1. Outline

1-1. Dates and Venue
The Third 3R International Scientific Conference on Material Cycles and Waste Management (3RINCs) was held March 9–11, 2016 at Melia Hotel, Hanoi, Japan.

1-2. Organization

- ORGANIZERS: Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE), Viet Nam Environment Administration (VEA), Department of Science and Technology under Ministry of Natural Resources and Environment (MONRE)
- SUPPORTERS: UNCRD (United Nations Centre for Regional Development), ISWA (International Solid Waste Association), IGES (Institute for Global Environmental Strategies), JICA (Japan International Cooperation Agency), MOEJ (Ministry of the Environment, Government of Japan), Japan Environmental Sanitation Center, Japan Environmental Facilities Manufactures Association, Japan Industrial Waste Information Center, Japan Waste Management Consultant Association, National Federation of Industrial Waste Management Associations, Japan, The Japan Society of Industrial Machinery Manufacturers

1-3. Official website: http://www.3rincs.org/3rincs2016-call-for-abstracts/

2. Participants and sponsors

2-1. Registered Participants
- Number of 3RINCs Registered Participants: 350
- Number of submitted abstracts and presentations: 200

2-2. Sponsors
- Sponsors, Exhibitors, andAdvertisers: 36
From Vietnam:
- Hanns Seidel Foundation Vietnam
- Ha Noi Urban Environment one member State-owne Limited Company
Vietnam Waste Solutions, Inc.
Thanh Chi Corporation
GMS Core Environment Program

From Korea
CGT CO., LTD
SAMHO CO., LTD
Korea Industrial Waste-Resources Mutual-aid Association
Korea Electronics Recycling Cooperative

From Japan
Dowa Holdings Co., Ltd.
JFE Engineering Corporation
Kobelco Eco-Solutions Co., Ltd.
Actree Corporation
EX Research Institute, Ltd.
Hitachi Zosen Corporation
Kawasaki Heavy Industries, Ltd.
Kokusai Kogyo Co., Ltd.
Mitsubishi Heavy Industries Environmental & Chemical Engineering Co., Ltd.
Nippon Steel & Sumikin Engineering Co., Ltd.
Plantec Inc.
ShinMaywa Industries, Ltd.
Sumiju Environmental Engineering Inc.
Takuma Co., Ltd.
Towa Technology Corporation
Yachiyo Engineering Co., Ltd.
Sanyu Plant Service Co., Ltd.
Swing Corporation
Taiheiyo Cement Corporation
Ebara Environmental Plant Co., Ltd.
Edison Inc.
iTask Japan
Kubota Environmental Service Co., Ltd.
Japan Environmental Sanitation Center
Japan Waste Management Consultant Association (JWMCA)
Kyoto University
Asia-Pacific Network for Global Change Research
Special Seminar was held as an on-site event of the 3rd 3RINCs on Thursday March 10, 2016. Exhibitors gave presentations about their company profile, products, services, and technologies. Some presentation files are uploaded on the WEB site (http://www.3rincs.org/exhibitions-and-special-events-by-sponsors/).

3. Short Report on the 3RINCS Scientific Program

3-1. Plenary Lectures

Six speakers were invited for the Plenary Lectures. On March 9, Dr. Nguyen Van Tai (Director General, Vietnam Environment Administration (VEA), Viet Nam) gave a speech entitled "Implementation of integrated waste management and 3R measures for Green Growth in Vietnam". He introduced current status of Vietnamese economic growth, social changes and experiences in waste management, including historical challenges and recent policies, future plan related to a Green Growth policy initiated by the Government. Dr. Sunil Herat (Senior Lecturer of Griffith University, Australia) gave a speech on "Current Perspectives on 3Rs Related Activities on E-waste Management in Asia Pacific Region". An expert in the E-waste field, he addressed the global situation and activities related to E-waste, and pointed out problems and possibilities in Asia and Pacific. Mr. Hermann Koller (Managing Director of International Solid Waste Association (ISWA), Austria) gave a speech entitled " Resource and Waste Management perspectives and challenges globally". He introduced global situation and needs for waste management business.

On March 10, the experiences of Korea, Japan and OECD were shared. Prof. & Dr. Jinwon Park (Yonsei University, President of NIER (National Institute of Environment Research)& KSWM, Korea) gave a lecture on the "The tendency of waste to energy, resources and waste management in Korea". Historical change of the waste management policy, policy of resource recirculation, policy of waste to energy, technology of waste to resource was discussed. The Japanese experience was examined by Prof. & Dr. Toshiaki YOSHIOKA (Dean, Graduate School of Environmental Studies, Tohoku University Japan) in his presentation entitled, "The role of 3R action visible through the experiment of disaster waste treatment". He presented detailed information and data on the disaster
waste management after Great East Japan earthquake and Tsunami, March 2011. As the final lecturer, Mr. Peter Borkey (Principal Administrator of OECD Environment Directorate) gave a speech on "Key Trends in Resource Efficiency and Related OECD Activities". He presented recent trends in the OECD and work areas on resource efficiency. He also discussed on-going works including EPR (updated guidance), waste containing nanomaterials, waste prevention and critical metals.

