

AI for Good Summit 2025

AI for Climate Action in Developing Countries

Opportunities, Risks, and the Path Forward:

Insights from the UNFCCC Technology Executive Committee's Landmark Paper

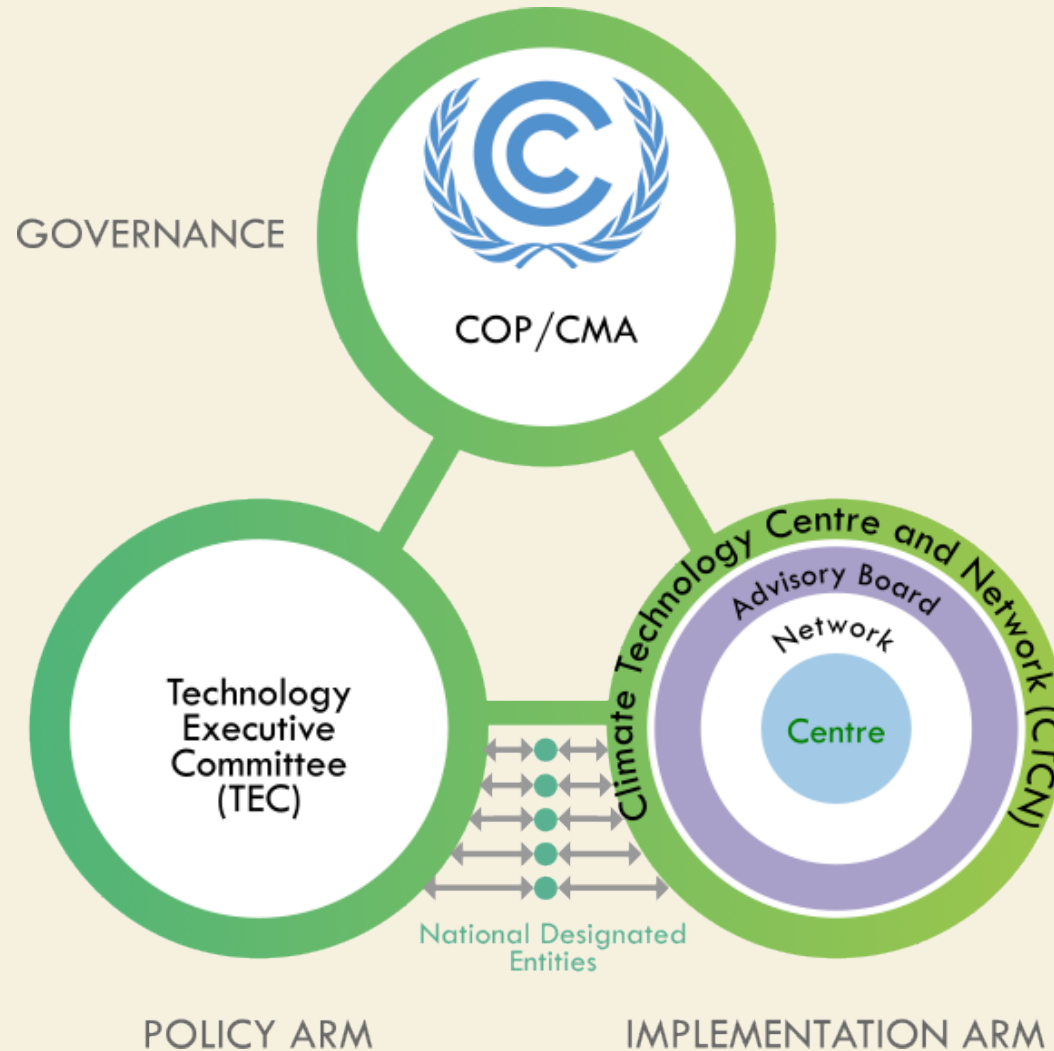
10 July 2025



United Nations Climate Change
Technology Executive Committee

Mr. Dietram Oppelt
Chair
UNFCCC Technology Executive Committee

UNFCCC Technology Mechanism: We connect policy with practice to accelerate the development and transfer of climate technologies



