of the environment.

## 2. Theme

The theme of the 2019 Seoul Conference is **“New, Green and Smart Paradigm of Agricultural Water.”** For paddy farming, water is a key element and thus contributes greatly to food security in Asian countries. However, there is also a growing concern over water scarcity globally amidst growing water demand from other sectors. Hence, concerted efforts are required to adopt water management policies and technologies on a larger scale. With close cooperation among INWEPF and PAWEES member countries, 2019 Seoul Conference provides a valuable platform for policy planners and experts of member countries. The event stimulates and promotes multidisciplinary discussions towards sustainable solutions for water management in paddy farming through an exchange of latest policies and academic Research or studies. The theme of INWEPF is further sub-categorized into two sub-themes: **(Sub theme 1) Innovative and Sustainable Paddy Farming for Water, Food and Environment and (Sub theme 2) Smart Paddy Farming Policies and Technologies to Address Climate Change Impact.** Meanwhile, the PAWEES proposes the four sub-themes **1) Irrigation Technology and Management, 2) Hydrology and Watershed Management, 3) Climate Change and Disaster Management, and 4) ICT Convergence and Emerging Issues.**

## 3. Date and Venue

2019 Seoul Conference will take place in Seoul COEX, Republic of Korea on the 5th to 7th of November.



<b>Venue</b>	INTERCONTINENTAL SEOUL COEX, Gangnam, Seoul, Republic of Korea
<b>Address</b>	(06164) 524, Bongeunsa-ro, Gangnam-gu, Seoul, Republic of Korea
<b>Homepage</b>	<a href="https://seoul.intercontinental.com/iccoex/eng/">https://seoul.intercontinental.com/iccoex/eng/</a>
<b>Tel</b>	+82-2-3452-2500
<b>By subway</b>	Line 9 Bongeunsa Station Exit 7 Line 2 Samseong Station Exit 5

### 3.1. Layout of Venue



### 3.2. Venue Schedules

Date	Time	Diamond Hall	Vivace		Allegro		Moderato	Andante	Zelkova (2F)	
5. Nov. 2019 (Tue)	09:00-10:00	Registration	-		-		-	VIP Only	-	
	10:00-11:30	Opening Ceremony	-		-		-	-	-	
	11:30-13:00	Lunch	-		-		-	VIP Luncheon	-	
	13:00-15:00	-	INWEPF Session 1		PAWEES Session 1	PAWEES Session 3	PAWEES Poster session	-	-	
	15:00-18:00	-	INWEPF Session 2		PAWEES Session 2	PAWEES Session 4		-	-	
	18:00-20:00	Welcome Dinner	-		-		-	-	-	
6. Nov. 2019 (Wed)	09:00-09:30	Registration	-		-		-	VIP Only	-	
	09:30-10:30	Opening of Steering Meeting	-		PAWEES Session 5	PAWEES Session 7	PAWEES Poster session	-	-	
	10:30-12:00	-	WG 1 Discussion	WG 3 Discussion				-	WG 2 Discussion	
	12:00-13:30	Lunch	-		-		-	-	-	
	13:30-16:00	-	Steering Meeting			PAWEES session 6	PAWEES session 6	-	-	-
						PAWEES Awards Ceremony				
16:00-17:00	Closing Ceremony	-		-		-	-	-		

## 4. Schedule

### 4.1. Opening Ceremony - Morning, 5 November 2019

Time	Contents	Remarks
09:00-10:00	Registration	
*09:30-10:00	Tea Time	
10:00-13:00	Opening Ceremony	Diamond Hall
10:00-10:05	Opening Speech	Mr. Jae-Ouk Lee Vice Minister, Ministry of Agriculture, Food and Rural Affairs, Republic of Korea
10:05-10:10	Welcome Speech	Dr. Chien-Hsin Lai President, PAWEES, Taiwan
10:10-10:15	Congratulatory Address I	Prof. Seong Joon Kim President, The Korean Society of Agricultural Engineers, Republic of Korea
10:15-10:20	Congratulatory Address II	Mr. In Sik Kim President, Korea Rural Community Corporation, Republic of Korea
10:20-10:30	Photo Time	
10:30-10:45	Keynote Speech 1	Mr. In Joong Kim Director General, Ministry of Agriculture, Food and Rural Affairs, Republic of Korea
10:45-11:00	Keynote Speech 2	Prof. Jin Soo Kim Chungbuk National University, Republic of Korea
11:00-11:15	Keynote Speech 3	Eng. S. Lalith De Alwis Acting Additional Secretary, Ministry of Agriculture, Rural Economic Affairs, Irrigation and Fisheries & Aquatic Resources Development, Sri Lanka
11:15-11:30	Break Time	
11:30-13:00	Lunch (Hotel)	

