

Agenda item 4 (a) iii. Digital technologies: artificial intelligence

## Draft information note on AI for climate action

**TEC/2024/29/7**

Technology Executive Committee, 29<sup>th</sup> meeting and TEC-CTCN AB Joint session  
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### Key Objectives

- To raise awareness among policymakers and stakeholders regarding the opportunities, risks, and challenges of AI in climate action.
- To introduce the Technology Mechanism Initiative on AI for Climate Action under the UNFCCC.

### Why AI Matters for Climate Action

- AI plays an enabling role in mitigating and adapting to the effects of climate change.
- AI plays an important role in supporting LDCs and SIDS, as both are highly vulnerable to severe climate impacts.
- AI can help LDCs and SIDS overcome barriers by enabling more efficient and targeted interventions.

### Key AI Use Cases and Applications for Climate Action

- AI enhances disaster forecasting for more timely and accurate responses.
- AI optimizes crop yields while reducing resource consumption.
- AI improves the efficiency of water distribution and usage.
- AI optimizes the integration and deployment of solar, wind, and thermal power systems

### Examples of Case Studies on AI for Climate Action

- Using satellite imagery to identify communities at risks of climate impacts - **Ethiopia**
- Early Warning System for Crop Phenotyping and Food and Nutrition Security - **Kenya**
- AI for Water Management in the Red River Delta –**Vietnam**
- Mapping Housing Stock for Climate Resilience in the Caribbean Using AI - **Dominica, Saint Lucia, Grenada**

### Major Challenges and Risks of AI for Climate Action

- AI systems require high levels of energy and water, straining resources..
- Lack of infrastructure, expertise, and resources limits AI adoption and effectiveness.
- AI models can perpetuate or reinforce gender and social inequities.
- Misuse, breaches, and privacy violations threaten data security in AI systems.
- AI can promote consumerism, accelerates fossil fuel extraction and exploration, and spread climate misinformation

### Conclusion

- AI offers powerful tools for climate action but requires responsible use.
- Efforts should focus on ensuring AI is inclusive and sustainable for developing countries.

### Next Steps

- Finalize the information note based on feedback and incorporate any necessary revisions.
- Prepare for dissemination to key stakeholders and policymakers.



*Thank you!*

