

Contributors, themes and presentations from all meetings of the research dialogue to date<sup>1</sup> and suggested themes for future meetings.

SBS TA	RD	Themes	Presentation and poster titles	Presenter	Organization / Party
30	1	Conveying emerging research findings	<a href="#">Emerging Scientific Findings and Activities Relevant to UNFCCC</a>	Rik Leemans	ESSP
			<a href="#">Climate Change: global risks, challenges and decisions</a>	Katherine Richardson	IARU
			<a href="#">IPCC: Towards AR5</a>	Jean-Pascal Van Ypersele	IPCC
		Research-related capacity-building activities and activities in the regions	<a href="#">START's input to the SBSTA 30 Research Dialogue</a>	Jon Padgham	START
			<a href="#">Climate change research and observations in the FP7: Results, planning, activities, research needs</a>	Elisabeth Lipiatou	FP7
			<a href="#">IPCC-WG2 - Future Research Needs</a>	Holm Tiessen	IAI
			<a href="#">Developments in Climate Change</a>	Andrew Matthews	APN
32	2	Conveying emerging research findings and activities	<a href="#">What is dangerous climate change?</a>	Rik Leemans	ESSP
			<a href="#">Climate information for decision making</a>	Ghassem R. Asrar	WCRP
			<a href="#">Ocean acidification</a>	Sybil Seitzinger	IGBP
			<a href="#">IPCC AR5: Innovations and cooperation among WGs</a>	Ottmar Edenhofer	IPCC
		Research-related capacity-building activities and activities in the regions	<a href="#">Asia-Pacific Network for Global Change Research</a>	Andrew Matthews	APN
			<a href="#">Climate change research in the 7th Framework Programme: Results and new initiatives</a>	Elisabeth Lipiatou	FP7
			<a href="#">Science-policy dialogues on climate change</a>	Jon Padgham	START
		Overview presentations by Parties and panel discussion on climate change research needs and priorities in support of the Convention	<a href="#">Research needs and priorities to support UNFCCC</a>	Ann Gordon	Belize
			<a href="#">Science and an effective response to climate change</a>	David Warrilow	European Union
			<a href="#">Challenges and needs in research</a>	Hiroki Kondo	Japan
			<a href="#">Needs for research and systematic observation in Africa</a>	Birama Diarra	Mali
			<a href="#">Perspectives from the United States</a>	Benjamin Zaitchik	United States of America

<sup>1</sup> See <https://unfccc.int/topics/science/workstreams/research/research-dialogue-0>

**Research Dialogue**

SBS TA	RD	Themes	Presentation and poster titles	Presenter	Organization / Party
34	3	Overview of recent key findings from regional and international climate change research	<a href="#">Summary of main scientific findings presented at the SBSTA workshop on research</a>	Sergio Castellari	Italy
			<a href="#">Emerging results from global climate change research</a>	Guy Midgley	ESSP
			<a href="#">Findings from UNEP/WMO Integrated Assessment of Black Carbon and Tropospheric Ozone</a>	Drew Shindell	UNEP
			<a href="#">Arctic Council Assessment of Regional and Global Climate Change Impacts on Snow, Water, Ice and Permafrost in the Arctic</a>	Morten Skovgård Olsen	AMAP
		Developments towards preparation of the AR5	<a href="#">IPCC, Article 2, Sea-level rise and Scenario Development</a>	Jean-Pascal van Ypersele	IPCC
			<a href="#">New features in IPCC AR5</a>	Renate Christ	IPCC
		Research needs and priorities to support emerging issues under the UNFCCC: views by Parties	<a href="#">Needs for research and systematic observation</a>	Birama Diarra	Mali on behalf of LDCs
			<a href="#">AOSIS concerns and issues for consideration</a>	Clifford Mahlung	Jamaica on behalf of AOSIS
			<a href="#">Overview of Research Needs to address Climate Change: The case for Botswana</a>	David Lesolle	Botswana
			<a href="#">Blue Carbon: Consideration in SBSTA</a>	Federica Bietta	Papua New Guinea
			<a href="#">Policy-making relevant questions to the socio-economic scientific community</a>	José Romero	Switzerland
			Good practices and challenges in communicating climate change research results	<a href="#">Developments on the Global Framework for Climate Services: Communicating climate information</a>	Mannava Sivakumar
		<a href="#">Communicating climate science to policy makers: A success story from the IAI collaborative research in the Americas</a>		Ione Anderson	IAI
		<a href="#">Communicating scientific knowledge and needs for research on vulnerability, impacts and adaptation</a>		Cynthia Rosenzweig	PROVIA
		Collaboration with and opportunities for building research capacity in developing countries	<a href="#">Enhanced research capacity building in developing countries in the Asia-Pacific: Success stories</a>	Andrew Matthews	APN
			<a href="#">Capacity building for adaptation research: START's African Climate Change Adaptation Fellowship Programme</a>	Jon Padgham	START

