



Framework Convention on
Climate Change

Fourteenth meeting of the SBSTA research dialogue 09 June 2022

The fourteenth meeting of the research dialogue will provide an update on research and research needs. Discussions will focus on four topics as identified in submissions:

- 1. Near term climate projection and regional modelling**
- 2. Ocean and cryosphere**
- 3. Carbon Dioxide Removal**
- 4. Integrated solutions for adaptation and resilience**

The following draft agenda has been constructed after analysis of Parties' submissions. The Parties are invited to make interventions from the floor on their regional or national research needs.

Guiding questions.

In order to support implementation of the Convention and the Paris Agreement:

- 1. What are the latest research findings and lessons learned, particularly at regional level?**
- 2. What are specific needs for national and regional research and research capacity building for developing countries?**



3 hrs	Dialogue	<i>All times shown in CEST</i>
1100	Opening remarks	SBSTA Chair
1110	Near term climate projections and regional modelling	
3-4 mins each Approx. 20mins discussion	Updates on projections of the near term evolution of the climate system Regional modelling support for decision making via CORDEX Q&A discussion	June-Yi Lee (virtual) and Francois Englebrecht (virtual), IPCC WGI Michael Sparrow, World Climate Research Programme (WCRP); Irène Lake (virtual), CORDEX International Project Office
1140	Ocean and cryosphere	
5-7 mins each Approx. 30mins discussion	Regional research needs identified by the Decade on Ocean Science for Sustainable Development Updates and needs in cryosphere research and unresolved deep uncertainty processes Q&A discussion	Margaret Leinen (virtual), Scripps Institution of Oceanography Robert DeConto, University of Massachusetts Amherst; Helene Hewitt (virtual), IPCC WGI
1220	Carbon Dioxide Removal	
5-7 mins each Approx. 30mins discussion	Key Characteristics and Multiple Roles of Carbon Dioxide Removal Role of Carbon Dioxide Removal Technologies in Climate Change Q&A discussion	Oliver Geden (virtual), Andy Reisinger, Jim Skea, IPCC WGIII Naif B. AlQahtani (virtual), King Abdulaziz City for Science and Technology
1300	Integrated solutions for adaptation and resilience	
5-7 mins each Approx. 40mins discussion	Climate risk and research needs for integrated solutions Early warning systems and near term shocks and stressors Indigenous understanding of addressing adaptation knowledge gaps and enabling action Q&A discussion	Hans-Otto Pörtner, IPCC WGII Anand Patwardhan, World Adaptation Science Programme (WASP) and Adaptation Research Alliance (ARA) Titus Letaapo (virtual), GEO Indigenous Alliance
1350	Concluding remarks	SBSTA Chair

1415 – **Poster Session**
1545 *Some titles TBC*

Posters available online and in-person throughout

Short-term climate predictions and regional modelling

The chain from global to local: from data to knowledge to societal benefit	Irène Lake, CORDEX International Project Office, World Climate Research Programme (WCRP), and Swedish Meteorological and Hydrological Institute (SMHI)
A coordinated global greenhouse gas (GHG) monitoring infrastructure in support of research needs	Lars Peter Riishojgaard, World Meteorological Organisation, (WMO) Secretariat
Combined dynamical and statistical downscaling and its application in the development of socio-economy	Zhenyu Han, Ying Shi, Jia Wu, Rouke Li and Ying Xu, National Climate Center (NCC), China Meteorological Administration (CMA), Beijing, China
Efforts to develop climate models and to reflect the knowledge in the adaptation plans	Hiroyuki Tsujino, Izuru Takayabu, Yukiko Imada, Hiroaki Kawase, Meteorological Research Institute, Japan Meteorological Agency, Japan



