

# **Report of the EANET Emission Inventory Workshop**

**SAC21**

**26-28 October 2021**

**Virtual Meeting**

**J. Kurokawa (NC)**

# Background

Red colored species are Short-lived Climate Pollutants (SLCPs)



**Anthropogenic Emissions**

CO<sub>2</sub>,  
**CH<sub>4</sub>, HFCs,**  
**BC,**  
 SO<sub>2</sub>, OC,  
**NO<sub>x</sub>, NMOVCs, CO**

**Warming Agents**

CO<sub>2</sub>,  
**CH<sub>4</sub>, HFCs**

**BC,**  
**O<sub>3</sub>**  
 (NO<sub>x</sub>/NMVOC/CO)

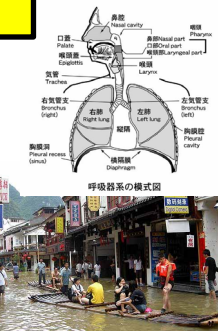
SO<sub>2</sub>, NMVOCs,  
 NO<sub>x</sub>, CO

**Air Pollutants**

**Cooling Agents**

SO<sub>4</sub><sup>2-</sup>,  
 NO<sub>3</sub><sup>-</sup>,  
 OC

**Impacts**



**SLCPs:** Agents which have relatively short lifetime in the atmosphere and have a warming influence on climate.

- In order to tackle problems of atmospheric environment, it is essential to understand current status of emissions of air pollutants and consider effectivities of mitigation measures.
- Emission inventory is essential to obtain such information and helps to make appropriate atmospheric environmental policies.

# Program of the EANET Emission Inventory Workshop

<b>Monday, October 18, 2021 UTC 5:30-9:30</b>		
05:30-05:35	Opening remarks	Shiro Hatakeyama (NC/Director General of ACAP)
05:35-05:40	Introduction of the workshop	Jun-ichi Kurokawa (NC/ACAP)
	<b>Lecture presentations from experts</b>	
05:40-06:00	Roles of emission inventory in air quality management	Toshimasa Ohara
06:00-06:30	Emission estimation for air pollutants emission inventory	Tazuko Morikawa
06:30-07:00	Japan's National GHG Inventory	Elsa Hatanaka
07:00-07:30	Development of biomass open burning emission inventory for air quality management at national and regional levels in Thailand	Savitri Garivait
07:30-08:00	Application of emission inventory to air quality simulation	Satoru Chatani
	<b>Presentations from participants nominated by the NFPs</b>	
08:00-08:05	Cambodia	Chandath Him
08:05-08:10	Lao PDR	Bounmany Soulideth
08:10-08:15	Malaysia	Farah Diyana Rusli
08:15-08:20	Mongolia	Bayarmagnai Jambaldori
08:20-08:25	Myanmar	Kyu Kyu Sein
08:25-08:30	Philippines	Paul Nathan Vallar
08:30-08:35	Russia	Alisa Trifonova-Yakovleva
08:35-08:40	Thailand	Naboon Riddhiraksa
08:40-08:45	Viet Nam	Van Sy Pham
08:45-08:55	Q & A for the presentations from participants	
08:55-09:25	General discussion among participants and experts	
	<b>Closing</b>	
09:25-09:30	Announcement and closing	

# Lectures

Emission **estimation** for air pollutants emission inventory  
(Dr. Tazuko Morikawa of JARI)  
\*General methodology

Japan's **National** GHG Inventory  
(Ms. Elsa Hatanaka of NIES)  
\*Development of national official emission inventory

**Roles of emission inventory in air quality management**  
(Dr. Toshimasa Ohara of NIES)

Development of **biomass open burning** emission inventory for air quality management at national and regional level in Thailand  
(Dr. Savitri Garivait of KMUTT)

**Application** of emission inventory to air quality simulation  
(Dr. Satoru Chatani of NIES)  
\*Essential linkage between EI and AQM

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**Roles of emission inventory in air quality management**  
(Dr. Toshimasa Ohara of NIES)

- Basic idea of air quality management, definition of emission inventory, how it is utilized, basic methodology of development of emission inventory, what can be obtained from emission inventory were introduced.
- Importance of development of national emission inventory was emphasized.

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# Lectures

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Japan's **National** GHG Inventory

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\*Development of national official emission inventory

- How to estimate emissions both from stationary sources and mobile sources were explained in detail.
- Currently available regional and global emission inventories were introduced as alternative way to understand current status of emissions in each country and Asian region.

Development of **biomass open burning** emission inventory for air quality management at national and regional level in Thailand

(Dr. Savitri Garivait of KMUTT)

**Application** of emission inventory to air quality simulation

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\*Development of national official emission inventory

- How to develop and maintain the national emission inventory in Japan is explained from perspectives of legal arrangement, institutional arrangement, and procedural arrangement.
- For example, how necessary data are collected from the Ministries and other organizations were introduced.

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- Methodology to estimate open biomass burning emissions using satellite data, land use data, and field survey was explained.
- How to evaluate the estimated open biomass burning emissions were introduced based on results of case study in Thailand, especially Bangkok Metropolitan Area.

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- how effective and powerful to utilize emission inventory in air quality model are introduced: Identifying key process and sources for ambient pollutant concentrations, evaluating source sensitivities of ambient pollutant concentrations to emissions, and predicting future ambient pollutant concentrations based on emission scenarios.

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# Participants and their presentations

- Participants were from administrative organization and research institutes of each country basically related to air quality management.
- Number of participants were around 50 from 9 countries.



## Short presentations from nominated participants

- Introduction of air quality management activities in your country.
- Current status and/or plans of the national emission inventory.  
(Or major emission sources need to be reduced in each country.)
- **Opinions for necessary roles of and required activities in EANET related to Emission Inventory.**

# **Major opinions from participants for EANET related to Emission Inventory issues**

- **Most countries emphasized necessity of capacity building although required contents depend on countries. (-> Preparing different courses such as general guidance, practical training, application of emission inventory, etc.?)**
- **Supports from both technical (such as providing guideline) and financial aspects are necessary for conducting activities of emission inventory.**
- **Sharing emission inventories in participating countries in EANET is useful for understanding atmospheric environment issues as well as comparing methodologies including emission factors.**

**Thank you for your  
attention!**