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		Needs and priorities for enhanced research capacity and for enhanced science-policy dialogue: views by Parties	<a href="#">Enhanced science-policy dialogue and communication</a>	Katrine Krogh Andersen	Denmark
36	4	Conveying emerging research findings and activities: updates from recent climate change research on aspects relevant to the long-term global goal – emission pathways, new scenarios and recent global and regional emission trends	<a href="#">Low stabilization and new long term scenarios from the IPCC special report on renewables (SRREN)</a>	Jan Minx	TSU Head of WGIII of the IPCC
			<a href="#">State of the community driven scenario process: New framework for future scenario development for the AR5</a>	Tom Kram	IPCC
			<a href="#">Results from research by the Earth System Science Partnership (ESSP) programmes (ESSP, WCRP, IGBP, IHDP, DIVERSITAS) of relevance to the long term global goal</a>	Rik Leemans	ESSP
			<a href="#">Some results from the WCRP on climate modelling</a>	Adrian Simmons	WCRP
			<a href="#">Impacts and costs of climate change under different scenarios: results from selected FP7 projects (ClimateCost, IMPACT2C, etc.)</a>	Luca Perez	FP7
		Conveying emerging research findings: Coastal and marine ecosystems: Greenhouse gas sources, sinks and reservoirs	<a href="#">Technical and scientific aspects of sources, sinks and reservoirs of all GHGs for coastal and marine ecosystems (mangroves, tidal salt marshes, wetlands and sea grass meadows)</a>	Boone Kauffman	Coalition for Rainforest Nations
			<a href="#">Development of marine sciences in South America: Ocean, climate and fisheries - the Patagonia Shelf case</a>	Alberto Piola	IAI
			<a href="#">Results from research by the ESSP and its partner programmes (ESSP, WCRP, IGBP, IHDP, DIVERSITAS) on coastal and marine ecosystems -related research</a>	Rik Leemans	ESSP
		Updates from recent climate change research: Other areas of relevance to the Convention, including research-related capacity building	<a href="#">Overview of recent results from research by the ESSP and its partner programmes (ESSP, WCRP, IGBP, IHDP, DIVERSITAS and START)</a>	Rik Leemans	ESSP
			<a href="#">New Climate Change Synthesis Report for policy makers in Asia-Pacific Region and initiatives for capacity development</a>	Andrew Matthews	APN
			<a href="#">Observed changes in the climate system. Global sea-level rise and permafrost thawing: results from Ice2Sea and outlook to PAGE21</a>	Luca Perez	FP7
			<a href="#">GHG monitoring from outer space: current outcome and future perspective</a>	Tatsuya Yokota	Japan
			<a href="#">Atmospheric measurements for emission estimation: real-world emission verification of halogenated greenhouse gases</a>	Brigitte Buchmann	Switzerland