## 4. Schedule

### 4.2. INWEPF - Afternoon, 5 November 2019

Time	Contents	Remarks
INWEPF Session 1 at Vivace Hall - Sub-Theme: Innovative and Sustainable Paddy Farming for Water, Food and Environment - Chairman: Prof. Kyung Sook Choi, Kyungpook National University, Republic of Korea		
13:00-13:15	Innovative Approach on the National Scale of the Water Saving Integrated Smart Farming - AWDI Technique in Thailand	Dr. Noppadon Kowsuvon Irrigation Engineer, Royal Irrigation Department, Thailand
13:15-13:30	Integrated Solution to Cope with Drought for Sustainable Water Resources Management and Agricultural Production in South Central Region of Vietnam	Dr. Hai Duong Ha Head, Vietnam Academy for Water Resources, Vietnam
13:30-13:45	Agriculture Action Plan for Disaster Risk Reduction: Drought for Sustainable Agricultural Water Management	Dr. Mu Mu Than Deputy Director, MOALI, Myanmar
13:45-14:00	A study on Irrigation Water Saving Technology for Sustainable Paddy Farming	Dr. Jae Nam Lee Researcher, Rural Research Institute, KRC, Republic of Korea
14:00-14:15	Success of Participatory Planning Approach for Irrigation System Rehabilitation and Modernization : Eco System Services vs Water Use Efficiency Case Study in Wemedilla Major Irrigation Scheme in Sri Lanka	Eng. R. P. Weerasooriya Divisional Irrigation Engineer – Dambulla, MAREAIFARD, Sri Lanka
14:15-14:30	Irrigation Modernization in Asia and ADB's Approach	Mr. Ryutaro Takaku Principal Water Resource Specialist, ADB
14:30-14:50	Q&A	
14:50-15:00	Break Time	
INWEPF Session 2 at Vivace Hall - Sub-Theme: Smart Paddy Farming Policies and Technologies to Address Climate Change Impact - Chairman: Dr. JeongRyeol Jang, Principal Researcher of Rural Research Institute, KRC, Republic of Korea		
15:00-15:15	Policies and Technologies Addressing Climate Change Impacts on Irrigation Systems in the Philippines	Admin. Ricardo R. Visaya Administrator, National Irrigation Administration, Philippines
15:15-15:30	Installation Strategies for Sustainable and Multipurpose Usage of Paddy Field Coping with Changes in Agricultural Surroundings	Mr. Sung Eun Yoon Director of Project Planning Office, KRC, Republic of Korea
15:30-15:45	Sustainable Water Use and Climate Changes Resilient in the Irrigated Agricultural	Dr. Prof. Abd El-Azim EL Tantawi Badawi Former president of Agricultural Research Center, Egypt
15:45-16:00	An Overview on Changes of Irrigation Scenarios in Bangladesh	Dr. Mohammad Abdur Rashid Secretariat, The Institution of Engineers, Bangladesh
16:00-16:15	Climate Friendly Sustainable Paddy Cultivation in India	Prof. Anil Kumar Singh National Academy of Sciences, India
16:15-16:30	The Initiative on Drought Early Warning System in South Asia Providing Improved Climate Adaptation Measures in Local Implementation	Dr. Toru Nakada Researcher, International Water Management Institute
16:30-16:45	Hot Spot Analysis for Extreme Droughts(Agricultural) by Using Gatis – Ord Method and GIS Technique: Assessment of Applicability to Agro-Ecological Regions and Main River Basins of Sri Lanka	Eng. D. D. Prabath Witharana Chief Engineer, MAREAIFARD, Sri Lanka
16:45-17:00	Experimental Gate Operation of Pak Cheng Water Gate to Prevent Flood in Viengkham District, Vientiane Province in Laos	Mr. Chindaphone Senebouttarath Technical Officer, Ministry of Agriculture and Forestry, Lao PDR
17:00-17:15	The Role of Asset Management to Improve Water Use of Paddy Rice in Africa	Dr. Maher Salman Senior Water Officer, FAO of the United Nations
17:30-17:50	Q&A	
17:50-18:00	Break Time	
18:00-20:00	Welcome Dinner Reception	Diamond Hall

## 4. Schedule

### 4.3. PAWEES - Afternoon session1&2, 5 November 2019

Time	Contents	Remarks
PAWEES Session 1 at Allegro 1 - Sub-Theme: Irrigation Technology and Management 1 - Moderator: Prof. Wonho Nam, Hankyung National University, Republic of Korea Prof. Eunmi Hong, Gangwon National University, Republic of Korea		
13:00-13:15	(S1-1) Reduction Effect of Cyclic Irrigation on Nutrient Loads to the Downstream Lake	Toshiaki Iida, Sara Yatabe, Masaomi Kimura, Hiroki Minakawa
13:15-13:30	(S1-2) Economic Valuation of Water Table Management in SRI Paddy Cultivation	Nur Aini Iswati Hasanah, Budi Indra Setiawan, Chusnul Arif, Slamet Widodo, Norman Uphoff
13:30-13:45	(S1-3) Planning of Ablution Water Treatment Plant (IPA) Using Simple Filter Equipment in Public Junior High School 6, Malang City, East Java Province	Dian Chandrasasi, Tri Budi Prayogo, Dudiman Juziwijaya
13:45-14:00	(S1-4) The Determination of Real Requirement for Operations and Maintenance (AKNOP) based on Technical Audit Analysis (Case Study in Tuk Kuning Irrigation Area Klaten Regency Central Java)	Ussy Andawayanti, Dwi Priyantoro, Aziz Rizal Prasetyo
14:00-14:15	(S1-5) Water Management Planning Assessment to Increase Cropping Intensity in the Way Sekampung Irrigation System, Lampung, Indonesia	Nova Anika, RA Bustomi Rosadi, Ridwan Zahab
14:15-14:30	(S1-6) Impact force on Different Types of Groundsill	Yu-Jen Hou, Hung-Pin Huang
14:30-14:45	(S1-7) Study on the Difference between Irrigation Water Requirements and Biological Species with Eco-agricultural and Conventional Farming Methods for Paddy Fields	Sheng-Feng Kuo, Chih-Hung Tan, Wen-Beh Wang, Hsiang-Yi Hsu
14:45-15:00	(S1-8) Development of a GIS Based Graphical User Interface for Irrigation Management for Betwa River Basin, India	Ashish Pandey, Nikhil Mogarekar
15:00-15:30	Break	
PAWEES Session 2 at Allegro 1 - Sub-Theme: Irrigation Technology and Management 2 - Moderator: Prof. Wonho Nam, Hankyung National University, Republic of Korea Prof. Eunmi Hong, Gangwon National University, Republic of Korea		PAWEES Poster Session (Moderato)
15:30-15:45	(S2-1) Analysis of Water Demand in Sumber Bendo Irrigation Network, Indonesia	Rahmah Dara Lufira, Dian Chandrasasi, Rispiningtati, Dian Ambarwati
15:45-16:00	(S2-2) Analysis of Water Supply Reliability Based on Agricultural Reservoir Watershed Ratios and ET Approaches	Gun-Ho Cho, Junaid-Ahmad Mirza, Sanghyun Kim, Kyung-Sook Choi
16:00-16:15	(S2-3) Analysis of Water Supply Reliability based on the Agricultural Reservoir Watershed Ratios and ET Approaches	Jeongha Lim, Minhwan Shin, Jonggun Kim, Kisung Kim, Kyoung Jae Lim, Eunmi Hong
16:15-16:30	(S2-4) Food Consumption Patterns and Food Wastage: Implications on Water Resources Availability for Sustainable Paddy Farming	Bashir Adelodun, Kyung-Sook Choi
16:30-16:45	(S2-5) Efforts towards Safety to Agricultural products and Irrigation Water in the Disaster Area of Fukushima, Japan	Moono Shin, Tomijiro Kubota, Susumu Miyazu, Sangyoon Lee
16:45-17:00	(S2-6) Water Use and Actual Conditions of Taro Patch in the Republic of Palau	Keigo Noda, Masaomi Kimura, Akiko Iida
17:00-17:15	(S2-7) Assessment of Water Footprint for Koshi River Basin (KRB), Nepal	Kumar Ghimire, R. D. Singh, Ashish Pandey, G.S. Murthy
17:15-18:00	Break	
18:00-20:00	Welcome Dinner	Diamond Hall

