

1st IWA Specialist Conference on

"Municipal Water Management and Sanitation in Developing Countries", Bangkok, Thailand, 2014

Opening Session

Time	Description
Tuesday 2 December 2014	
08.30 – 09.00	Registration
09.00 – 10.15	<ul style="list-style-type: none">- Welcome Address <i>Prof. Chongrak Polprasert</i> International Program Committee and Former Dean School of Environment, Resources and Development, AIT- Introductory Address <i>Mr. Ganesh Pangare</i> Regional Director Asia-Pacific International Water Association (IWA)- Opening Remark <i>Prof. Worsak Kanok-Nukulchai</i> President Asian Institute of Technology (AIT)- Keynote Speech by Guest of Honor <i>Prof. Shinichiro Ohgaki</i> President Japan Water Research Center (JWRC), Japan- VDO Presentation of AIT- Presentation of Plaques of Appreciation to Keynote Speaker and Sponsors

CONFERENCE PROGRAM
(Tuesday, 02 December 2014)

07:30-09:00	Registration
09:00-09:30	Opening Ceremony
09:30-10:00	Keynote Speech: <i>Prof. Shinichiro Ohgaki</i> President, Japan Water Research Center (JWRC), Japan
10:15-10:30	Group Photo
10:30-11:00	Tea/Coffee Break

11:00-17:00 Parallel technical sessions for Theme 1 & Theme 2 (Room B202 and Room B206)

THEME 1: NEW CONCEPTUAL APPROACHES AND TECHNOLOGIES TO WASTEWATER MANAGEMENT

11:00-12:30 Session 101: Room B202

Chaired by Prof. Chongrak Polprasert

11:00-11:20 Effect of Hydraulic Retention Time on Long-term Operation of A Prototype IT/BF (Inclined Tube/Biofilm Membrane Bioreactor) for High-rise Building Wastewater Recycling

C.Ratanatamskul, N. Suksusieng and K. Yamamoto

11:20-11:40 Development of a Natural Treatment System Consisting of Black Soil and Kentucky Bluegrass for the Post-treatment of Anaerobically Digested Strong Wastewater

Xiaochen Chen and Kensuke Fukushi

11:40-12:00 In-Sewer Treatment System by Enhancing Self-Purification: Performance and Oxygen Balance in Pilot Tests

T. Shoji, Y. Matsubara, K. Matsuzak, and H. Satoh

12:00-12:20 CFD Analysis of Gas-Liquid Two-Phase Flow in Inverted Siphon in Urban Sewerage System

S. Sugi, S. Tsukada, M. Ishikawa and H. Kouchiwa

12:20-12:30 Session wrap up

12:30-13:30 Lunch Break

13:30-15:00 Session 102: Room B202

Chaired by Dr. Hiroyuki Katayama

13:30-13:50 The "Tiger Toilet": From Concept to Reality

C. Furlong, W. T. Gibson M. R. Templeton, M. Taillade, F. Kassam, G. Crabb, R. Goodsell, J. McQuilkin, A. Oak, G. Thakar, M. Kodgire and R. Patankar

13:50-14:10 Application of Microwave Technology for Treatment of Human Feces

T. A. Nguyen, S. Babel and S. Boonyarattanakalin

14:10-14:30 Source Identification of Fecal Contamination in the Canals in Bangkok using Fecal Sterol Compounds

S. Srijew, W. Chiemchaisri, C. Chiemchaisri and H. Satoh

14:30-14:50 Dynamic Modelling as a Tool to Investigate Performance of Solar Septic Tanks

T.Pussayanavin, T. Koottatep, N. Arora, S. Jabade, and C. Polprasert

14:50-15:00 Session wrap up

15:00-15:30 Tea/Coffee Break

15:30-17:00 Session 103: Room B202

Chaired by Dr. Milos Rozkosny

15:30-15:50 A New Photo-activated Sludge System for Nitrification by an Algal-bacterial Consortium in a Photo-bioreactor with Biomass Recycle

P. van der Steen, K. Rahsilawati, A. Rada, C. M. Lopez-Vazquez and P. Lens

15:50-16:10 Electrocoagulation for Post-Treatment of UASB Reactor Treating Municipal Wastewater

A. R. Makwana, M. Mansoor Ahammed

16:10-16:30 Phosphorous Recovery from Septic Tank Effluents by Electrochemical Process

S.K. Chapagain, T. Koottatep, P. Sittplangkoon, and C. Polprasert

- 16:30-16:50 Polyferric Coagulation at Short hydraulic Retention Time to Reduce Viruses in Sewage
H. Katayama, T. Huong, M. Inaba and H. Furumai
- 16:50-17:00 Session wrap up

THEME 2: NEW APPROACHES TO PLANNING, FINANCING AND IMPLEMENTATION

Session 201: Room B206

11:00-12:30 *Chaired by Dr. Sudhir Pillay*

- 11:00-11:20 Experiences with city sanitation planning in Madhya Pradesh, India
M. Starkl
- 11:20-11:40 Non-network system: A cost-effective approach for improved service delivery?
R. Raman, S. Jain and J. Ravikummar
- 11:40-12:00 A Cost-Benefit Approach to Water Quality Improvement in Disadvantaged Urban Communities
R. Maroun and M. El-Fadel
- 12:00-12:20 Flexible engineering designs for urban water management in Lusaka, Zambia
L. Tembo, A. Pathirana, P. van der Steen and C. Zevenbergen
- 12:20-12:30 Session wrap up
- 12:30-13:30 Lunch Break