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			<a href="#">Needs for research on slow onset events, e.g. sea level rise</a>	Malia Talakai	Nauru, on behalf of AOSIS
			<a href="#">Priorities for vulnerability, impacts and adaptation research</a>	Cynthia Rosenzweig	PROVIA
38	5	Science updates: Recent developments in global climate information	<a href="#">Towards the Fifth Assessment report of the IPCC</a>	Jean-Pascal van Ypersele, Vice Chair	IPCC
			<a href="#">Global science updates from international research programmes and organizations - Including on global carbon budget, regional temperature timelines, sea-level rise, climate predictions, black carbon</a>	Sybil Seitzinger	IGBP and WCRP
		Emerging scientific findings: ecosystems and GHG emissions and removals from sources, sinks and reservoirs, including terrestrial ecosystems	<a href="#">Management of different terrestrial ecosystems under a changing climate</a>	Dmitry Zamolodchikov and Andrey Sirin	Russian Federation
			<a href="#">Estimation of carbon and their fluxes in tropical peatlands: Results from a Japan-Indonesia joint project</a>	Mitsuru Osaki	Japan
			<a href="#">Overview of findings and results from international research programmes and organizations, including on terrestrial and coastal and marine ecosystems - Including on seagrass habitats and their decline; integration of biodiversity and ecosystems into climate change modelling</a>	Sybil Seitzinger	IGBP, IHDP, DIVERSITAS
			<a href="#">Carbon fluxes in tropical dry forests and savannahs: Human, ecological and biophysical dimensions</a>	Arturo Sanchez-Azofeifa	IAI
		Needs for climate change research and developments in research-related capacity-building	<a href="#">Regional capacity development, new opportunities on adaptation</a>	Andrew Matthews	APN
			<a href="#">Regional capacity development and use of regional climate information - Including on downscaling (CORDEX, Africa), use of climate information for agriculture; START capacity-building workshops and activities</a>	Sybil Seitzinger	IGBP, WCRP and START
			<a href="#">Research priorities for vulnerability, impacts and adaptation</a>	Cynthia Rosenzweig	PROVIA
		40	6	Science updates: recent developments in global climate information	<a href="#">Tropical Dry Forest Resilience and Water Use Efficiency</a>
<a href="#">Emerging research findings: Extreme events</a>	Sybil Seitzinger/ Vladimir Ryabinin				IGBP / WCRP
<a href="#">Report from the Joint GCOS/ Global Observation for Forest Cover and Land Dynamics (GOFC/GOLD) Workshop on 'Observations for Climate Change Mitigation'</a>	Carolin Richter				GCOS

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			<a href="#">New approaches in climate prediction for better adaptation: near-term prediction and high-resolution ensembles</a>	Masahide Kimoto	Japan
		Emerging scientific findings: the polar regions	<a href="#">IPCC WGI findings on the polar regions: warming and polar amplification, permafrost, and sea ice changes</a>	Paul Hezel	IPCC
			<a href="#">IPCC WGII findings on the polar regions: ecosystem impacts of ocean warming and acidification</a>	Hans-Otto Pörtner	IPCC
			<a href="#">Arctic Change: A need for multi-sector collaboration</a>	Jeremy Wilkinson	British Antarctic Survey
			<a href="#">Integrated biodiversity and climate scenarios</a>	Sybil Seitzinger	DIVERSITAS
		Needs for climate change research and developments in research-related capacity building	<a href="#">Knowledge gaps identified in AR5</a>	Renate Christ	IPCC
			<a href="#">Caribbean Regional Climate Centre</a>	Carlos Fuller	CCCCC
			<a href="#">Climate change research &amp; innovation in the Horizon 2020 programme</a>	Serena Pontoglio	EC, DG Research & Innovation
			<a href="#">New capacity building programme for APN</a>	Andrew Matthews	APN
42	7	Addressing data and information gaps, including from the IPCC <i>Guiding questions</i> a) What is the role of the ocean in the climate system and climate change? b) What are the links between climate change and desertification? c) What experience has been gained from global and regional initiatives to support regional assessment of climate change, its risks and impacts, including to support effective adaptation responses?	<a href="#">Efforts undertaken to address the information gaps in AR5</a>	Thomas Stocker	IPCC
			<a href="#">Confronting Urgent Climate Challenges</a>	David Carlson	WCRP and on behalf of Future Earth partners
			<a href="#">Linkages between Climate Change and Land Degradation</a>	Sergio Zelaya	UNCCD
			<a href="#">Human influence on extreme events: new approach by Probabilistic Event Attribution</a>	Masato Mori	Japan
			<a href="#">Downscaling of CMIP6 for regional climate modeling: experiences from CORDEX</a>	Claas Teichmann	EURO-CORDEX
			<a href="#">The KNMI Climate Explorer and International Climate Assessment &amp; Dataset</a>	Gé Verver	KNMI
		Lessons learned and good practices for knowledge and research capacity building <i>Guiding questions</i>	<a href="#">Climate knowledge and innovation – research strategies in support of climate policy</a>	Vera Stercken	Germany
			<a href="#">Addressing global societal challenges through EU research funding</a>	Peter Horvath	EC
			<a href="#">Some research-related messages from evaluation of the status of the Global Observing System for Climate</a>	Adrian Simmons	GCOS