An enhanced downscaling methodology for the elaboration of high-resolution climate scenarios for Peru to 2050	Acuña Delia, Llacza Alan, Sulca Sheylla, De la Cruz Gustavo, Paredes Jonathan, Jácome Gerardo; Atmospheric Numerical Modeling Division - National Service of Meteorology and Hydrology of Peru
A harmonized scenario framework can help to align national climate policies with global goals. Pathways for Asia	Shinichiro Fujimori, Kyoto University and National Institute for Environmental Studies (NIES); Detlef van Vuuren, Heleen van Soest, Netherlands Environmental Agency (PBL); Keywan Riahi, Bas van Ruijven, International Institute for Applied Systems Analysis (IIASA)
Current fossil CO2 emissions trends and road to net-zero	Pierre Friedlingstein, Alissa Haward, Global Carbon Budget Office - Global Carbon Project
The European observation-based system for monitoring and verification of greenhouse gas fluxes (the VERIFY and CoCO2 projects)	Philippe Peylin (CNRS), Richard Engelen (ECMWF) Philippe Ciais (CEA), Dirk Gunther (UBA), Lucia Perugini (CMCC), Hugo Denier van der Gon (TNO), Paul Palmer (U. Edinburgh), Grégoire Broquet (CEA), Peter Smith (UAB), Mallory McGrath (CEA), Rona Louise Thompson (NILU), Glen Peters (CICERO), Han A.J. Dolman (VUA), Ana Maria Roxana Petrescu (VUA), Greet Janssens-Maenhout (JRC), Chunjing Qiu (CEA), Robbie M. Andrew (CICERO), Corinne Le Quéré (UEA), Werner Kutsch (ICOS ERIC), Emmanuel Salmon (ICOS ERIC), Aurélie Paquirissamy (CEA), Geraud Moulas (ARTTIC), Patrick Brockmann (CEA) & VERIFY and CoCO2 Teams
Ocean and Cryosphere	
Building knowledge to weave the protection and restoration of coastal blue carbon ecosystems into decision making on mitigation and adaptation to climate change	Elisabetta Bonotto, Kirsten Isensee, Intergovernmental Oceanographic Commission of UNESCO
Global Ocean Acidification research and observation – connecting Climate and SDG indicators	Kirsten Isensee, Katherina Schoo, Intergovernmental Oceanographic Commission of UNESCO
Ocean Acidification Research for Sustainability – OARS	Jan Newton, Global Ocean Acidification Observing Network (GOA-ON), Ocean Acidification Research for Sustainability (OARS), University of Washington; Steve Widdicombe, GOA-ON, OARS, Plymouth Marine Laboratory; Kirsten Isensee, OARS, Intergovernmental Oceanographic Commission of UNESCO
Global Sea Level Rise: Latest scenarios and limits of adaptation	Robert DeConto, Julie Brigham-Grete, University of Massachusetts-Amherst; Heidi Sevestre, Arctic Monitoring and Assessment Programme; Emma Needham, International Cryosphere Climate Initiative (ICCI)
Marine Heatwaves: latest science on its negative impacts on biodiversity and people, and what we can do about it	Dorina Seitaj, Aurelie Spadone, Minna Epps, International Union for the Conservation of Nature (IUCN)
Roots of hope: The value of mangroves in the Western Indian Ocean region for planet and people	Save Our Mangroves Now! (SOMN)
Ocean-based climate action and human rights	Elisa Morgera, Mitchell Lennan, University of Strathclyde, UK and One Ocean Hub
Oceanic extreme events associated to climate change off Peru	Jorge Tam, Alice Pietri, Rodrigo Mogollón, Tomasa Cuellar, María del Carmen Igarza, Arturo Aguirre, Adolfo Chamorro, Dante Espinoza, Sonia Sánchez, Noel Domínguez, Hervé Demarcq, Hans Jara, Jorge Flores, Alberto Lorenzo, Dimitri Gutiérrez and Francois Colas; Peruvian Marine Research Institute (IMARPE)



Innovative approaches for strengthening coastal and ocean adaptation: integrating technology and nature-based solutions	International Union for the Conservation of Nature (IUCN), the Friends of Ecosystem-based Adaptation (FEBA) Network, the UNFCCC Technology Executive Committee (TEC), and the UNFCCC Nairobi Work Programme (NWP) Expert Group on Oceans
'Country of permafrost': Current and future permafrost emissions as large as major emitters	Gustaf Hugelius, Bolin Centre for Climate Research, Stockholm University, Rachael Treharne, Woodwell Climate Research Center, Emma Needham, International Cryosphere Climate Initiative (ICCI)
Melting of mountain glaciers: Large regional impacts and limits of adaptation	Matthias Huss, ETH-Zurich; Carolina Adler, Mountain Research Institute, Regine Hock, University of Oslo, Norway & University of Alaska Fairbanks, USA; Ben Marzeion, University of Bremen; Heidi Sevestre, Arctic Monitoring and Assessment Programme; Emma Needham, International Cryosphere Climate Initiative (ICCI)
Polar oceans as a carbon sink: Permanent ecosystem and fisheries loss due to polar ocean acidification	Nina Bednaršek, National Institute of Biology, Slovenia/Oregon State University, USA; Richard Bellerby, East China Normal University/Norwegian Institute for Water Research; Rolf Rødven, Arctic Monitoring and Assessment Programme; Emma Needham, International Cryosphere Climate Initiative (ICCI)
Carbon Dioxide Removal	
The importance of Carbon Dioxide Removal (CDR) for reaching Paris Climate Goals: Current research activities and new insights	Keywan Riahi, Joeri Rogelj, International Institute for Applied Systems Analysis (IIASA); Jessica Strefler, Elmar Kriegler, Potsdam Institute for Climate Impact Research (PIK)
Integrated solutions for adaptation and resilience	
Climate science information for climate action	Amir Delju, Ilaria Gallo, World Meteorological Organisation, (WMO) Secretariat
Toward a global target on systematic observation: support for research and operations as part of the Global Goal on Adaptation	Lars Peter Riishojgaard, World Meteorological Organisation, (WMO) Secretariat; Lorena Santamaria, Systematic Observation Financing Facility Secretariat
World Adaptation Science Programme (WASP) Science for Adaptation Policy Briefs (SAPBs)	Anand Patwardhan, World Adaptation Science Programme (WASP) Science Committee; WASP
Exploring the roles of local communities and local knowledge in integrated solutions for adaptation and resilience: Case studies of APN activities in Viet Nam and the Pacific cited in IPCC Sixth Assessment Report	Asia Pacific Network for Global Change Research (APN)
Action research for adaptation in practice	Anand Patwardhan, World Adaptation Science Programme (WASP) and Adaptation Research Alliance (ARA), Rosalind West (ARA), and the ARA Secretariat
The nature funding gap: Building better for biodiversity	The Nature Conservancy (TNC)
The nature funding gap: Unlocking funding to lock up carbon	The Nature Conservancy (TNC)
Looking ahead	
The 2022 GCOS Implementation Plan	Anthony Rea, Global Climate Observing System (GCOS) Secretariat; Han Dolman, GCOS Steering Committee