The AI Climate Convergence: Two mega-trends shaping our future

2.9°C

Temperature rise by 2100 if current policies continue

Source: UNEP Emissions Gap Report 2023

\$15.7T

Potential annual AI contribution to the global economy by 2030

Source: PwC, Sizing the Prize

1.1B+

People in LDCs & SIDS highly vulnerable to climate impacts

Source: UN-OHRLLS Data

~2-4%

Of global electricity data centers may consume by 2026

Source: IEA Electricity 2024 Report

"AI is simultaneously climate change's greatest opportunity and its newest challenge"



Our Flagship Initiative: **#AI4ClimateAction**



AI for Climate Action Award

Recognizing and scaling innovation.



AI Climate Application Hub

A knowledge platform for best practices.



Global AI Forum 2025

Convening experts to shape the agenda.



COP 30 Masterclass

Building capacity in critical energy systems.





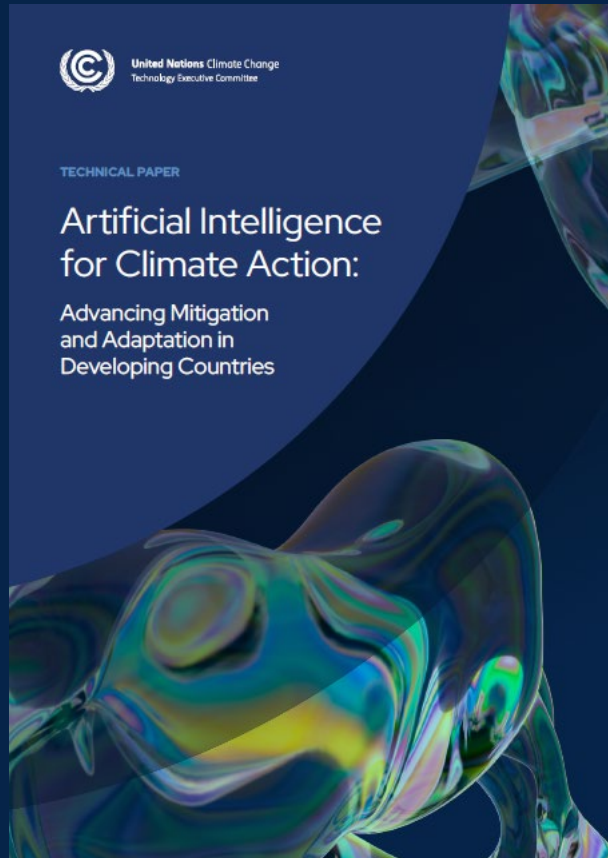
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Technology Executive Committee

Evidence-Based Action – TEC Technical Paper: AI FOR CLIMATE ACTION



156 pages of comprehensive analysis focusing on developing countries, LDCs and SIDS

- Mitigation Applications: Energy optimization, emissions tracking, renewable energy management
- Adaptation Solutions: Early warning systems, urban resilience, ecosystem management
- Specific Focus: Localized climate services for smallholder farmers
- Policy Framework: Recommendations for responsible AI governance
- Case Studies: Real-world examples from developing countries



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Scan the QR code to download the publication



Evidence-Based Action – TEC Technical Paper: AI FOR CLIMATE ACTION

Risks & Challenges of AI Use

- ⚠ Energy and water consumption
- ⚠ Digital divide and equitable access
- ⚠ Data security vulnerabilities
- ⚠ Data availability and biases
- ⚠ Acceleration of fossil fuel extraction
- ⚠ Spreading climate misinformation
- ⚠ Promoting unsustainable consumerism

Priority Actions

- ✅ Address digital divide through infrastructure investment
- ✅ Strengthen AI capacity-building programs
- ✅ Establish responsible AI governance frameworks
- ✅ Support open-source climate AI solutions
- ✅ Enhance international technology cooperation
- ✅ Promote green AI development
- ✅ Ensure equitable access to AI benefits



TOGETHER WE CAN: AI for Climate Justice

"AI offers significant potential to support mitigation and adaptation action, but requires addressing digital divides, energy consumption, and ensuring equitable access to benefits."

Join the #AI4ClimateAction movement
Apply for the AI for Climate Action Award by July 31, 2025



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