Research Dialogue

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		a) How can access to scientific data and information be improved to enhance research and innovation capacity?	<a href="#">Capacity Development in Developing States in the Asia-Pacific Region: Some of the Issues</a>	Andrew Matthews	APN
		b) How can regional and local capacity be improved to support decision making?	<a href="#">Climate Modelling in the Caribbean</a>	Carlos Fuller	CCCCC
		c) What are the opportunities for delivering consistent data and model outputs to support decision making?			
44	8	Conveying new scientific findings and research information in the light of the Paris Agreement	<b><u>Presentations</u></b>		
			<a href="#">Update on the Grand Challenges, CMIP6 and CORDEX</a>	David Carlson	WCRP
		<i>Guiding questions</i>	<a href="#">Science Understanding and Gaps on Temperature Change</a>	Panmao Zhai / Valérie Masson-Delmotte	IPCC
		a) How are slow onset events observed and measured, what are the emerging research findings, gaps and needs in regards to risks and impacts, and what are the implications for vulnerable countries?	<a href="#">Global Climate Observing System: New findings &amp; Emerging needs</a>	Carolin Richter	GCOS
			<a href="#">Observational constraints on the global carbon budget and preliminary analysis of the 2015 anomaly</a>	Philippe Ciais	Global Carbon Project
		b) What are the opportunities to help countries reduce the uncertainties of their national greenhouse gas inventories to support implementation of the Paris Agreement?	<a href="#">Differences in climate impacts between 1.5°C and 2°C</a>	Gerald Lindo	AOSIS
			<a href="#">Implications from climate - carbon cycle modelling on socioeconomic scenario development</a>	Michio Kawamiya	Japan
			<b><u>Posters</u></b>		
		c) What climate change indicators and climate services can support action at the national level	<a href="#">The Systematic Observation of Climate from Space</a>	Pascal Lecomte	CEOS
			<a href="#">INDCs and pathways to different temperature targets</a>	Helene Benveniste	France
			<a href="#">GCOS and the UNFCCC: The new Implementation Plan and the Paris Agreement</a>	Simon Eggleston	GCOS
			<a href="#">The GEO Carbon and GHG Initiative as a contribution to UNFCCC</a>	Antonio Bombelli	GEO
			<a href="#">Pathways for achieving the Paris Agreement's Article 2 and 4 goals</a>	Joeri Rogelj	IIASA
			<a href="#">The Shared Socioeconomic Pathways: An Overview</a>	Joeri Rogelj	IIASA

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			<a href="#">Using atmospheric observations to assess fossil fuel CO2 emissions in California</a>	Heather Graven	Imperial College London
			<a href="#">Sea level in a changing climate: AR5 and recent scientific advances</a>	Valérie Masson-Delmotte	IPCC WG I
			<a href="#">Drought in a changing climate: AR5 and recent scientific advances</a>	Valérie Masson-Delmotte	IPCC WG I
			<a href="#">Probabilistic information on climate change in extreme events by high-resolution large ensemble simulations</a>	Ryo Mizuta	Japan
			<a href="#">Probabilistic impacts assessment of low emission pathways</a>	Katja Frieler	PIK
			<a href="#">New Shared Socioeconomic Pathways in WCRP's Coupled Model Intercomparison Project</a>	David Carlson	WCRP
			<a href="#">Recent Surprises in Our Climate System</a>	David Carlson	WCRP
			<a href="#">Progress on the Integrated Global Greenhouse Gas Information System (IG3IS)</a>	Deon Terblanche	WMO
		Supporting scientific knowledge and capacity building in the light of the Paris Agreement	<b><u>Presentations</u></b>		
			<a href="#">Knowledge and capacity building in developing countries</a>	Maxx Dilley	WMO/GFCS
		<i>Guiding questions</i>	<a href="#">Connecting Science to People</a>	Ione Anderson	IAI
		a) What would be effective climate services from the international community to support international, regional, national and local climate change decision-making?	<a href="#">Research &amp; Capacity Building: Climate Adaptation and Slow Onset Events</a>	Andrew Matthews	APN
			<a href="#">Slow onset events: Perspectives from the Pacific</a>	Espen Ronneberg	SPREP
			<a href="#">Climate Services: European Research &amp; Innovation</a>	Diogo de Gusmao-Soerensen	EC
		b) How can regional and local knowledge and capacity be improved?	<a href="#">Translating Climate Science into Useful Products and Services</a>	Marian Westley	NOAA
		c) How can south-south cooperation be promoted to support knowledge - sharing and capacity-building on slow onset events?	<b><u>Posters</u></b>		
			<a href="#">Reducing emissions from agriculture to meet ambitious limits on global temperature increase</a>	Meryl Richards	CGIAR
			<a href="#">European Commission Climate Services</a>	Diogo de Gusmao-Soerensen	EC
			<a href="#">Work towards slow onset events</a>	Monika Antosik, Dawn Pierre-Nathaniel and Idy Niang	L&D ExCom
			<a href="#">Work towards catalyzing further action</a>		L&D ExCom