3-2. Special Sessions

Special Sessions were organized for various 3R-related topics. The topics of five sessions were 3R Policy & Science Cooperation (by UNCRD and 3RINCs), Policy based on EPR in the context of emerging economies (by IGES), Biomass Waste Management in Asia and the Pacific and Needs for Scientific Cooperation, Waste-to-Energy Issues in Asia and the Pacific and Needs for Scientific Cooperation (Co-organized by JSMCWM & KSWM, and Sponsored by Korea National Institute of Environmental Research), and 3R and waste management in Vietnam (by ISPONRE).

3-3. General Sessions

In the general sessions, there were 13 oral presentation sessions and 2 poster presentation sessions. We were very pleased to host a total of 200 presentations, including 100 oral (including special sessions) and 100 poster presentations.

Oral sessions consisted of the following topics in parallel in two to four rooms: GHG emission, Waste to Energy (two sessions), Biomass Waste, 3R Policy, Waste Management, Industrial Waste, E-waste, 3R Technology, Anaerobic digestion, Disaster waste, Hazardous Waste and System Analysis (MFA,
SFA and IOA). Thanks to the Chairs’ contributions and active participation from the floor, all of the sessions successfully promoted a deeper understanding and fruitful discussions on each topic.

Posters were shown during two sessions on March 9 and 10.

3-4. Awards

To encourage excellence at this and future conferences, the National Organizing Committee presented Excellent Research Awards for oral and poster presentations. Extended abstracts were submitted in advance for general oral and poster sessions (and some presentations at special sessions that had originally been planned for the general sessions) were evaluated by international scientific researchers and other contributors. After the screening and voting, Excellent Research Awards were given to four presenters: Mr. Komsilp Wangyao (King Mongkut’s Univ. Technol. Thonburi, Thailand), Mr. Myo Min Win (Kyoto Univ., Japan), Nguyen LE PHUC (Vietnam Petroleum Institute), Jin-Ho Sung (Yonsei Univ. Korea). The awards were presented at the closing ceremony. We congratulate these researchers for their excellent presentations.

3-5. Closing Ceremony

At the Closing Ceremony, Dr. Asari briefly summarized the conference. On behalf of the co-organizers, she expressed her sincere appreciation to all of the plenary lecturers, participants,
supporters, staff, and other contributors. Then Prof. Sakai introduced the invitation to submit a manuscript for Special Issue of Journal of Material Cycles and Waste Management (JMCWM) on the 3rd 3RINCs 2016. Finally, Dr. Thallada Bhaskar and Prof. Sadhan K Ghosh announced the plan for the forth 3RINCs that will be held in India next year. The participants welcomed their plan and hoped to see each other again in New Delhi, 8-11 March 2017 (http://www.3rinicsindia.org/).

4. Other Events
4-1. Exhibition by Companies
The Exhibition was in front of the main rooms on March 9 (13:00–18:30) and March 10 (9:00–18:30). Exhibitors presented their technology and activities.

4-2. Welcome Reception and Banquet
All participants enjoyed a Welcome Reception held from 18:30 on March 9 and a Banquet starting at 19:00 on March 10. Vietnamese professional group performed a traditional dance and music.

4-3. Technical Tours
The technical tour was conducted for the participants.

8:30 Depart from Melia Hotel
8:30 - 9:30 Transfer to site 1 by chartered bus
9:30 - 11:30 Site 1: Arrive Dai Dong waste treatment facility
  · Visit RPF Plant
  · Introduce about Dai Dong waste treatment facility
12:00 - 13:30 Lunch at the local restaurant
14:00 - 16:15 Site 2: Nam Son waste treatment facility
  · Introduce about Nam Son waste treatment facility
  · Visiting Nam Son landfill and seeing industrial waste incineration plant (NEDO project)
17:00 - 19:00 Dinner at the Airport
5. Closing Comments

The cooperation of many collaborators resulted in a successful meeting. We feel that this meeting will lead to the next step and future developments. For the various sessions, collaboration was shown by industry-government-academia for science and policy that should lead to effective real-world cooperation. In addition, the participation of local residents, young researchers and private companies added to the energy and heartfelt exchange of ideas. For the future, continued efforts and measures to increase the participation from various Asian nations will be necessary. Finally, we would like to express our appreciation to all of the participants and supporters.