## 4. Schedule

### 4.3. PAWEES - Afternoon session3&4, 5 November 2019

Time	Contents	Remarks
PAWEES Session 3 at Allegro 2 - Sub-Theme: Hydrology and Watershed Management 1 - Moderator: Prof. Tae-Il Jang, Jeonbuk National University, Republic of Korea Prof. Jonggun Kim, Gangwon National University, Republic of Korea		
13:00-13:15	(S3-1) Assimilating Rainfall Runoff Process into 2D Hydraulic Model	Bambang Winarta, Pitojo Tri Juwono, Very Dermawan, Ali M. I, Nurul Nadrah Aqilah Tukimat
13:15-13:30	(S3-2) Utilizing Rainwater Harvesting toward Sustainable Urban Stormwater Runoff Management in Metropolitan Jakarta, Indonesia	Caesaria Asri Setyowati
13:30-13:45	(S3-3) Evaluation of the Effect of Channel Geometry on Streamflow and Water Quality Modelling and Modification of Channel Geometry Module in SWAT: A Case Study of the Andong Dam Watershed	Jeongho Han, Dongjun Lee, Seoro Lee, Se-Woong Chung, Seong Joon Kim, Minji Park, Kyoung Jae Lim, Jonggun Kim
13:45-14:00	(S3-4) Development of Relationship between Scatter meter-retrieved Soil Moisture and Observed Discharge over Indian River Basins	Deen Dayal, Abhilash Soni, Ashish Pandey, Praveen K. Gupta
14:00-14:15	(S3-5) Estimation of Unit Load of Total Nitrogen from Domestic Wastewater of Urban Areas in Vientiane, Lao PDR	Takuya Okada, Keigo Noda, Masaomi Kimura, Hiromasa Hamada, Keouangchai Keokhamphui, Somphasith Douangsavanh
14:15-14:30	(S3-6) Effects of Two Systemic Insecticides, Imidacloprid and Fipronil, on Sympetrum Species Inhabiting Japanese Rice Paddy Fields	Hiroshi Jinguji, Testuyuki Ueda
14:30-14:45	(S3-7) An Innovative Treatment of Handling AMC in SCS-CN Methodology for Runoff Computation	S.K. Mishra, Ishan Sharma, Ashish Pandey and S.K. Kumre
14:45-15:30	Break	
PAWEES Session 4 at Allegro 2 - Sub-Theme: Hydrology and Watershed Management 2 - Moderator: Prof. Hak-Kwan Kim, Seoul National University, Republic of Korea Prof. Yoonsik Park, Gongju National University, Republic of Korea		
		PAWEES Poster Session (Moderato)
15:30-15:45	(S4-1) Runoff-Sediment Management Modelling Responses to Land Use/Land Cover Changes using SWAT Model in West Ethiopia	Mulugeta Melese, Won-Ho Nam
15:45-16:00	(S4-2) Sensitivity Analysis of Input Parameters for the Agricultural Reservoir Water Balance Simulation Model (HOMWRS)	Sanghyun Kim, Junaid-Ahmad Mirza, Gunho Cho, Kyung-Sook Choi
16:00-16:15	(S4-3) Evaluation of Stream Flow and Water Quality Impacts of Yeongsan and Seomjin Rivers by Juam Dam Water Transfer Using SWAT	Yongwon Kim, Jiwan Lee, Soyoung Woo, Seong-joon Kim
16:15-16:30	(S4-4) The Calibration Usefulness of ET in Watershed Hydrological Model by Referencing SEBAL Spatial ET	Jinuk Kim, Yonggwon Lee, Jeehun Chung, Seongjoon Kim
16:30-16:45	(S4-5) A Modified Grid-Base Continuous Hydrological Model for Streamflow Routing Considering Dam and Weir Operation Data	Yonggwon Lee, Wonjin Kim, Chunggil Jung, Seongjoon Kim
16:45-17:00	(S4-6) Development of Advanced Web-Based SWAT LUC System Considering Yearly Land Use Changes and Recession Curve Characteristics	Dongjun Lee, Jeongho Han, Min Ji Park, Bernard A. Engel, Jonggun Kim, Won Seok Jang Kyoung Jae Lim
17:00-17:15	(S4-7) Potential Use of Soil Databases to Estimate Hydrologic Component of HSPF model for Accurate Estimation of Local Direct Runoff Baseflow Component	Soo Hong Kim, Yun Soo Sung, Seoro Lee, Dong Seok Yang, Jonggun Kim, Kyoung Jae Lim
17:15-17:30	(S4-8) Measures of Runoff Reduction on Expropriation Zone from Mostly Paddy Field	Hung-Pin Huang
17:30-18:00	Break	
18:00-20:00	Welcome Dinner	Diamond Hall

