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Thailand advances low-emission rice farming with support from IRRI and Green Climate Fund

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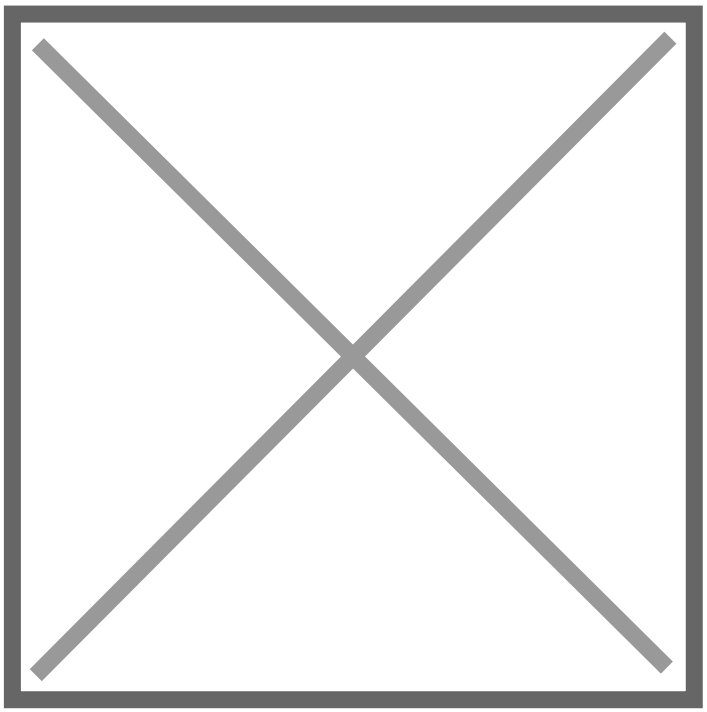

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In a follow-up meeting held this month, officials from the Rice Department, including Mr. Sommai Lertna, Acting Rice Production Technology Specialist, and Dr. Orathai Jaituy, Director of the Foreign Relations and Special Projects Group at the Bureau of Rice Policy and Strategy, joined representatives from IRRI and GIZ Thailand to discuss implementation strategies. The meeting followed earlier planning sessions held in February 2025 and builds on two years of collaboration since the joint

work plan was signed in 2023.

The project, titled Thai Rice: Strengthening Climate-Smart Rice Farming, is focused on transforming Thailandâ??s rice sector by introducing sustainable practices and circular economy solutions. With global rice production contributing greenhouse gas emissions comparable to the aviation industry, the initiative seeks to lower methane emissions from Thai rice fields by introducing alternative irrigation techniques and improved rice straw management. In addition to reducing emissions, the project aims to enhance farmersâ?? climate resilience and create new sources of income through value-added uses of rice straw, replacing open-field burning with recycling for industrial and agricultural purposes.

The collaboration includes a range of advanced technologies and practices. Mechanized Direct Seeded Rice (DSR) systems are being promoted to reduce water usage and improve sowing efficiency. Drones are being deployed for tracking water levels and collecting data critical for greenhouse gas monitoring, reporting, and verification. A digital platform is being developed to connect farmers with service providers who offer harvesting, seeding, and rice residue management solutions. This is expected to facilitate the abandonment of traditional straw-burning practices.

To support Thailandâ??s national greenhouse gas inventory and its Nationally Determined Contributions (NDCs), the project is expanding the countryâ??s monitoring, reporting, and verification (MRV) system. This includes integrating on-ground field surveys focused on Alternate Wetting and Drying (AWD) techniques with satellite and drone-generated remote sensing data. In support of these efforts, IRRI is introducing the RiceMoRe toolâ??a digital solution originally developed in partnership with the Vietnamese governmentâ??that streamlines data collection at the farm level and automates reporting to provincial and national agencies.

As a next step, project partners are finalizing the operational plan for collecting essential data on water use and straw management practices. This work will ensure the initiative makes a measurable contribution to Thailandâ??s national climate targets while equipping farmers with tools and insights for sustainable agriculture.

â??This initiative empowers Thai farmers with the tools and knowledge needed to transition to low-emission, climate-resilient agricultureâ??while ensuring their economic viability in a changing global food system,â? said a representative from the Ministry of Agriculture.

The Thai Rice GCF project stands as a model of international cooperation and innovation in agriculture, demonstrating how public-private partnerships and science-based solutions can drive climate action and sustainable development.