13:30-15:00 **Session 202: Room B206**

Chaired by Prof. Dr. Mufit Bahadir

- 13:30-13:50 Comparison of Water Quality Management Framework in Asian Countries
T. Kuyama
- 13:50-14:10 Financial and economic analysis of centralized and decentralized sanitation options for the new district of Obninsk, Russia
K. Gorshkov, P. van der Steen and M. P. van Dijk
- 14:10-14:30 Public health risk assessment tool: Strategy to improve public policy framework for onsite wastewater treatment systems (OWTS)
P. E. Cooke, T. Koottatep, P. van der Steen and P. N. L. Lens
- 14:30-14:50 Public perceptions on sanitation and human waste recycling options: Thailand as a case study
S. Kittpongvises, T. Koottatep, A. Panuvatvanich, N. Surinkul, Y. Sarathai, S. Dulyakasem and C. Polprasert
- 14:50-15:00 Session wrap up
- 15:00-15:30 Tea/Coffee Break

15:30-17:00 **Session 203: Room B206**

Chaired by Dr. Markus Starkl

- 15:30-15:50 Off-Grid Pour and Low Flush Toilets for Wipers: Pilot Studies from South Africa
D. Still, B. Louton, R. Inglis, J. Harris and J. Bhagwan
- 15:50-16:10 Understanding How People Innovate for Emergency Sanitation: A Case Study of a Local NGO
Y. P. Thye, A. J. Effendi, P. Soewondo, D. Brdjanovic and T. Setiadi
- 16:10-16:30 Understanding the Decision-making Process for Toilet Replacement in Urban Slums of Indonesia
Y. Nagai, K. Ushijima, U. Hamidah, N. Sintawardani, J. Triastuti, and N. Funamizu
- 16:30-16:50 Physical approach to lead applicable wastewater treatment system in swampy area (Case study : Seberang Ulu I District, Palembang, South Sumatera)
D. W. Putri
- 16:50-17:00 Session wrap up

CONFERENCE PROGRAM
(Wednesday, 03 December 2014)

- 09:30-10:00 Keynote Speech:
Dr. Hubert Jenny
Asian Development Bank
- 10:00-10:30 Keynote Speech:
Dr. Regina Dube
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
- 10:30-11:00 Tea/Coffee Break

11:00-12:45 Parallel technical sessions for Theme 1 & Theme 5 (Room B202 and Room B206)

THEME 1: NEW CONCEPTUAL APPROACHES AND TECHNOLOGIES TO WASTEWATER MANAGEMENT

Session 105: Room B202

11:00-12:30 *Chaired by*

- 11:00-11:20 Occurrences of Soluble Microbial Products in Effluent of Submerged Anaerobic Membrane Bioreactor (SAMBR) under Different HRTs and Transient Load Conditions
C. Kunacheva, D. C. Stuckey, Y. N. A. Soh
- 11:20-11:40 The Use of Immobilized Microorganism Cell with Expanded Granular Sludge Bed System in Treating Low Strength Domestic Sewage for Hot Climate Country Application
C. Ratanatamskul and R. Bunchuaidee
- 11:40-12:00 Kinetics and Degradation of Paraquat from Contaminated Water Using TiO₂/Coffee Nanoparticles in Photocatalytic Process
P. Phuinthiang, J. Ananpattarachai and P. Kajitvichyanukul
- 12:00-12:20 Antibacterial Ability of Ag and Ag/AgCl Nanoparticles from Radish and Tea Extracts for Water Treatment Application
Y. Boonto, J. Ananpattarachai, P. Kajitvichyanukul
- 12:20-12:30 Session wrap up
- 12:30-13:30 Lunch Break

THEME 5: CASE & PILOT STUDIES

Session 501: Room B206

11:00-12:45 *Chaired by Dr. Chavalit Ratanatamskul*

- 11:00-11:20 An alternate approach for municipal waste water management: technology options for small and medium towns
K. J. Nath and A. K. Sengupta
- 11:20-11:40 Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: Case study of Budapest Waterworks
T. Bencze and E. Mindak
- 11:40-12:00 Integration of water safety and sanitation safety planning: WHO conceptual approach
T. Thompson
- 12:00-12:20 Study on Sewage Treatment Facility for Unsewered Areas
H. Kawamura, Y. Odaka, and T. Sannomiya
- 12:20-12:40 School Sanitation in Underserved Urban Areas in India
H. Jaritz, R. Dube, D. Panse, and S. Satish
- 12:40-12:45 Session Wrap up
- 12:40-13:30 Lunch Break

13:30-14:30 **Poster session & Exhibition**

14:30-17:30 **Technical Field Visit**

18:00-20:00 **Conference Gala Diner**

CONFERENCE PROGRAM
(Thursday, 04 December 2014)