## 4. Schedule

### 4.4. The 16th INWEPF Steering Meeting - 6 November 2019

Time	Contents	Remarks
09:00-09:30	Registration	
09:30-09:50	Opening of Steering Meeting	Diamond Hall
09:30-09:40	Introduction of Steering Meeting and Members	INWEPF Korea
09:40-09:50	Opening Speech	
09:50-10:30	Steering Meeting (I)	Diamond Hall
09:50-10:00	Report on 15th INWEPF Steering Meeting in Nara Japan	INWEPF Japan
10:00-10:10	Report on WG 1 Activity	INWEPF Malaysia
10:10-10:20	Report on WG 2 Activity	INWEPF Korea
10:20-10:30	Report on WG 3 Activity	INWEPF Japan
10:30-12:00	Steering Meeting (II)	
10:30-12:00	WG 1 Discussion (Action Plan for 2020)	INWEPF Malaysia Vivace 1
	WG 2 Discussion (Action Plan for 2020)	INWEPF Korea Zelkova 1
	WG 3 Discussion (Action Plan for 2020)	INWEPF Japan Vivace 2
12:00-13:30	Lunch	
13:30-14:00	Steering Meeting (III)	Vivace Hall
13:30-13:40	Report on WG1 Discussion Result	INWEPF Malaysia
13:40-13:50	Report on WG2 Discussion Result	INWEPF Korea
13:50-14:00	Report on WG3 Discussion Result	INWEPF Japan
14:00-16:00	Steering Meeting (IV)	Vivace Hall
14:00-14:10	Introduction of 2019-2020 Annual Action Plan	INWEPF Korea
14:10-14:20	Introduction of 17th Steering Meeting in Sri Lanka	INWEPF Sri Lanka
14:20-14:30	Discussion of 18th Steering Meeting Country	Thailand, Lao PDR, Egypt
14:30-15:30	Future Cooperation with New Participants	Africa, Iran
15:30-15:40	Role of ICID in Promoting Water Saving Agriculture Management and Implications for Paddy Farming	Er. Ashwin Pandya, Secretary General of ICID
15:40-15:50	Discussion and Clarification for 2019 Seoul INWEPF-PAWEES Joint Statement	INWEPF Members
15:50-16:00	Other Discussion	INWEPF Members
16:00-17:00	Closing Ceremony	Diamond Hall
16:00-16:10	Announcement of 2019 Seoul INWEPF-PAWEES Joint Statement and Closing Speech	INWEPF and PAWEES
16:10-16:20	Brief of Technical Tour	INWEPF Korea
16:20-16:30	Photo Time	President, PAWEES
16:30-17:00	Break	
17:00-18:00	Move to Reception	
18:00-20:00	Dinner Reception	INWEPF only



## 4. Schedule

## 4.5. PAWEES Morning Session 5&amp;7, 6 November 2019

Time	Contents	Remarks
PAWEES Session 5 at Allegro 1 - Sub-Theme: Climate Change and Disaster Management 1 - Moderator: Prof. Yong-Chul Shin, Kyungpook National University, Republic of Korea Prof. Syewoon Hwang, Gyeongsang National University, Republic of Korea		PAWEES Poster Session (Moderato)
09:30-09:45	(S5-1) Evaluation of Standardized Precipitation Index and Percent Normal Index Method in Assessment of Drought Characteristic in the Pekalen River Basin, East Java Province, Indonesia	Donny Harisuseno, Ledib Aprilansi
09:45-10:00	(S5-2) Seasonal Climate Variability Impacts on Rice Agriculture in Mountainous Watershed Indonesia	Atiqotun Fitriyah, Tasuku Kato
10:00-10:15	(S5-3) Regionalization of Drought Using Hydro-Climatic Characteristics Of South Korea	Seung Jin Maeng, Muhammad Azam, Ju ha Hwang, Dayea Kim
10:15-10:30	(S5-4) Evaluation of Leaf Traits Effect on Transpirative Cooling in Aerobic Rice System	Samuel Godson-Amamoo, Tasuku Kato
10:30-10:45	(S5-5) Greenhouse Monitoring and Control System based on Humidity and Temperature Sensors	Walaal Kareem Khalaf, Won-Ho Nam, Yong-Tae Kim
10:45-11:00	(S5-6) Climatic Drivers of Wheat Yield Variability and their Influences on Future Water Footprints	Mirza Junaid Ahmad, Gunho Cho, Sanghyun Kim, Kyung-Sook Choi
11:00-11:15	(S5-7) Estimation of Slope Displacement using Artificial Neural Network	Rong-Jing Ju, Kuo-wei Liao
11:15-11:30	(S5-8) Evaluate the Impact of Extreme Weather on the Water Resource and Crop Growth in Northern Taiwan	Guan-Zhou Lin, Qun-Zhan Huang, Shao-Yiu Hsu, Tsung-Yu Lee
11:30-12:00	Break	
PAWEES Session 7 at Allegro 2 - Sub-Theme: ICT Convergence and Emerging Issues 1 - Moderator: Prof. Inhong Song, Seoul National University, Republic of Korea Tae-Il Jang, Jeonbuk National University, Republic of Korea		PAWEES Poster Session (Moderato)
09:30-09:45	(S7-1) Reliability Analysis for Semi-Rigid Connected Frame Structure Under Snow	Sangik Lee, Jonghyuk Lee, Youngjoon Jeong, Won Choi
09:45-10:00	(S7-2) Integrated Alkaline and Ultrasound Pre-treatment for Enhanced Anaerobic Digestion of Corn Stover	Shu-Yuan Pan, Ning Sun, Hyunook Kim, Zhaoyang You
10:00-10:15	(S7-3) Estimation of Leaf Inclination Angle in Three-Dimensional Plant Images Obtained from Lidar	Kenta Itakura, Fumiki Hosoi
10:15-10:30	(S7-4) Monitoring and Prediction of Small Reservoir Water Level Using ICT and Deep Learning Technique	Daisuke Hayashi, Daiki Matsuura, Atsushi Yamamoto, Nobumasa Hatcho, Yutaka Matsuno, Tsumugu Kusudo, Haruhiko Horino
10:30-10:45	(S7-5) Application of Drone Technology for Investigating Straw and Compost Management Practices in Paddy Irrigation Districts	Jinseok Park, Hyeongjun Kim, Seongju Jang, Inhong Song
10:45-11:00	(S7-6) A Feasibility Study of Tributary Mapping using Autonomous Unmanned Aerial Vehicle	Seungwon Kim, Junyoung Kwak, Chanyoung Ju, Seung-Hwan Yoo, Hyoung Il Son
11:00-11:15	(S7-7) Estimation of Spatial Soil Moisture using RNN-LSTM with MODIS and GPM Satellite Data in South Korea	Wonjin Jang, Yonggwan Lee, Seongjoon Kim
11:15-12:00	Break	
12:00-13:30	Lunch	Diamond Hall

