



## Clean Air with Improved Agricultural Crop Residue and Biomass Management in Asia

6 June 2024 (Thursday) | Room: Nostalg 2  
Joy Nostalg, Manila, Philippines

### Background

Poor management of agricultural residues and biomass can contribute to air pollution and greenhouse gas emissions in Asia and the Pacific. Due to increasing labor shortages in rural areas and lack of appropriate machinery, many farmers are unable to collect crop residues and other biomass from fields for productive use. Economic pressure to use land intensively has led farmers to plant successive crops, requiring land to be prepared for the next crop within a narrow time window. This window is shrinking further due to changing rainfall patterns, influenced by climate change. This is particularly challenging for rice-wheat systems, where land preparation for wheat planting must occur immediately after rice harvest. Burning crop residues in open fields remains a common practice due to its perceived efficiency, but it contributes to air pollution, increased greenhouse gas emissions and reduced soil fertility and crop yields.

Government initiatives, such as bans on residue burning, have not solved the problem. Many innovative technologies have been proposed to reduce crop field burning by using specialized harvesters and balers to efficiently remove the residue and convert it into valuable products. Carbon markets can also provide an incentive for farmers to avoid residue burning.

This workshop will explore the causes and challenges of crop residue burning and discuss solutions through real-world experiences in Asia. The session will also focus on the challenges and opportunities in agricultural mechanization for vulnerable groups such as smallholder farmers and women agricultural workers, strengthen the policy environment, and leveraging South-South and triangular cooperation.

### Program Agenda

**Moderator:** Noriko Sato; Senior Natural Resources Specialist; Agriculture, Food, Nature, and Rural Development Sector Office; Sectors Group (SG-AFNR), ADB

Time	Activity
9:30am–9:50am	<b>Opening Session</b>  <b>Opening Remarks</b> by Qingfeng Zhang, Senior Director, SG-AFNR, ADB  <b>Remarks</b> by Yoko Watanabe; Director; Environment, Climate Change, Resilience, and Environment Cluster (CCRE); Climate Change and Sustainable Development Department (CCSD) ADB
9:50am–10:45am	<b>Session 1: Overview</b>
9:50am–10:05am	ADB's corporate approach on improved air quality - Karma Yangzom, Principal Environment Specialist, CCRE-ENV, CCSD, ADB

<b>Time</b>	<b>Activity</b>
10:05am–10:20am	Crop residue management through agricultural mechanization <ul style="list-style-type: none"> <li>- Marco Silvestri, Deputy Head/Program Officer, UNESCAP's Center for Sustainable Agricultural Mechanization (CSAM) / Asia and Pacific Network for Testing of Agricultural Machinery (ANTAM) (online participation)</li> </ul>
10:20am–10:35am	Overview of air quality management in the agriculture sector in Asia region and possible collaboration with ADB <ul style="list-style-type: none"> <li>- Bertrand Bessagnet, Coordinator, Air Pollution Action Area, The International Center for Integrated Mountain Development (ICIMOD)</li> </ul>
10:35am–10:45am	Q&A
<b>10:45am -11:40am</b>	<b>Session 2: Country experience of Pakistan</b>
10:45am–11:00am	Why do Pakistani farmers burn crop residue and what can be the solutions? <ul style="list-style-type: none"> <li>- Amina Bajwa, Food Security Specialist (Consultant), ADB</li> </ul>
11:00am–11:15am	Managing crop residue burning by using advanced harvest machinery: evidence from pilot testing and its impact evaluation study in Punjab, Pakistan <ul style="list-style-type: none"> <li>- Babur Wasim, Agriculture and Natural Resources Economist (Consultant), ADB</li> </ul>
11:15am–11:30am	Crop residue management for low carbon rice – the private sector's initiatives in Pakistan <ul style="list-style-type: none"> <li>- Shahid Tarar, CEO, Galaxy Rice Mills, Pakistan (online participation)</li> </ul>
11:30am–11:40am	Q&A
11:40am–12:20am	<b>Session 3: Biomass management in practice</b>
11:40am–11:55am	ADB's support for SAEL biomass energy projects in India <ul style="list-style-type: none"> <li>- Sumika Nakane, Investment Specialist, Infrastructure Finance Division 1, Private Sector Operations Department, ADB</li> </ul>
11:55am–12:10pm	Possible solutions on biomass managements or biomass pelletization for cleaner air <ul style="list-style-type: none"> <li>- Bidya Banmali Pradhan, Senior Atmospheric Environment Specialist, ICIMOD</li> </ul>
12:10am–12:20am	Q&A
<b>12:20pm–13:30pm</b>	<b>Lunch</b>
<b>13:30am–14:10pm</b>	<b>Session 4: Potential use of carbon markets</b>
13:30am–13:45am	Carbon markets for agriculture and natural resources sector: opportunities and Challenges (Online) <ul style="list-style-type: none"> <li>- Zeynep Pinar Ozturk, Carbon Market Specialist / Independent Consultant</li> </ul>

<b>Time</b>	<b>Activity</b>
13:45am–14:00am	Beyond the smoke – The untapped potential of carbon markets for crop residue management - Hiz Jamali, Senior Climate Change Officer, CCRE, CCSD, ADB
14:00am–14:10pm	Q&A
<b>14:10pm–14:50pm</b>	<b>Session 5: Programmatic approaches for air quality management</b>
14:10pm–14:30pm	People’s Republic of China: Beijing – Tianjin – Hebei (BTH) Air Quality Improvement Program - Lei Zhang; Unit Head, Project Administration; Energy Sector Office; Sector Group
14:30pm–14:50pm	Mongolia: Ulaanbaatar Air Quality Improvement Program - Maria Pia Ancora, Senior Urban Development Specialist, Water and Urban Development Sector Office
14:50pm–15:00pm	Q&A
<b>15:00pm–15:20pm</b>	<b>Session 6: Open Discussion and Wrap-up</b>  Moderated by Sabah Abdulla, Senior Economist (Climate Change), Economic Analysis and Operational Support Division, Economic Research and Development Impact Department, ADB
15:20pm–15:30pm	<b>Closing Session</b> Closing remarks by Yasmin Siddiqi, Director, SG-AFNR
<b>15:30pm ~</b>	<b>Tea Reception</b>