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			<a href="#">Contrasting futures for ocean and society from slow-onset climate-related changes</a>	Alexandre Magnan	France
			<a href="#">Combining local and scientific knowledge to increase adaptive capacity to global changes among farmers in Mesoamerica</a>	Edwin Castellanos	IAI / Guatemala
			<a href="#">Translating climate research into useful products and services</a>	Marian Westley	NOAA
			<a href="#">Wetlands help reduce drought</a>	Edmund Jennings	RAMSAR
			<a href="#">Reducing risk and impacts of climate-related disasters: Making space-based observations usable in developing countries - The agricultural drought example</a>	Joachim Post	UN-SPIDER
			<a href="#">How does Climate Change Affect Migration in the Pacific</a>	Robert Oakes	UNU-EHS
			<a href="#">YESS - Young Researchers Address the Future of Earth System Science</a>	David Carlson	WCRP
			<a href="#">The Global Framework for Climate Services (GFCS)</a>	Maxx Dilley	WMO/GFCS
46	9	1. Regional climate research data and information, and gaps.  <i>Guiding questions</i>  a) What is the regional coverage of observational climate data for research, and what are the gaps?  b) What scientific information is available to support mitigation, and adaptation and NAPs?  c) What scientific information on downscaling is available for provision of regional and national scale climate scenarios?  d) What activities are in place to provide and strengthen regional and national	<b><u>Presentations</u></b>  <a href="#">WMO Global to regional climate services for better climate change adaptation and risk management</a>	Andre Kamga Foamouhoue	WMO/ ACMAD
			<b><u>Posters</u></b>  <a href="#">The WCRP Grand Challenge on Understanding and Predicting Weather and Climate Extremes</a>	David Carlson	WCRP
			<a href="#">Regional Climate Downscaling through Arctic-CORDEX</a>	David Carlson	WCRP
			<a href="#">The EURO-CORDEX initiative: A new generation of regional climate scenarios for Europe</a>	David Carlson	WCRP
			<a href="#">Africa needs to rehabilitate the observation network</a>	Andre Kamga Foamouhoue	WMO/ ACMAD
			<a href="#">Prevention, preparation and response to disaster using climate outlooks</a>	Andre Kamga Foamouhoue	WMO/ ACMAD
			<a href="#">Climate services for meningitis epidemic surveillance and control in Niger</a>	Andre Kamga Foamouhoue	WMO/ ACMAD



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		climate services, and what are the gaps?	<a href="#">Climate Activities and Services in Beijing Climate Center</a>	Zhiqiang Gong	Beijing Climate Center (BCC)
			<a href="#">Climate research gaps and opportunities to support risk management and adaptation in Latin American countries</a>	Juan José Nieto	CIIFEN
			<a href="#">The WMO RAVI Regional Climate Centre Network</a>	Stefan Rösner	RAVI Regional Climate Centre Offenbach
			<a href="#">Recent findings of the “Snow, Water, Ice and Permafrost in the Arctic 2017 assessment”</a>	Morten Skovgård Olsen	AMAP
			<a href="#">Measure to Manage: A view from the Asia-Pacific</a>	Andrew Matthews	APN
			<a href="#">Decision making and adaptation planning decision support tools for the Caribbean</a>	Ulric Trotz	CCCCC
			<a href="#">Copernicus Climate Change Service - Developing drought, pest impact and phenological indicators for potential adaptation anywhere in the World</a>	Hugo Zunker	EU
			<a href="#">Regional effects of air pollution, disaster risk, and urban climate change</a>	Thorsten Kiefer	Future Earth
			<a href="#">Systematic observations: from global systems to local information</a>	Simon Eggleston	GCOS
			<a href="#">Contribute to improving systematic observations: capacity development through the GCOS Cooperation Mechanism</a>	Simon Eggleston	GCOS
			<a href="#">Open Earth observation data for regional climate research, mitigation and adaptation decision making</a>	Stefan Rösner	GEO
			<a href="#">Gap Filling through Collaborative Researches Using Non-Hydrostatic Regional Climate Model (NHRCM) and the Tokyo Climate Center (WMO Regional Climate Center)</a>	Atsuya Kinoshita	TCC - Japan
			<a href="#">Regional climate downscaling for risk information - Establishment of the CORDEX Asia Empirical-Statistical Downscaling (ESD) Group</a>	Koji Dairaku	Japan
			<a href="#">The impact of 2015-2017 El Niño on the regional ocean variability off Peru: A case study</a>	Sara Purca and Ione Anderson	IAI
		<a href="#">Added value of regional downscaling with COSMO-CLM in the context of CORDEX-Africa</a>	Hans-Jürgen Panitz	KIT	