## 4. Schedule

### 4.5. PAWEES Afternoon Session 6, 6 November 2019

Time	Contents	Remarks
PAWEES Session 6 at Allegro 1 - Sub-Theme: Climate Change and Disaster Management 2 - Moderator: Prof. Syewoon Hwang, Gyeongsang National University, Republic of Korea		
13:30-13:45	(S6-1) The Vulnerability of the Irrigation Water Sector to the Impacts of Climate Change in Afghanistan	Sayed Shajahan Sadiqi, Won-Ho Nam, Eun-Mi Hong
13:45-14:00	(S6-2) Farmers' Perception of Drought and its Validation in Khon Kaen Province	Miki Nodera, Keigo Noda, Mallika Srisutham, Koshi Yoshida
14:00-14:15	(S6-3) Hydrological Data Analysis Using Nonlinear Downscaling Method: Manifold Learning	Yi-Hsuan Shih, Ming-Che Hu, Shao-Yiu Hsu
14:15-14:30	(S6-4) Development and Performance Evaluation of Infrared Wave Heating System for Preventing Cold Injury to Fruit Trees	Jonghyuk Lee, Sangik Lee, Youngjoon Jeong, Seokju Hong, Sangyeon Kim, Yunhyuk Han, Kiseok Kim, Won Choi
14:30-15:00	Break	
PAWEES Session 6 at Allegro 2 - Sub-Theme: Climate Change and Disaster Management 2 - Moderator: Prof. Yong-Chul Shin, Kyungpook National University, Republic of Korea		
13:30-13:45	(S6-5) Land Surface Temperature (LST) Prediction by Summer Heat Wave Using Multiple Linear Regression in South Korea	Jeehun Chung, Yonggwon Lee, Jiwan Lee, Seongjoon Kim
13:45-14:00	(S6-6) Storm Runoff Evaluation Using GPM Satellite Data and KIMSTORM2 Model for Yongdam Dam Watershed	Sehoon Kim, Jinuk Kim, Jeehun Chung, Seongjoon Kim
14:00-14:15	(S6-7) Effects of River Morphological Processes on Fish Habitat Quality – Implications for River Management in Urban Regulated Rivers	Meng-Chi Hung
14:15-15:00	Break	
15:00-16:00	PAWEES Awards ceremony	Allegro 1&2
16:00-18:00	Closing Ceremony	Diamond Hall
16:00-16:10	Announcement of 2019 Seoul INWEPF-PAWEES Joint Statement	INWEPF and PAWEES
16:10-16:20	Overview of Field Trip	INWEPF Korea
16:20-16:30	Closing Speech & Photo Session	President, PAWEES

### 4.6. Technical Tour – Thursday, 7 November 2019

Time	Contents	Remarks
09:00-10:00	Venue → Seoul Botanic Park	Departure
10:00-12:00	Seoul Botanic Park, Yangcheon Drainage Pumping Station	Technical Tour
12:00-13:00	Lunch	Canteen, Seoul Botanic Park
13:00-14:00	Seoul Botanic Park → Majang Reservoir	
14:00-15:30	Majang Reservoir	Technical Tour
15:30-17:00	Majang Reservoir → Venue	Arrival
17:00-	Free Time	

## 5. Technical Tour

Technical tour provides an opportunity for participants to learn more about Korean Culture related to paddy farming infrastructures, as well as to enjoy the beautiful scenery of Korea.

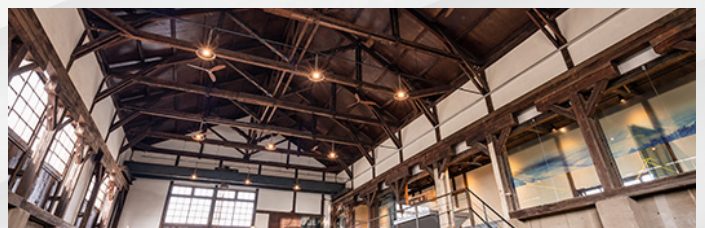
### 5.1. Seoul Botanic Park

Seoul Botanic Park, located in Magok-dong, Gangseo-gu, Seoul, opened to the public in May 2019. Its total area measures 504,000m<sup>2</sup>, which is larger than 70 soccer fields. Seoul Botanic Park is home to over 3,100 species of flora. It is divided largely into three sections: first, the outdoor Traditional Garden is housing plants indigenous to Korea and the Greenhouse is displaying plants from 12 tropical and Mediterranean regions. Secondly, promenades and observation spots along the shores of the lake showcasing wetland plants and the rest area where resident birds can be watched. And lastly, the wetland at the intersection of the park and the Han River created to promote biodiversity. In addition, Seoul Botanic Park accommodates the Seed Library, where plant seeds are distributed to visitors, and the Botanic Library boasting an extensive collection of books and DVDs about plants, ecological gardens, and landscape gardening from Korea and abroad.



