

Submission by the Democratic Republic of Timor-Leste on behalf of the Least Developed Countries Group on SBSTA Research and Systematic Observation:

Views on possible topics for the eighteenth meeting of the research dialogue to be held in conjunction with SBSTA 64

The Least Developed Countries Group (LDCs Group) welcomes the opportunity to submit their views on possible topics and considerations for the eighteenth meeting of the research dialogue to be held in conjunction with SBSTA 64. The LDC Group looks forward to the event and suggests the following themes for consideration:

- Advances in the understanding of annual temperature changes and their anthropogenic drivers, in the context of the 1.5°C temperature limit of the Paris Agreement, and advances in understanding overshoot pathways and their differentiated impacts on LDCs.
- Impacts of warming and overshoot scenarios on the cryosphere, with particular attention to glacier retreat in LDC regions (Hindu Kush Himalaya and East African highlands), glacial lake outburst floods (GLOFs), downstream hydrological impacts, and associated socio-ecological risks to LDC communities until and beyond 2100.
- Climate impacts at the regional and local level in LDCs as critical indicators of climate change, including the differential effects of warming on agriculture, water resources, coastal systems, and ecosystems, and advances in regional climate modelling relevant to data-scarce LDC contexts.
- Advances in the understanding of compound and cascading climate risks in LDCs, including the interaction of floods, droughts, extreme heat, GLOFs, and slow-onset events, and their implications for inequality, poverty, and sustainable development.
- Advances in understanding climate change impacts on water security and food systems in LDCs, including the freshwater implications of glacier retreat for glacially-fed catchments that serve as primary sources of dry-season irrigation water for mountain LDCs.
- Update on loss and damage science: observed and projected economic and non-economic loss and damage in LDCs under different levels of global warming, including slow-onset losses from glacial retreat, desertification, and salinisation, and advances in methodologies to capture non-economic losses relevant to LDCs.
- Advancement in climate attribution science to inform anthropogenic climate change in exacerbating the impacts of historical and projected climate hazards in LDCs, including attribution of observed glacier change, droughts, and extreme heat events, and development of operational methodologies for use in national loss and damage assessments.

- Advances in early warning systems and climate services to strengthen preparedness and resilience in LDCs, including for GLOFs and cryosphere-related hazards, and progress under the WMO Early Warnings for All initiative in bridging global climate models to local-scale early warning needs in data-scarce LDC contexts.
- Sectoral transformations to reach climate goals, including pathways for transitioning away from fossil fuels in line with sustainable development in LDCs.
- Update on the scale and distribution of finance flows for mitigation, adaptation, and loss and damage, as well as finance gaps and needs especially for LDCs, and advances in research capacity building including improved access to climate data, observational networks, and the integration of indigenous and local knowledge in climate science.