

## The 1<sup>st</sup> Workshop on Reduction of Unintentional POPs in East Asian Countries

Sep. 25-26, 2006    Kyoto University, Kyoto, Japan

### Summary

(Chair:Masatoshi Morita, Ph.D)

1. The 1<sup>st</sup> workshop on Reduction of Unintentional POPs in East Asian Countries was held on September 25-26, 2006, in Kyoto. The workshop was attended by administrative officers and experts from 11 East Asian countries (Cambodia, Indonesia, Japan, Korea, Lao PDR, Malaysia, Mongolia, the Philippines, Singapore, Thailand and Vietnam), the United Nations Environment Programme (UNEP), the United States of America, Canada, as well as observers from various countries. The workshop program included an opening session, session 1 (Development of Inventories of Unintentional POPs in the East Asian Region and Data Sharing), session 2 (Effective Utilization of BAT/BEP for Strategic Measures to Reduce Unintentional POPs), and Session 3 ( Implementation of Strategies to Reduce Unintentional POPs and Monitoring in the East Asian Region).
2. In the opening Session, opening remarks were given by Prof. Kazuo Oike, President of Kyoto University and two keynote speeches were presented. The first keynote speech was by Mr. Kazuhiko Takemoto, Director-General of Environmental Management Bureau, Ministry of the Environment, Japan. In the speech, it was stressed that the purpose of the workshop is to share information on the unintentional POPs in East Asian countries as a first step towards capacity building to reduce unintentional POPs and towards the formation of national implementation plans and action plans under the Stockholm Convention. Also referred to were the development of an East Asian network and dissemination of the outcome of the workshop for worldwide use through The 2<sup>nd</sup> BAT/BEP expert group meeting (December 2006, Beijing) and COP3 (April 2007, Dakar).

3. The second keynote speech was given by Dr. Heidelore Fiedler, UNEP Chemicals Branch, Geneva. Current analysis concerning unintentional POPs was presented including release inventories and the methodology to establish comparable dioxin and furan inventories, priority setting, and guidelines on BAT/BEP. She informed that presently, no further unintentional POPs are under discussion for inclusion in the Convention. On-going activities of UNEP and next steps include regional consultations/workshops on BAT/BEP by the Stockholm Convention Secretariat, improvement of the Toolkit for use by countries in their national implementation plans, further work on improving the scientific basis for emission factors with emphasis on developing country technologies and practices, and inclusion of PCB and HCB in the evaluations.
4. In session 1, development of emission inventories of unintentional POPs and data sharing in East Asian region was discussed. Drs. Noriyuki Suzuki from National Institute for Environmental Studies, Japan and Seungdo Kim from Hallym University, Korea, co-chaired the session. Four country reports were presented on the subject. Malaysia presented a report entitled “National Implementation Plan on POPs Management”; Mongolia, “Dioxins and Furans in Mongolia”; Thailand, “Preliminary of Unintentional POPs in Thailand”; and Lao PDR, “Implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs) in Lao PDR”. The topics of presentations covered the experiences of each country on the development of dioxin/furan inventories and also the development of PCB/pesticide inventories and NIP. Questions from participants concerned the emission amounts and source contribution of dioxins, the cost of measures to reduce dioxin emission, and several other points.
5. In session 2, effective utilization of BAT/BEP for strategic measures to reduce unintentional POPs was discussed. Drs. Shinichi Sakai, Kyoto University, Japan and Robert E. Hall, US EPA co-chaired the session. Four papers were presented. Cambodia presented a paper entitled “Unintentionally POPs in Cambodia and Its Action Plan”;

Korea, “Reduction Measures for Dioxin Generated from Industrial Sectors in Korea”; Vietnam, “U-POPs sources in Vietnam : Challenges and the Action Plan to reduce unintentional releases”; and Canada, “Implementation of BAT/BEP in Canada’s National Action Plan for Unintentional POPs”. BAT/BEP approach can be combined and integrated with Pollution Prevention Strategies like those used in Canada. European countries have a similar system named the Integrated Pollution Prevention Control (IPPC) system which has opened BAT References (BREF) documents to the public. These systems identify opportunities to minimize emissions of multi-pollutants including U-POPs and have a framework for continuous improvement. Vietnam is also integrated in using the Cleaner Production Strategy. For POPs control each country referred to difficulties establishing an Action Plan and fulfilling Reduction Measures because of shortfalls in human resources and finances. It is suggested that workshops like this would play a useful role to overcome these difficulties. Due to limited resources Korea has tried to have a stepwise approach, such as voluntary agreements with industries, followed by direct regulation.

6. In session 3, implementation of strategies to reduce unintentional POPs and monitoring in the East Asian region was discussed. Drs. Heidrore Fiedler and Shinichi Sakai co-chaired the session. Four reports were presented, from Indonesia, “Current Status of Unintentional POPs in Indonesia”; Singapore, “Country Paper by Singapore”; the Philippines, “Reduction of Unintentional Persistent Organic Pollutants(POPs) in the Philippines”; and the USA, “Challenges in Quantifying and Reducing POPs from Uncontrolled Combustion”. Each country referred to progress in the preparation of the NIP including priority setting and future strategies to address unintentional POPs and stressed the need for future standard setting, monitoring, and emission controls. Countries presented national legal frameworks and measures to monitor and control unintentional POPs including the application of BAT/BEP measures. Most countries underlined the absence of dioxin laboratories as a major deficit as well as a need for capacity building. Numeric results of dioxin and

furans inventories were given by Indonesia and the Philippines. A comprehensive monitoring and assessment program is being set-up by Singapore for all POPs using USEPA methods and analyses done by private laboratories. The USA presented approaches and results for determining emission factors from open burning processes. The open fires in agriculture, forests, and of wastes typically represent the largest sources in national inventories of developing countries and counter-measures are needed. Discussions addressed regulation on dioxin controls such as emission limits or requirements to determine destruction and removal efficiencies (DREs).