### 5.2. Yangcheon Drainage Pumping Station

Yangcheon Drainage Pumping Station was installed in 1928 within the beneficiary area of Yangcheon Irrigation Association in the downstream of the Han River. The Yangcheon Irrigation Association was established in 1923 in Yangdong-myeon, Gimpo-gun, Gyeonggi-do, Korea for irrigation & drainage, and flood prevention. The beneficiary area was 595 ha. In 1925, the beneficiary area of Yangcheon Irrigation Association was inundated by Han River that leads to the construction of the Yangcheon Drainage Pumping Station for the flood prevention of the lowland paddy fields. There were 3 units of pump with a 200kW electric motor, which was 8m<sup>3</sup>/s, and the pumping head was 2 meters. The operation of the Yangcheon Drainage Pumping Station was stopped in 1991 as the paddy fields disappeared due to urbanization, but in 2019, it was rehabilitated to the Magok Cultural Center with the grand opening of the Seoul Botanic Park.



### 5.3. Majang Reservoir

The Majang Reservoir was constructed for agricultural water supply in the year 2000 by the Korea Rural Community Corporation. The local government of the Paju city then transformed the Majang Reservoir and its surrounding areas of 200,000 m<sup>2</sup>, located at Gwangtan-ri of Gisan-myeon, into the Majang Reservoir Park, which becomes a famous theme park near the urban center. In March 2018, the Paju city newly opened the Outdoor Theme Park with promenades and hiking trails along the shores of the Majang Reservoir, a camping site, facilities for water play, a suspension bridge, an observatory, and cafés. In particular, the suspension bridge is 220 meters long and became a popular tourist attraction.



### 5.4. Travel Map



## 6. Accommodation

RAMADA SEOUL HOTEL, L7 GANGNAM and INTERCONTINENTAL SEOUL COEX have been selected for the official hotels for 2019 Seoul INWEPF-PAWEES International Conference & 16th INWEPF Steering Meeting to accommodate the participants. These hotels are within walking distance to the venue.

### RAMADA SEOUL HOTEL

Location : 410, Bongeunsa-ro, Gangnam-gu, Seoul, Korea

Facilities : Restaurant&Bar, Business Center, Meeting Room, Relax Room, Gym, Spa



Room Type	Room Rate	Breakfast
Superior Twin	<input type="checkbox"/> KRW 99,000	<input type="checkbox"/> 1person KRW19,800
Superior Double	<input type="checkbox"/> KRW 99,000	
Premier Double	<input type="checkbox"/> KRW 140,000	<input type="checkbox"/> 2 persons KRW39,600
Suite Room	<input type="checkbox"/> KRW 200,000	

Ramada Hotel by Wyndham

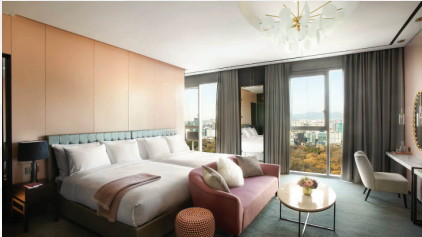
Address | 410 Bongeunsa-ro, Gangnam-gu, Seoul Korea

Contact | 82) 2-6202-2000

### L7 GANGNAM HOTEL

Location : 415, Teheran-ro, Gangnam-gu, Seoul, Korea

Facilities : Restaurant&Bar, Business Center, Meeting Room, Laundromat, Gym, foot Spa



Room Type	Room Rate	Breakfast
Standard Double	<input type="checkbox"/> KRW121,000	<input type="checkbox"/> 1person KRW19,800
Standard Twin	<input type="checkbox"/> KRW121,000	
Superior Double	<input type="checkbox"/> KRW132,000	<input type="checkbox"/> 2 persons KRW39,600
Superior Twin	<input type="checkbox"/> KRW132,000	

L7 GANGNAM Hotel by LOTTE

Address | 415 Teheran-ro, Gangnam-gu, Seoul Korea

Contact | 82) 2-555-8007

### INTERCONTINENTAL SEOUL COEX HOTEL

Location : 524, Bongeunsa-ro, Gangnam-gu, Seoul, Korea

Facilities : Restaurant&Bar, Business Center, Meeting Room, Laundromat, Gym, Foot spa



Room Type	Room Rate	Breakfast
Superior Double	<input type="checkbox"/> KRW145,000	<input type="checkbox"/> 1person KRW36,300
Superior Twin	<input type="checkbox"/> KRW145,000	

INTERCONTINENTAL SEOUL COEX

Address | 524, Bongeunsa-ro, Gangnam-gu, Seoul, Korea

Contact | 82) 2-3452-2500

## 7. Transportation

The pick-up service from and to airport will not be provided to all the participants. Participants should use public transportation to the venues and accommodations.

