

Brazil's Submission on possible themes for the 18th Meeting of the Research Dialogues

Brasília, March 2025

Brazil welcomes the opportunity to submit its suggestions of themes for the eighteenth Research Dialogue during the next meeting of the Subsidiary Body for Scientific and Technological Advice (SBSTA 64). Brazil firmly believes in the relevance of science in tackling the challenges caused by climate change, and consequently, the Research Dialogue represents an important platform for collaboration between technical experts and policymakers, providing a better understanding of the current state of science across a variety of topics.

Suggested themes

1. Advances in the science of extreme weather events and event attribution.

Recent developments in detection and attribution science have expanded the capacity to assess the influence of anthropogenic climate change on extreme weather events. Discussion of methodological advances, uncertainties, and applications for risk management can contribute to strengthening adaptation strategies and disaster risk reduction.

2. Advances in regional climate modeling and the provision of climate information for decision-making.

More robust regional climate projections, including advances in downscaling techniques and climate services, are essential to support planning at national and local levels. Special attention should be given to improving climate information for regions where uncertainties remain significant, including tropical regions and selected areas of developing countries. In this context, it is important to target groups that are known to be highly vulnerable to the impacts of extreme events, such as women and girls, people of African descent, children and youth, Indigenous Peoples and local communities, among others.

3. Advances in the assessment of compound climate risks and cascading risks.

Emerging scientific research has highlighted the growing importance of compound climate events and cascading risks arising from interactions among different climate hazards. Further development of methodologies for assessing systemic risks

and their implications for food security, water security, and infrastructure resilience could contribute to more comprehensive risk assessments.

4. Strengthening the integration of traditional knowledge and climate science in adaptation.

Recent research has increasingly emphasized the value of integrating traditional knowledge systems with scientific knowledge to strengthen climate resilience and support locally appropriate adaptation responses. Indigenous Peoples and local communities hold generations of experience related to ecosystem management, climate variability, and risk management that can contribute to climate research and adaptation planning. Further scientific discussions could explore methodological advances for integrating these knowledge systems, including participatory approaches to climate risk assessment, knowledge co-production, and the development of indicators that incorporate equity and just transition considerations in adaptation policies, as well as research examining patterns of vulnerability affecting Indigenous Peoples and local communities, including those associated with environmental racism.