7. In closing sessions, the Chair compiled this summary. In the 2-day workshop, participants came to know each other, and information about the current situation and problems and countermeasures related to unintentional POPs in East Asian countries were shared. Such information exchange and discussion in the workshop was considered useful for the future reduction of unintentional POPs in each country in the region. It is also pointed out that the information and experience in the East Asian region will contribute to the global reduction through transmission to international meetings such as the BAT/BEP expert group in December 2006 in Beijing, COP3 in April 2007 in Dakar, or even to scientific meetings such as Dioxin 2007 in September 2007 in Tokyo. Considering the health of future generations and wildlife in the world, and global measures, East Asian countries should further enhance measures for unintentional POPs. The Chair recommended continuing efforts for discussion in East Asian countries such as this workshop to aid in developing effective controls for POPs.

【List of Participants】

Name	Affiliation	Country
Sina, Cina	Deputy Director of Pollution Control Department Ministry of Environment	Cambodia
Vuthyrak, Peou	Government official, Vice Chife office of Air qulity,Noise and Vibration management, Environmental Pollution Control Department,the Ministry of Environment	Cambodia
Purnama, Aep	Head of Division of Energy Power, Assistant Deputy for Hazardous and Toxic Substances and hazardous Waste Management of Mining, Energy & Oil and Gas, Ministry of Environment	Indonesia
Suwargana, Iyan	Head of Division of Agro Industries, Assistant Deputy for Hazardous and Toxic Substances and hazardous Waste Management of Manufacture and Agro Industry	Indonesia
Fukuda, Hiroyuki	Deputy Director, Office of Dioxins Control, Environmental Management Bureau, Ministry of the Environment, Government of Japan	Japan
Ishii, Aki	Policy and Coordination Division, Environmental Management Bureau, Ministry of the Environment, Government of Japan	Japan
Matsuda, Akihisa	Ministry of Economy, Trade and Industry	Japan
Mohri, Takako	Policy and Coordination Division, Environmental Management Bureau, Ministry of the Environment, Government of Japan	Japan
Morita, Masatoshi	Special Guest Scientist, National Institute for Environmental Studies, Japan	Japan
Sakai, Hakaru	Chief, Office of Dioxins Control, Environmental Management Bureau, Ministry of the Environment, Government of Japan	Japan
Sakai, Shinichi	Professor, Environment Preservation Center, Kyoto University, Japan	Japan
Suzuki, Noriyuki	Section Head, Exposure Assessment Research Section, Research Center for Environmental Risk, National Institute for Environmental Studies, Japan	Japan
Takemoto, Kazuhiko	Director General, Environmental Management Bureau, Ministry of the Environment, Government of Japan	Japan
Tashiro, Yasuhiko	Director, Office of Dioxins Control, Environmental Management Bureau, Ministry of the Environment, Government of Japan	Japan
Wakasa, Yuji	Office of Dioxins Control, Environmental Management Bureau, Ministry of the Environment, Government of Japan	Japan
Kim, Kiheon	Senior Researcher, National Institute of Environmental Research	Korea
Kim, Seungdo	Professor, Hallym University	Korea
Phanthavongsa, Setouanh	Technical officer of Environment Quality Monitoring Center, Environment Research Institute	Lao Peoples' Democratic Republic
Vongphosy, Thavone	Deputy Director of Environment Quality Monitoring Center, Environment Research Institute	Lao Peoples' Democratic Republic
Jusoh, Rohani	Department of Environment, Ministry of Natural Resources & Environment	Malaysia
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Bravo, Francisco S	Senior Undersecretary of DENR and the concurrent EMB Director	Philippines
Morena, Paquito T	Department of Environment and Natural Resources, Environmental Management Bureau	Philippines
Rajaram, Indrani	Chief Scientific Officer, Pollution Control Department, National Environment Agency	Singapore
Seng, Tan Kong	Manager, Operations, Tuas Incineration Plant, National Environment Agency	Singapore
Rungthawornwong, Nuchida	Environmental officer, Wastes and Hazardous Substances Management Bureau, Pollution Control Department	Thailand
Binh, Bui Hoa	International Cooperation Division, Vietnam Environment Protection Agency, Ministry of Natural Resources and Environment	Vietnam
Tuan, Nguyen Anh	Pollution Control Division, Vietnam Environment Protection Agency, Ministry of Natural Resources and Environment	Vietnam
Fiedler, Heidelore	Scientific Affairs Officer, UNEP Chemicals Branch, DTIE, International Environment House	UNEP
Smith, Ken	Steel and By-product Organics Unit Metals, Cement and By-Product Organics Section Natural Resources Division Pollution Prevention Directorate Environmental Stewardship Branch Environment	Canada
Gullett, Brian	U.S. Environmental Protection Agency	USA
Hall, Robert E.	Chief, Air Pollution Technology Branch, U.S. Environmental Protection Agency	USA
Lee, Chun Wai	Environmental Protection Agency	USA