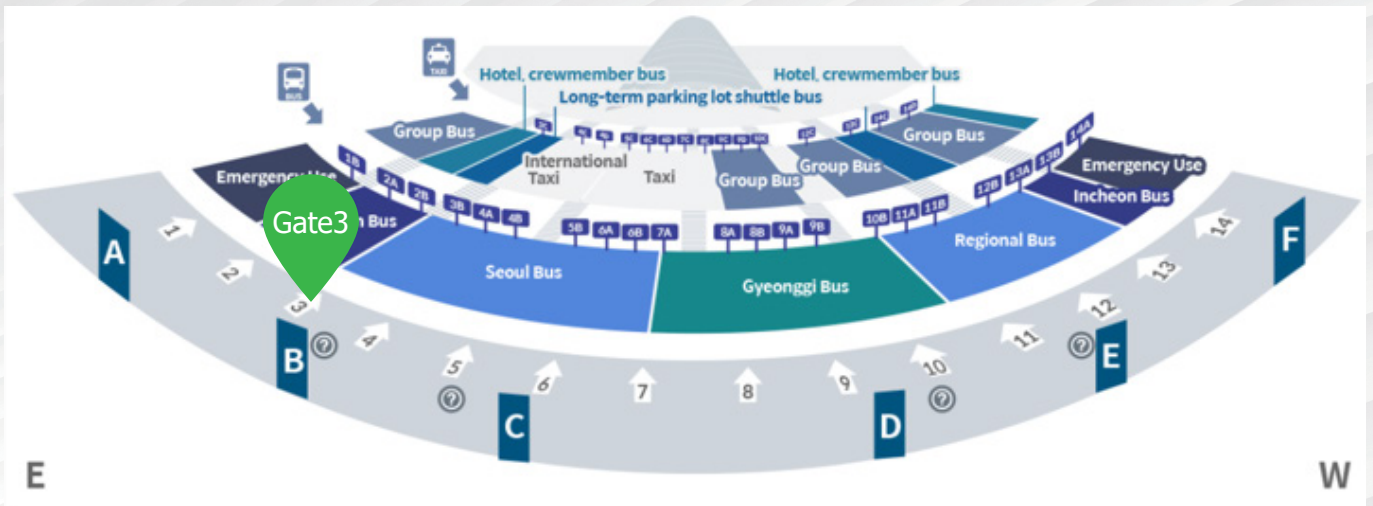
### 7.1. Airport Limousine Bus : Incheon Airport to Venue & Hotel

#### 7.1.1. Route

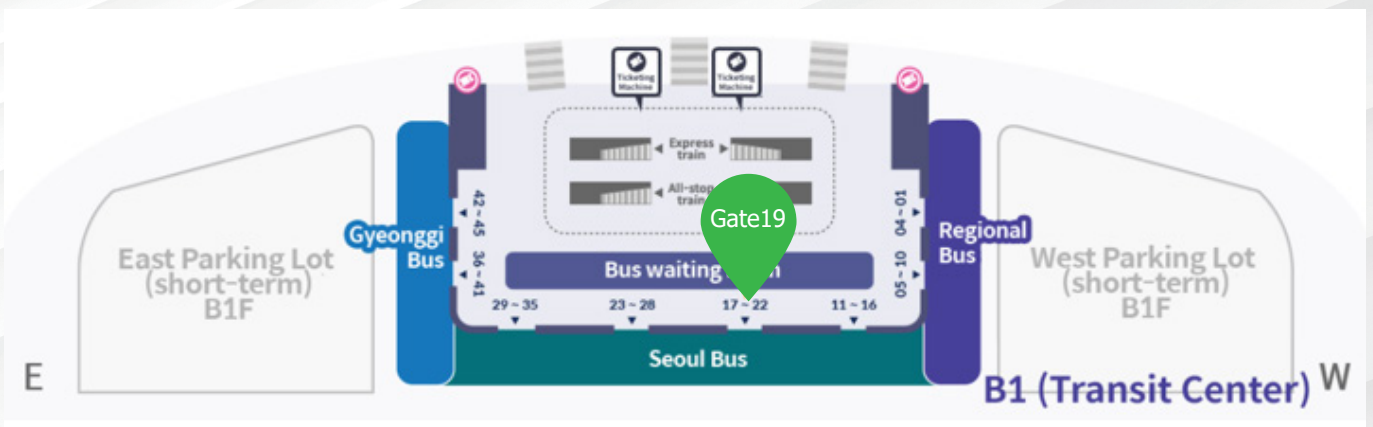
#### Bus 6703 (Incheon Airport ↔ Gangnam/COEX)



#### 7.1.2. Bus Stop in Incheon Airport Terminal 1(Gate 3 at 1 Floor)



#### Terminal 2 (Gate 19 at B1)

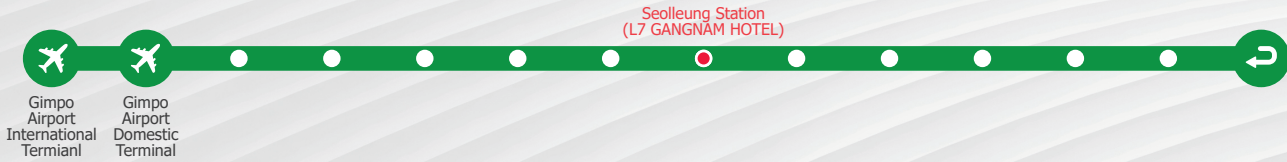


- Bus Number 6703
- Hours of Operations 05:00 ~ 23:12
- Departs Every 25~30 minutes
- Length of Trip 90~120 minutes
- Bus Stop Terminal 1(F1) – Gate 3 / Terminal 2(B1) – Gate 19
- Bus Fares KRW 16,000

