

New Climate and Clean Air Coalition Agriculture Effort Tackles Climate Change, Supports Rice Production

Leading agricultural research institutes join partners in Bangladesh, Colombia and Vietnam in groundbreaking effort to reduce climate emissions while supporting rice producers' efficient production

Bangkok, Thailand (31 October 2014) —A new effort launched today seeks significant reductions in greenhouse gas emissions from rice cultivation—the second largest source of methane generated by agriculture globally—while making production more efficient and resilient to weather-related shocks in three rice-producing countries in Asia and Latin America.

“We have a way to overcome a major dilemma facing agriculture everywhere, which is how to adjust production of critical staple crops like rice to changing climate while also reducing agriculture’s significant contribution to climate change,” said Reiner Wassmann, a senior climate researcher at the Philippines-based International Rice Research Institute (IRRI).

IRRI is leading the effort along with International Center for Tropical Agriculture (CIAT), and the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). They will work with rice farmers, policy makers, and an array of other partners in Vietnam and Bangladesh, two of Asia’s largest rice producers, and Colombia, the country with the second largest rice area in Latin America.

The work is part of the Agriculture Initiative of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC), which is led by nine CCAC partners: Bangladesh, Canada, the European Commission, Ghana, Japan, Nigeria, the United States, the World Bank, and the U.N. Food and Agriculture Organization (FAO). “Other components of the same initiative include livestock manure management and reducing open burning of agriculture waste, practices which reduce open burning of agriculture waste, practices which reduce emissions of black carbon and methane while improving production and energy efficiency,” said Helena Molin Valdes, head of the CCAC secretariat.

The new CCAC paddy rice effort will focus on large-scale adoption of an irrigation method—known as alternate wetting and drying (AWD)—in which rice farmers periodically drain rice paddies, rather than continuously flooding their rice fields. Scientific studies have shown that standing water in rice paddies cause the formation of methane that eventually is released into the atmosphere, where it is far more efficient at trapping radiation than equivalent amounts of

carbon dioxide. At the same time, farmers have to ensure that rice roots can still take up water that can be monitored through a simple perforated tube.

“Researchers at IRRI and partner institutes have been perfecting this approach for years. We think AWD could reduce methane emissions from rice by 30 to 50 percent while also reducing yield losses and lowering production costs,” Wassmann said. He noted that by reducing water use, farmers can spend less on fuel and electricity expenses for pumping, and are less exposed to unreliable irrigation or rainfall.

In the three participating countries, the agriculture sector is an important source of methane. For example, Vietnam has very intensive rice production in the delta regions, accounting for major portion of Vietnam’s total annual greenhouse gas emissions.

Rice production is prominent on both sides of the climate change equation. Experts predict that the combination of higher temperatures and the effects of rising sea waters on freshwater irrigation systems could significantly depress rice yields. The Intergovernmental Panel on Climate Change (IPCC) identified paddy rice cultivation as the second largest agricultural source of methane emissions globally.

Thus, rice researchers are challenged to improve farming systems that allow farmers to both adapt to the effects of climate change while mitigating methane emissions as well.

“This initiative will reduce emissions from the massive rice sector while benefitting rice farmers in terms of more reliable yields and reduced production costs,” said Lini Wollenberg, leader of low-emissions agricultural development at CCAFS.

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The **International Rice Research Institute (IRRI)** is a member of the CGIAR Consortium. IRRI aims to reduce poverty and hunger, improve the health of rice farmers and consumers and ensure environmental sustainability of rice farming through collaborative research, partnerships, and strengthening of national agricultural research and extension systems. www.irri.org

The **CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)** is a strategic partnership of CGIAR and Future Earth, led by the International Center for Tropical Agriculture (CIAT). CCAFS brings together the world’s best researchers in agricultural science, development research, climate science and earth system science, to identify and address the most important interactions, synergies and tradeoffs between climate change, agriculture and food security. www.ccafs.cgiar.org

The **International Center for Tropical Agriculture (CIAT)** is a member of the CGIAR consortium. CIAT’s mission is to reduce hunger and poverty, and improve human nutrition in the tropics through research aimed at increasing the eco-efficiency of agriculture. www.ciat.cgiar.org

The **Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC)** is a voluntary global partnership of governments, intergovernmental organizations, business,

scientific institutions and civil society committed to catalysing concrete, substantial action to reduce SLCPs (including methane, black carbon and many hydrofluorocarbons). The Coalition works through collaborative initiatives to raise awareness, mobilize resources and lead transformative actions in key emitting sectors. www.ccacoalition.org

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