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			<a href="#">ISIPedia - the climate impacts encyclopedia: presenting the upcoming 3rd phase of ISIMIP which includes regionalized evaluation and climate impacts information across sectors</a>	Jacob Schewe	PIK
			<a href="#">Regional impacts of climate change on hydrology: a model inter-comparison</a>	Jacob Schewe	PIK
			<a href="#">RCC developments and the CREWS initiative</a>	Ge Verver	KNMI
			<a href="#">Combining Traditional Knowledge and Meteorological Forecasts in the Pacific to Increase Community Resilience to Extreme Climatic Events</a>	Espen Ronneberg	SPREP
			<a href="#">Regional projections of global climate change for local adaptation response</a>	Ralf Döscher	SMHI
			<a href="#">WASCAL – West African Climate Service Center on Climate Change and Adapted Land Use. Regional Climate and Land Surface Information and Services</a>	Christiana Olusegun, Andreas Hirner	KIT/DLR
			<a href="#">Long-Term Observing Stations are a critical part of the climate puzzle</a>	Stuart Goldstraw	UK MetOffice
			<a href="#">UNISPACE+50 and its Thematic Priority “International Cooperation Towards Low-emission and Resilient Societies”’: Role of Space Research and Technology</a>	Joachim Post	UN-SPIDER
		2. Science to take stock and assess progress on mitigation.	<b>Presentation</b>		
		<i>Guiding questions</i>	<a href="#">Mitigation pathways and sustainability in the context of the Paris Agreement</a>	Jim Skea	IPCC WG III
		a) How can we take stock and assess progress on the Paris Agreement long-term mitigation goal (Article 4.1), including by using indicators?	<b>Posters</b>		
			<a href="#">Updated Scenario Planning and Current Schedules for CMIP6</a>	David Carlson	WCRP
			<a href="#">WCRP activities on decadal climate prediction</a>	Matthias Tuma	WCRP
		b) How can science information support the facilitative dialogue 2018?	<a href="#">Key indicators to track current progress and future ambition of the Paris Agreement</a>	Glen Peters	CICERO
		c) What are the emerging information, opportunities and cost estimates in	<a href="#">Identifying AFOLU emission hotspots in the tropics: where are they, how uncertain are they, and what can be done about it?</a>	Rosa Maria Roman Cuesta	CIFOR

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		addressing climate change in line with sustainable development?	<a href="#">Human-induced warming to date and implications for outstanding carbon budgets for 1.5°C</a>	Richard Millar	Universities of Exeter & Oxford
		d) How do we consider the role of other short-lived climate forcers in reducing temperature?	<a href="#">Carbon budgets, historic baselines, and agricultural contribution to climate mitigation</a>	Thorsten Kiefer	Future Earth
			<a href="#">Country-driven mid-century low-emission development strategies – Methods and insights from the Deep Decarbonization Pathways Project (DDPP)</a>	Henri Waisman	IDDRI
			<a href="#">An update on the process of creating a very low emission scenario for climate change research</a>	Joeri Rogelj	IIASA
			<a href="#">Understanding the origin of Paris Agreement emission uncertainties</a>	Joeri Rogelj	IIASA
			<a href="#">An overview of new work on climate and development linkages from the CD-LINKS project</a>	Volker Krey	IIASA
			<a href="#">Earth System Modeling to Contribute to the Paris Agreement in the Integrated Research Program for Advancing Climate Models</a>	Tomohiro Hajima	Japan
			<a href="#">Contribution to the Paris Agreement using space-based GHG monitoring</a>	Shamil Maksyutov	Japan
			<a href="#">Mitigation strategy under uncertainty and learning on climate sensitivity and damages</a>	Tommi Ekholm	VTT Technical Research Centre of Finland
			<a href="#">Understanding Changes in Climate (in support of the Global Stocktake)</a>	Amir Delju	WMO
48	10	1. Ecosystems: update on research and modelling on human settlements, oceans and land and their importance for implementation of the Paris Agreement	<b><u>Presentations</u></b>		
			<a href="#">Understanding the contemporary global carbon balance and its implications for monitoring emissions</a>	Corinne Le Quere	Global Carbon Project
		<i>Guiding questions</i>	<a href="#">Implementing the Paris Agreement: the role of human settlements</a>	Nicola Tollin	University of South Denmark
		a) What are the key outputs from the global research and modelling community to support action to meet the Paris Agreement goals at global, regional and national level?	<a href="#">The IOC ocean science contribution to the climate change science agenda</a>	Salvatore Arico	IOC-UNESCO
			<a href="#">Importance of terrestrial ecosystems for the implementation of the Paris Agreement</a>	Sakhile Koketso	CBD
			<a href="#">Messages of Changing Arctic</a>	Tero Mustonen	Snowchange Cooperative

