

Submission of views by Chile on possible themes for and ways to organize the eighteenth meeting of the research dialogue

Background

In response to the Subsidiary Body for Scientific and Technological Advice's (SBSTA) invitation to submit perspectives on potential themes for the eighteenth meeting of the research dialogue, Chile hereby presents its views as follows:

Chile places great emphasis on the Scientific Community, the Intergovernmental Panel on Climate Change (IPCC), and its reports, which significantly influence its position as well as the outcomes from Research Dialogues. Scientific knowledge is fundamental to the decision-making process, particularly in shaping collective actions under the United Nations Framework Convention on Climate Change (UNFCCC). Recent years have witnessed extensive exchanges among parties regarding knowledge gaps and research needs, necessary for improving scientific understanding of the urgent climate action needed.

Research Dialogues (RDs) are instrumental in establishing a shared comprehension of the most recent scientific findings concerning climate change, as well as identifying extant knowledge gaps. These dialogues serve to inform parties, the SBSTA, and research communities on the current state of climate change, areas requiring focused attention, existing and emerging solutions, and actionable measures at both national and international levels. Consequently, RDs should support the implementation of the Convention and the Paris Agreement in all their provisions, including helping inform GSTs and parties on scientific knowledge that they might consider when planning and later implementing their NDCs. Notably, these dialogues ensure that the most recent research findings are reflected in the process's conclusions and decisions, playing a critical role in connecting parties with scientific communities. They furthermore provide a channel for parties to communicate agreed research priorities effectively, in particular knowledge gaps identified in recent IPCC reports that the scientific community is well placed to address.

Chile emphasizes that the SBSTA, at its latest research session, noted the needs and gaps, including in research, and welcomed advances in the understanding of observed and projected changes in the climate system and the synergies and trade-offs between climate action and sustainable development. It noted the importance of urgently aligning adaptation and mitigation actions with sustainable development, including poverty eradication, recognizing that these actions can generate important synergies with many Sustainable Development Goals, but may also entail trade-offs that need to be addressed, and that both synergies and trade-offs vary according to context and scale of implementation across different countries and regions.

Therefore Chile proposes that **one of the themes of the research dialogue** should focus on **advances in identifying optimal mitigation and adaptation actions for different contexts, warming scenarios, and scales, both across and within countries and regions**. This theme could also explore **Decarbonization and a Just Transition; Adaptation and territorial equity; Water and climate in arid and semi-arid zones; and Solar Radiation Modification (SRM) including Cirrus Cloud Thinning, and high potential mitigation options with transboundary effects and related governance**.

Chile also highlights that SBSTA further noted the need to strengthen research capacities in developing countries, particularly in the Least Developed Countries and Small Island Developing States.

For this reason, Chile proposes that **another theme of the dialogue** should focus on **advances in identifying, evaluating, and strengthening the research capacities needed in developing countries, including explicit funding requirements**. This is directly related to the ability of individual countries to engage in integrated climate planning, develop resilience scenarios, identify actions that best suit their circumstances and make decisions under uncertainty. Key topics for this theme could also include **data governance and repositories for resilient, internationally accessible historical data repositories**; and the **design and development of public instruments, innovations in multi-level coordination, and building of implementation capacities**.

Also, Chile would like to **propose the following theme** as highly relevant for this year's dialogue: **Advances in regional tipping points, cascading risks, and Earth system responses under overshoot scenarios**. We recommend emphasizing **compound events and interconnected extremes; natural variability and the amplification of extremes such as the ENSO**; and **Oceans and integrated land-sea observations**.

Finally Chile proposes a dedicated theme focusing on the human and cultural dimensions of climate resilience that could encompass **Indigenous peoples, traditional knowledge, and transdisciplinarity**; and **Mental health, youth, and community resilience**, exploring the psychosocial dimensions of climate change (particularly for children and youth), climate perception, community participation, and mechanisms that translate science into action.

Chile welcomes that the SBSTA requested its Chair to prepare an information note that maps how research gaps identified since SBSTA 22 under the agenda item on research and systematic observation are being addressed by the scientific community and present it during the eighteenth meeting of the research dialogue. **Chile looks forward to this presentation**.

Chile also welcomed the organization of the seventeenth Research Dialogue and believes the format is a good basis for research dialogue eighteen. In particular, Chile appreciates the participatory and engaging approach, which involves plenary, breakout discussion and poster sessions, as well as the invitation to engage in informal consultations with Parties held ahead of the meeting. But Chile also recalls the need for further **broadening of representation during the research dialogue, including by increasing the participation of experts and including more scientific research from developing countries**. It is important that these experts are invited well in advance and supported to participate if possible. It is important that the dialogue does not conflict with any negotiation agenda, takes place before research negotiations begin, and that the messages conveyed are clear, with a clear separation between the research advances and the remaining research gaps and needs, so that parties and the SBSTA can more easily determine how and what to reflect in the conclusion text.

Chile could also contribute with the event by sharing research on the following topics related to the proposed themes:

- ENSO–climate change interactions and teleconnections affecting heatwaves, drought and wildfire risk, including attribution and projections of extreme events.

- Compound events and cascading risk frameworks for prevention and investment planning, applied to critical infrastructure, watersheds, cities, and territorial planning.
- Regional tipping points and Earth system responses relevant to the Southern Andes and the South-East Pacific, including early warning, attribution and modelling/observing needs.
- Climate change impacts on water availability in arid regions and their implications for water and food security, adaptive management, and productive sectors.
- Mining–climate interactions, competition for water uses, watershed vulnerability, and governance, alongside their social and environmental impacts on cities and communities.
- Decarbonization of the mining sector, including renewable energy use, electrification/e-mobility in operations, energy efficiency, and technological innovation.
- Just transition approaches for energy transition, including environmental and social impact assessments and distributional effects.
- Adaptation strategies addressing extreme events and water stress in vulnerable communities and their impacts on health and food security.
- Climate change and socio-territorial equity, including the design of institutional and intersectoral governance frameworks and capacities for implementation.
- Integrated land–ocean observing systems and ocean carbon uptake/upwelling impacts on ecosystem resilience and fisheries productivity.
- Climate change, mental health, and community resilience, particularly for youth and children, integrating climate perception, indigenous knowledge, and social engagement.
- Climate data stewardship, including interoperable repositories, data standards, quality, access, and continuity of historical records to support research and decision-making.
- Solar Radiation Modification (SRM): Regional contributions to science-policy dialogues, identifying research and observation needs, and governance implications.