09:00-12:30 Parallel technical sessions for Theme 3 & Theme 4 (Room B202 and Room B206)

THEME 3: INTEGRATED SOLUTIONS CONSIDERING SLUDGE, STORM-WATER AND SOLID WASTE MANAGEMENT ASPECTS

Session 301: Room B202

09:00-10:30 *Chaired by Mr. Pierre Flamand*

09:00-09:20 Quality of sludges and wastes from natural and small aerobic-anaerobic wastewater treatment plants and their processing

H. Hudcova, and M. Rozkosny

09:20-09:40 Evaluation of treatment potential, biogas generation and sludge properties of an anaerobic Claridigester

K. Muzamil Gani, M. Ali, S.O. Singh, and A.A.Kazmi

09:40-10:00 Solid waste and septage co-composting as a pathway to cost and resource recovery in Sri Lanka

S. Fernando, P. Drechsel, I. Amirova, N. Jayathilake, and C. Semasinghe

10:00-10:20 Evaluation of treated sewage reuse potential and membrane based water reuse technology for Bangkok Metropolitan

C. Chiemchaisri, W. Chiemchaisri, N. Sangnarin, S. Buathong, T. Koottatep, T. Itonaga and K. Yamamoto

10:20-10:30 Session wrap up

10:30-11:00 Tea/Coffee Break

Session 302: Room B202

11:00-12:30 *Chaired by Dr. Peter van der Steen*

11:00-11:20 Holistic approach in policy, financing and human resource development for sustainable wastewater management: The case of Japan

P. Flamand

11:20-11:40 Reduction of organic matter in drinking water using a hybrid system combined with a rock biofilter and membrane in development countries

M. Maeng, E. Choi, and S. Dockko

11:40-12:00 A comparison of kinetics and degradation of paraquat using various green iron nanoparticles in heterogeneous fenton and photo-fenton reactions

P. Sukthang, J. Ananpattarachai and P. Kajitvichyanukul

12:00-12:20 Selection of Urban Water Supply Criteria and Performance Measures in Iskandar Malaysia by Using Rating Method Survey

N. A. Roslan and N. H. Zardari

12:20-12:30 Session wrap up

12:30-13:30 Lunch Break

THEME 4: INDEPENDENT EVALUATION AND ASSESSMENT OF WASTEWATER SOLUTIONS

Session 401: Room B206

09:00-10:30 *Chaired by Dr. Claire Furlong*

09:00-09:20 Life cycle based approach for municipal wastewater treatment in Developing Countries

S.V. Srinivasan, R. Narendiran, R. Suthanthararaja, and E. Ravindranath

09:20-09:40 *Qualitative Evaluation of SBR Based STPS in India*

A. Bhatia, Shriom, V. K. Tyagi and A.A.Kazmi

09:40-10:00 Qualitative evaluation of small scale municipal wastewater treatment plants (wwtps) in South India

S. Suneethi, R. Soundhar, M. Kanmani, T. Boobalan, D. Krithika, and Ligy Philip

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- 10:00-10:20 Evaluation of removal efficiency of human antibiotics in wastewater treatment plants in Bangkok
D. Sinthuchai, S. Kitpati Boontanon, N. Boontanon and C. Polprasert
- 10:20-10:30 Session wrap up
- 10:30-11:00 Tea/Coffee Break
- 11:00-12:30** **Session 402: Room B206**
Chaired by Dr. Regina Dube
- 11:00-11:20 EXCEED-Excellence Center for Development Cooperation-Sustainable Water Management in Developing Countries
M. Bahadir and N. Dichtl
- 11:20-11:40 The Prevalence of Pepper Mild Mottle Virus in Drinking Water Resources and Household Use, and Viral Removal of Household Treatment in Suburban Community of Hanoi By Means of Large Volume Virus Concentration Method
J. Sangsanont, T.D. Dang, T.T.V. Nga, H. Katayama, and H. Furumai
- 11:40-12:00 Reactor performance and pathogen removal during the wastewater treatment by Vermifiltration
S. Arora, and A. A. Kazmi
- 12:00-12:20 Photodegradation of benzene and phenanthrene in aqueous solution by pulsed-ultraviolet light
H. Lee, Y. Yoon, J. Han, J. Park, J. Oh, and N. Her
- 12:20-12:30 Session wrap up
- 12:30-13:30 Lunch Break
- 13:30-14:00** **Closing Ceremony**

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Closing Session

Time	Description
Thursday 4 December 2014	
13.30 – 14.00	<ul style="list-style-type: none"><li data-bbox="512 434 1439 607">- Vote of Thanks <i>Dr. Markus Starkl</i> Chair IWA Specialist Group on Water Management and Sanitation in Developing Countries <li data-bbox="512 640 1439 779">- Appreciation Address <i>Mr. Pierre Flamand</i> Manager - International Affairs Japan Sanitation Consortium (JSC) <li data-bbox="512 813 1439 981">- Closing Remark <i>Dr. Thammarat Koottatep</i> Chair Conference Organizing Committee Asian Institute of Technology (AIT)