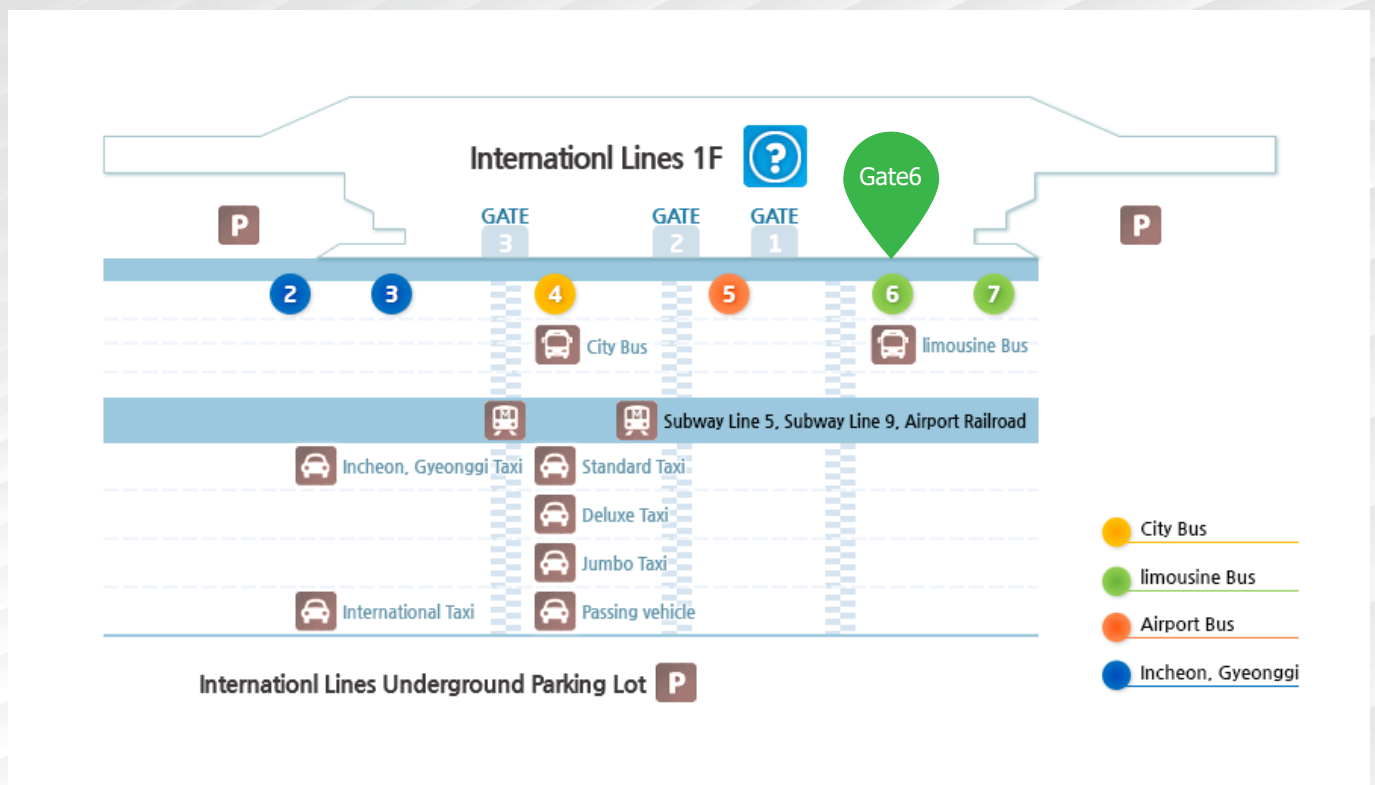
## 7.2. Airport Limousine Bus : Gimpo Airport to Venue & Hotel

### 7.2.1. Route

#### Bus 6000 (Gimpo Airport ↔ Seolleung Station)



### 7.2.2. Bus Stop in Gimpo Airport



- Bus Number **6000**
- Hours of Operations **05:30 ~ 23:00**
- Departs Every **30~45 minutes**
- Length of Trip **80~110 minutes**
- Bus Stop **International Terminal(F1) – Gate 1, No.6**
- Bus Fares **KRW 7,000**

### 7.3. Gimpo Airport Subway : Gimpo Airport to Venue & Hotel

#### 7.3.1. Route



- Train Line **No.9(Express)**
- Hours of Operations **05:30 ~ 23:55**
- Departs Every **10~20 minutes**
- Length of Trip **38 minutes(Express)**
- Train Stop **Train Line No.9(B3) – Gimpo Airport Station**
- Train Fares **KRW 1,650**

#### 7.4. From Hotel to Venue



#### 7.5. Contact Information

INTERCONTINENTAL HOTEL COEX : +82) 2-3452-2500  
<https://seoul.intercontinental.com/eng/welcome/MapBus>

RAMADA SEOUL HOTEL : +82) 2-6202-2003

L7 GANGNAM Hotel : 82) 2-2011-1000  
<https://www.lottehotel.com/gangnam-l7/en/location.html>



## 8. General Information

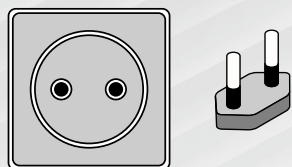
### 8.1. Weather :

Korea is in Autumn, from September to November, The early fall is cool, and gradually becomes colder before turning into winter. Autumn is the most favorite season in Korea. The diurnal variation between maximum and minimum temperatures is around 7 to 11 degrees Celsius and quite cold early in the morning. It is highly recommended that all the participants bring along warm clothes.

### 8.2. Insurance :

INWEPF and PAWEES do not cover any insurance during the event, including group accident and hospitalization. Participants are advised to purchase their own travel insurance which fully covers costs arising from the injuries and damages.

### 8.3. Plug and Voltage : C type



### 8.4. Helpline :

Police: 112

Fire & Emergency: 119

Tourist Information: 1330

### 8.5. Contact :

#### Mr. Eunseo Park

Assistant Manager  
Research Planning Office of Rural Research Institute

Korea Rural Community Corporation  
Tel: +82-31-400-1752, Mob: +82-10-9931-2150, Fax: +82-31-400-1744  
Inwepf.korea@gmail.com

For hotel reservation and visa

#### Mr. Roy Song

Manager  
SWAN COMMUNICATION

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