Opening Remarks

Study Visit on Reducing Desertification and the Risk and Negative Impacts of Sand and Dust Storms

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Distinguished participants,

Ladies and gentlemen,

On behalf of the Centre for Sustainable Agricultural Mechanization (CSAM) of the Economic and Social Commission for Asia and the Pacific (ESCAP), it is my great pleasure to open this Study Visit on Reducing Desertification and the Risk and Negative Impacts of Sand and Dust Storms we have organized in China together with the National Forestry and Grassland Administration, and our colleagues at the ESCAP Asian and Pacific Centre for the Development of Disaster Information Management (or APDIM).

Desertification is not merely the encroachment of deserts into formerly fertile lands. It is a complex and multifaceted process driven by both natural and anthropogenic factors. Unsustainable land management practices, overgrazing, deforestation, and climate change are among the primary drivers that degrade the land, reducing its productivity and resilience. The consequences are dreadful: loss of arable land, decreased agricultural productivity, and heightened vulnerability of communities to extreme weather events.

Similarly, sand and dust storms represent a significant environmental hazard. These storms not only strip away the topsoil, further exacerbating land degradation, but they also carry pollutants that can have severe health impacts on humans and animals. The economic costs associated with these phenomena are affecting agriculture, infrastructure, and public health systems.

Amid these challenges, sustainable agricultural practices, and particularly mechanization-based interventions can play a pivotal role in addressing these problems. Modern agricultural technologies and practices have the potential to transform our approach to land management, offering solutions that can mitigate, reverse, and ultimately halt the processes of land degradation and desertification. By adopting innovative mechanization techniques, we can enhance the efficiency of land use, improve soil health, and increase the resilience of agricultural systems to climatic stresses.

Sustainable agricultural mechanization encompasses a broad range of tools and practices. From precision farming and conservation tillage to efficient water management and sustainable crop rotation operations, these technologies enable us to manage land resources more effectively. Precision farming, for instance, uses data-driven insights to optimize the use of inputs such as water, fertilizers, and pesticides, ensuring that they are applied in the right amounts and at the right time. This not only boosts crop yields but also minimizes the environmental footprint of agriculture.

Conservation tillage, another critical practice, reduces soil disturbance and maintains organic matter in the soil. This enhances soil structure, promotes water retention, and reduces erosion—key factors in combating desertification. Efficient water management technologies, such as drip irrigation and rainwater harvesting, ensure that every drop of water is used wisely, addressing the scarcity issues that are often at the heart of desertification.

However, the success of these technologies will rely on the following factors. First, there must be a concerted effort to raise awareness and build capacity among farmers, policymakers, and stakeholders. Knowledge transfer and training are crucial to ensure that these practices are adopted widely and effectively. This Study Tour is our first step in this direction. Second, supportive policies and incentives are needed to encourage the adoption of sustainable practices. Governments and international organizations must play a proactive role in facilitating access to resources, financing, and markets. ESCAP, through its regional institutions like CSAM and APDIM, stands ready to support you in this endeavor. Lastly, collaboration and partnerships are key. The challenges we face are global in nature, and they require coordinated efforts across borders and sectors. By working together, sharing knowledge, and leveraging our collective expertise, we can develop integrated solutions that address the root causes of land degradation, desertification, and sand-dust storms. For this purpose, I believe the experience of China in addressing these issues can be of extreme value to all of you.
China, with its vast and diverse landscapes, has been facing all these challenges for centuries. Through continued efforts, China has implemented comprehensive strategies to combat desertification and mitigate the impacts of sand and dust storms. This study visit will allow us to witness firsthand the innovative approaches and best practices that have made significant strides in restoring degraded lands and improving the livelihoods of affected communities. During the time in China, participants will have opportunity to visit projects and sites where these innovative practices have been implemented successfully, including Kubuqi and Maowusu desertification control and management facilities.

In closing, I would like to express my deep gratitude to the National Forestry and Grassland Administration of China for their valuable support to make this study visit possible. I thank the colleagues in APDIM for their great contribution to the organization of this event. I would also like to extend our cordial welcome to all the representatives from the Islamic Republic of Iran and Mongolia for their participation in this study visit.

Our gathering today is a testament to our shared commitment to addressing these pressing environmental challenges of our time: desertification, land degradation, and the increasing threats posed by sand and dust storms. These issues, if left unchecked, have the potential to undermine food security, economic growth, and the well-being of millions of people around the world. I encourage all participants to actively engage and share perspectives. Together, we can forge a path towards a sustainable Asia-Pacific region where our lands are restored, our ecosystems are resilient, and our communities thrive.

Thank you, and I wish you all a productive exchanges and fruitful visit in China.