Framework Convention on Climate Change

Technology Executive Committee

05 September 2023

Twenty-seventh meeting

19–21 September and 22 September 2023 (TEC-CTCN Joint session)

Technology Mechanism Initiative on Artificial Intelligence for Climate Action

Concept note

I.   Background

1.   As per Activity A.4.1 of its rolling workplan (2023-2027), the TEC is exploring the role of artificial intelligence (AI) and applied machine learning as enablers of climate solutions.

2.   During the intersessional period, the TEC agreed to add as Activity A.4.1.iii of its rolling workplan a deliverable in 2023, the Technology Mechanism Initiative on Artificial Intelligence for Climate Action (#AI4ClimateAction), that was launched at the United Nations Climate Change Conference in Bonn on 10 June 2023.[1]

3.   Following the launch of the Initiative, the open-ended activity group that supports the implementation of this activity developed a concept note on the Initiative.

II.   Scope of the note

4.   The annex to this note is prepared to inform the discussions of the TEC on a possible objective and structure of the Initiative as well as partnerships and activities that the TEC may wish to pursue individually, or jointly with the CTCN, under this Initiative.

III.   Expected action by the Technology Executive Committee

5.   The TEC will be invited to consider the concept note contained in the annex and provide guidance on further work on this matter, including on the:

(a)   Objective;

(b)   Structure;

(c)   Partnerships;

(d)   Activities.

6.   The TEC may also wish to agree on activities to be pursued under the Initiative in 2023 and 2024.

7.   The TEC may further wish to consider how to coordinate with the CTCN on the finalization of the concept note and the delivery of activities.

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[1]   https://www.ctc-n.org/news/artificial-intelligence-climate-action-gaining-momentum.

Annex

Concept Note on the Technology Mechanism Initiative on Artificial Intelligence for Climate Action

I.   Objective

1.   The UNFCCC Technology Mechanism is setting in motion its Initiative on Artificial Intelligence for Climate Action **#AI4ClimateAction** to explore the role of artificial intelligence (AI) as a powerful technological tool for advancing and scaling up transformative climate solutions for mitigation and adaptation action in developing countries with a focus on least developed countries and small island developing States.

II.   Structure

2.   As the policy arm of the Technology Mechanism, the TEC has a unique position to convene stakeholders and provide space for global policy discussions on AI for climate action. As implementation arm of the Technology Mechanism, the CTCN is best suited to pioneer AI solutions for climate action through its provision of technical assistance to developing countries.

3.   The **#AI4ClimateAction** Initiative aims to deliver concrete and transformative results under the Technology Mechanism Joint Work Programme (2023–2027), including the TEC rolling workplan (2023-2027) and the CTCN Programme of Work (2023-2027). In particular, the TEC and the CTCN are joining forces on the Initiative to:

(a)   Provide a space for policy discussions, including UNFCCC national focal points and NDEs, awareness raising, and exchange of knowledge and experience among relevant stakeholders on developing and deploying climate solutions powered by AI;

(b)   Support capacity-building efforts in developing countries to leverage emerging digital technologies and devise locally led solutions harnessing AI;

(c)   Develop CTCN regional networks of entities supporting AI for climate actions.

4.   The work of the Initiative will be guided by the Technology Mechanism Joint Work Programme, including the TEC and CTCN Common Areas of Work: National Systems of Innovation, Water-Energy-Food Systems, Energy systems, Buildings and resilient infrastructure, Business and industry, and Technology Needs Assessment.

5.   More specifically, activities under the Initiative will be developed with a view to support the implementation of the **TEC rolling workplan (2023-2027)** with its four workstreams:

(a)   National Systems of Innovation and Collaborative Research, Development and Demonstration and General Purpose Technologies;

(b)   Technology needs assessments and technology planning tools to support NDC implementation;

(c)   Transformative and innovative solutions (water-energy-food system, buildings and infrastructure, transformative industry, nature and ecosystem);

(d)   Collaboration and engagement with other UNFCCC processes and constituted bodies and other UN agencies;

and the **CTCN Programme of Work (2023–2027)** with its five system transformational areas that complementent the CTCN's demand driven delivery model:

(a)   Water-energy-food nexus;

(b)   Buildings and resilient infrastructure;

(c)   Electro-mobility;

(d)   Energy systems;

(e)   Business and industry.

6.   Activities under the Initiative could be organized along the following workstreams:

(a)   AI for Mitigation;

(b)   AI for Adaptation/Disaster Risk Reduction;

(c)   AI for the development of climate technologies.

III.   Partnerships

7.   The TEC and CTCN call for partners and collaborators from public and private entities, across different fields of expertise and regions to join the Initiative through the UNFCCC as the TEC Secretariat or by joining the CTCN as a network member.

IV.   Activities

8.   Activities to be undertaken in 2023:

(a)   Develop a concept note for the Initiative;

(b)   Organize a COP 28 high-level event on AI for climate action;

(c)   Organize events at the Regional Climate Weeks on AI for climate action to inform the COP 28 high-level event and the further work of the Initiative;

(d)   Develop a concept for a Grand Challenge on AI for climate action with Enterprise Neurosystem.

9.   Other proposed activities:

(a)   Establish and host an Advisory Group with the participation of leading technology companies to inform the work of the Initiative;

(b)   Develop an external version of this document to inform discussions and facilitate engagement with potential partners, including for resource mobilization;

(c)   Establish partnership modalities and develop partnerships on specific activities with entities that have expressed interest to support the Initiative, including: AIMforClimate, Climate Chain Coalition, Climate Change AI/MIT Policy Lab, ClimateTech.org, COP 28 Presidency, Enterprise Neurosystem, FAO, GIZ, Google, Group on Earth Observations (GEO/WMO), ITU, Microsoft AI for Good Research Lab, Monday.com, NewEnergyNexus, OpenEarth, Start-up Nation Central, UNESCO, UICCA and UNU-EHS/MCII;

(d)   Prepare a workplan for the Initiative;

(e)   Organize 2-4 online workshops/events on different use-case of AI-powered solutions for climate change adaptation and mitigation in developing countries, in particular in LDCs and SIDS;

(f)   Develop a dedicated webpage on Initiative on TT:Clear;

(g)   Map existing initiatives, information portals and examples on AI for climate action;

(h)   Develop an online repository that functions as a meta aggregator or mapping with links to existing information sources on AI for climate action to avoid duplication of existing efforts;

(i)   Organize events at Regional Climate Weeks to inform the work of the Initiative and raise awareness on AI for climate action;

(j)   Develop a platform for all AI for climate action activities at COP 28;

(k)   Organize events at UNFCCC conferences to present the work of the Initiative and raise awareness on AI for climate action;

(l)   Establish regional AI for climate action networks coordinated by NDEs with the participation of different stakeholder groups;

(m)   Explore development of AI University Honors Programme initially proposed by Enterprise Neurosystem as part of the Grand Challenge;

(n)   Develop communication and outreach activities on the Initiative.

V.   Next steps

10.   Finalize this concept note and agree on activities for 2023–2024 at TEC 27 and the TEC/CTCN AB joint session from 19–22 September 2023.

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