



Summary Report

International Workshop on Climate Smart Agriculture

I. Meeting Brief

The APN "International Workshop on Climate Smart Agriculture" hosted by the Institute of Agricultural Environment and Sustainability Development of the Chinese Academy of Agricultural Sciences (IEDA CAAS), co-organized by the Global Food Economy and Policy Research Institute, the International Forum on Low-Carbon Transition of Agricultural and Food Systems, and the international journal "Climate Smart Agriculture" (CSA) was successfully held on July 25-26, 2024 in Beijing China.

The workshop aimed to gather domestic and international experts to explore the climate change risks, adaptation and mitigation strategies, and pathways for the low-carbon transition of agro-ecosystems. More than 50 participants from the United States, Thailand, Pakistan, Vietnam, Germany, and China internal organizations attended, covering a wide range of stakeholders including renowned scholars, officers, farmers and industry experts in the fields of climate change and agriculture.

The workshop was chaired and presided over by Deputy Director Hao Weiping of IEDA, firstly delivered a welcome speech emphasizing the importance of sustainable agricultural development in the context of climate change. Dr. Linda Stevenson, Acting Director of the APN, also sent a welcome letter to express heartfelt congratulations on the convening of the workshop, hoping that the Asia-Pacific region can form a close research cooperation alliance in the field of climate-smart agriculture, enhancing the resilience of agriculture to climate change. Mr. Fan Shenggen, former Director of the International Food Policy Research Institute (IFPRI) and Professor at China Agricultural University, Mr. Yao Chunsheng, Global Environment Facility Project Officer at the FAO Representative Office in China, and Deputy Director Zhai Lin of the International Cooperation Bureau of the Chinese Academy of Agricultural Sciences, each delivered speeches, forming a consensus on the relationship between climate change and agriculture, the importance of international cooperation, and highlighting supports of China's contributions to international collaboration on CSA.

The workshop focused on climate change adaptation and mitigation strategies, with lively exchanges and discussions on effective strategies and technologies for agricultural adaptation and mitigation of climate change, such as CSA measures, low-carbon agricultural practices, and the resource utilization of agricultural waste, to enhance the

resilience and sustainability of agricultural systems. Participants engaged in academic exchanges and discussions on climate change risks and their impact on agricultural production. By sharing the latest scientific research findings, they assessed the potential risks that climate change may pose to global and regional agricultural systems, including fluctuations in crop yields, water resource shortages, and increased pest and disease pressures. Based on crop model-based climate risk assessment on agriculture, many experts discussed the climate risks and solutions faced by the ecological low-carbon transition of the agricultural and food system, and provided a detailed exposition on the future contributions of CSA, offering new ideas for sustainable agricultural development. Chinese and foreign experts also conducted in-depth exchanges on the construction of CSA planting systems, the development of agroforestry systems.

On July 26, the attendees had an internal roundtable discussion, focusing on future research directions and funding channels for future cooperation both in the Asia-Pacific region and worldwide, building a platform to promote regional cooperation and exchange. Subsequently, participants visited the Beijing Shunyi Agricultural Comprehensive Experimental Base for the field trial, experiencing firsthand the research and technological potential of modern agricultural technology in addressing climate change, providing scientific evidence and references for government policymakers and research institutions to better cope with the impact of climate change on agriculture.

II. Main Outcomes

The workshop brought together experts, scholars, government officials, and industry experts from different countries and regions to discuss and address the impact, challenges, and opportunities of climate change on agriculture, and to promote the transformation of agriculture towards a more sustainable, low-carbon, and resilient direction, achieving the expected outcomes, mainly including:

(1) Deepened scientific understanding of the impact of climate change risks on agriculture

Through the presentations and discussions, the workshop deepened participants' understanding of the impact of climate change on agricultural systems, including risks in crop growth, water resource management, and pest and disease control. Participants conducted in-depth discussions on how to adapt to and mitigate the impact of climate change on agriculture, proposing various strategies, including improving crop varieties, optimizing agricultural management measures, promoting water-saving irrigation technologies, and strengthening the resource utilization of agricultural waste.

(2) Shared cutting-edge achievements and technologies on CSA

The workshop showcased cutting-edge research results and technologies such as crop model-based climate change risk assessment, ecological low-carbon transition of agricultural systems, and clean transformation and high-value utilization of straw technology. The workshop raised public awareness and attention through publicity and reporting, encouraging all sectors of society to participate and contribute to achieving harmonious coexistence between agriculture and the environment.

(3) Promoted international cooperation and exchange

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The workshop provided a platform for experts and scholars from different countries and internal regions to exchange and promote international cooperation and exchange in CSA, helping to jointly activities to address climate change challenges. The workshop also expected to provide insights for policymakers and researchers on technology innovations and CSA solutions, promoting the formulation of relevant policies and scientific innovation to better cope with the climate change on agriculture. In the internal roundtable discussion, participants discussed future research directions and funding channels for climate change, such as bilateral or multilateral international cooperation projects by the Ministry of Science and Technology each year, and APN programme on agriculture, clarifying the direction of future research and the focus of cooperation, providing guidance for future scientific research work.

The workshop achieved significant results in deepening understanding, sharing results, discussing strategies, promoting cooperation, driving innovation, and raising awareness, making a positive contribution to addressing the challenges of climate change to agriculture and promoting technology innovations for agriculture sustainable development.

III. Next Steps

During the workshop, participants reached a broad consensus on issues such as climate change risk, low-carbon transition of agriculture, adaptation and mitigation strategies, contributing wisdom and strength to CSA perspective. The following work plans will be considered in future works:

(1) Strengthen the transformation and application of scientific research results

Select suitable technologies for China's specific agricultural production circumstance from the cutting-edge technologies and research results displayed at the workshop for trial application. Help farmers master new technologies and improve agricultural production efficiency and quality through technical training and demonstration projects. Establish CSA technology demonstration sites in different ecological regions to showcase the practical application effects of CSA technologies, and drive the CSA development in surrounding areas and even larger regions through the successful experiences and models of demonstration sites.

(2) Deepen the cross-integration of CSA across multiple departments and fields

Actively promote cooperation between different departments and expand into multiple crop fields to promote in-depth integration and development of CSA. Establish long-term cooperative relationships with international organizations, research institutions, and universities to jointly carry out research projects on climate change and agricultural development. Promote the process of sustainable agricultural development through cross-integration of different fields, sharing resources, technologies, and experiences. Organize technical training and exhibitions, invite domestic and foreign experts, scholars, and industry representatives to participate, and carry out face-to-face exchanges and interactions to enhance mutual understanding and trust, promoting comprehensive discipline construction and deepening.

(3) Seek bilateral or multilateral project cooperation opportunities

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Thai experts and ADB experts from Pakistan have expressed a positive intention for project cooperation, including jointly exploring the establishment of a comprehensive agricultural climate change monitoring system, assessing climate change conditions in agricultural production processes, and providing data support for formulating scientific response measures. Participating experts have indicated a need for broader cooperation channels to assess and feedback on the effectiveness of sustainable agriculture actions in the Asia-Pacific region, adjust action plans and agriculture policies timely according to risk assessments, and ensure the realization and continuous effect of CSA goals in the Asia-Pacific region.

This workshop not only provided a platform for domestic and international experts to deeply exchange and share scientific results in CSA, and also promoted the application of new measures in the crop field. Looking forward to continuing to strengthen international cooperation in the Asia-Pacific region and globally in the future, to jointly address climate change challenges and strive for harmonious coexistence between agriculture and the environment.



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