RRC.AP and Partners Built Capacities of Member Countries of ASEAN Haze Agreement and Malé Declaration on Air Quality Management

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Many countries in the Asian region are facing serious air pollution problems and need technical assistance and policy guidance for building capacities for effective management of air quality. The Regional Resource Centre for Asia and the Pacific (RRC.AP), with partners, organized a 5-day capacity-building workshop on air quality management during 19-23 September 2022 at the Asian Institute of Technology Conference Center (AITCC). The workshop aimed to build the capacities of the countries for better management of air quality and to enhance the technical capabilities to support their national efforts for addressing air pollution issues including emission reduction of particulate matters (such as $PM_{2.5}$).

The participants, including policymakers and scientific and technical staff of the Ministry of Environment and the Pollution Control Agencies of the member countries of the ASEAN Agreement on Transboundary Haze Pollution (ASEAN Haze Agreement) and the Malé Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia (Malé Declaration) and the ASEAN Secretariat, were invited to the workshop.

Group Photo of the Workshop Participants

More than 45 participants from 17 countries including 9 member countries of the ASEAN Haze Agreement (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, and Thailand) and 8 member countries of the Malé Declaration (Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan, and Sri Lanka) and a representative from the ASEAN Secretariat participated in the workshop.

The proceedings of the workshop consisted of 5 Modules, namely, Air Quality Monitoring, Emission Inventory Development, Air Quality Modeling, Impact Assessment, and Air Pollution Mitigation Policies.

On day 1, the workshop was began with an opening session in which RRC.AP Director and AIT President delivered the Welcome Remarks followed by the Opening Remarks from APN Director, Regional Facilitator of the Malé Declaration, and Head of Automotive Emission Laboratory, Pollution Control Department (PCD), Ministry of Natural Resources and Environment, Government of Thailand. Later, during workshop proceedings of day1, each member country was invited to make a presentation about their facilities and infrastructure available for air quality monitoring, emission inventory development, air quality modeling, impact assessment, and air pollution mitigation policies, regulations, and action plans. Countries also presented challenges and requirements of effective management of air quality in their countries.

On day 2, the proceedings of the workshop were focused on the Air Quality Monitoring Module which covered an overview of ambient air quality monitoring and instrumentation and facilities including hands-on training on air quality monitoring in AIT's Ambient Air Quality Laboratory and InterLab on the latest research conducting on Low-Cost Sensors for air quality monitoring.

On day 3, the proceedings of the workshop were focused on the Emission Inventory Module which covered details of emission inventory development theories, concepts, and demonstration of available emission inventory tools and manuals including source apportionment of air pollutants using the models. On day 3, a field visit was organized to the Pollution Control Department (PCD) and Environmental Research and Training Center (ERTC) of the Ministry of Natural Resources and Environment, Thailand. Participants learned about sampling and analysis of dioxins, VOCs, mercury, and ambient air quality parameters in the mobile laboratory.

On day 4, the proceedings of the workshop were focused on the Air Quality Modeling Module which covered the details of dispersion modeling and source apportionment receptor modeling. Participants also performed hands-on training on dispersion and source apportionment models.

On day 5, the proceedings of the workshop were focused on the Impact Assessment Module in which participants learned about the impacts of air pollution on health and the co-benefits of air pollution emission reduction. On day 5, Air Pollution Mitigation Policy Module was also delivered which covered the air pollution mitigation strategies and clean measures and actions, and lessons learned in Asia followed by the air pollution mitigation policies and action plans and success stories of India and Thailand (key countries of South Asia and Southeast Asia).

During 5 days of the workshop, 11 lectures were delivered, conducted 4 hands-on training session, and organized a field visit to PCD and ERTC. The resource persons from India, Thailand, Indonesia, the Philippines, and the UK delivered the lectures and conducted hands on trainings. A Certificate of Participation was awarded to each participant after the workshop on day 5. Feedback showed that the participants had learned a lot from the workshop and were very satisfied with the content of the resource materials and organizing the workshop professionally.

This workshop was the second capacity-building workshop of the 2-year project "Capacity Development Program on Air Quality Management and Emission Reduction of $PM_{2.5}$ for ASEAN Countries [CBA2020-01MY-Verma]" supported by the Asia-Pacific Network for Global Change Research (APN). APN funded this project as a part of their Capacity Development Programme (CAPaBLE) and it is in line with APN's thematic priority areas on transboundary air pollution and its impact on human health.

Apart from APN and AIT, the Pollution Control Department (PCD) and Environmental Research and Training Center (ERTC) of the Ministry of Natural Resources and Environment, Thailand; the National Institute of Technology (ITENAS), Indonesia; the University of Malaya (UM), Malaysia; and the UNEP Regional Office for Asia and the Pacific are the partner to this project.

For more information can be found at http://www.rrcap.ait.ac.th/apn2022/