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		b) How can research inform and improve the management of ecosystems for adaptation?	<a href="#">Impacts of climate change on extreme weather, food and water resources at 1.5C and 2C</a>	Richard Betts	UK Hadley Centre
			<b>Posters</b>		
		c) What is the role of ecosystems in the carbon cycle, what are the main uncertainties and how can these be addressed?	<a href="#">Impacts of climate change on extreme weather, food and water resources at 1.5C and 2C</a>	Richard Betts	UK Hadley Centre
		d) What research is being undertaken and what is needed to improve understanding of ecosystems, climate change and human-ecosystem relationships?	<a href="#">Urban Climate Information for Decision Making in Cities: Local to Global Decisions and Policies</a>	Helen Cleugh Boram Lee	WCRP
			<a href="#">Knowledge gaps for urban climate action</a>	Nicola Tollin	University of South Denmark
		e) How can research and modelling inform and assess progress on the management of urban, land and coastal ecosystems? What are the known aspects of ecosystems protection, optimal use and measures to recover degraded ecosystems	<a href="#">Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC)</a>	Hans Portner Katja Mintenbeck	IPCC WGII IPCC TSU
			<a href="#">Ocean Acidification: The Other Carbon Dioxide Problem</a>	Hans Portner Katja Mintenbeck	IPCC WGII IPCC TSU
			<a href="#">Global Synthesis of the Response of Marine Taxa to Ocean Acidification</a>	Hans Portner Katja Mintenbeck	IPCC WGII IPCC TSU
			<a href="#">The IOC ocean science contribution to the climate change science agenda</a>	Salvatore Arico	IOC-UNESCO
			<a href="#">Importance of terrestrial ecosystems for the implementation of the Paris Agreement</a>	Sakhile Koketso	CBD
			<a href="#">Saami Climate Knowledge from Utsjoki</a>	Tero Mustonen	Snowchange Cooperative
			<a href="#">Land Degradation Neutrality (LDN): A Framework for Maintaining Ecosystems and Human Well-being under a Changing Climate</a>	Sasha Alexander Barron Joseph Orr	UNCCD
			<a href="#">Five reasons stopping mangrove deforestation makes a whole lot of sense for climate change mitigation in Indonesia</a>	Christopher Martius	CIFOR
			<a href="#">For Peat's sake: The Facts</a>	Christopher Martius	CIFOR
			<a href="#">Carbon burial and land building in low-lying tropical coastal wetlands</a>	Christopher Martius	CIFOR
			<a href="#">Human exposure in the coastal zone</a>	Joachim Post	German Aerospace Center

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SBS TA	RD	Themes	Presentation and poster titles	Presenter	Organization / Party
		2. Strengthening the link between the research community and action to meet the goals of the Paris Agreement	<b><u>Presentations</u></b>		
		<i>Guiding questions</i>	<a href="#">Climate Change Science Communication Practices in Japan: what we have found through dialogue</a>	Seita Emori	Japan
		a) What are the best practices for science communication to support understanding of climate change impacts, vulnerabilities and options for decision making on adaptation, mitigation and loss and damage?	<a href="#">The Caribbean Regional Climate Science Initiative: Value Added and Lessons Learnt</a>	Kimberly Ann Stephenson	University of the West Indies
			<a href="#">Co-production of actionable climate information for policy development in Africa</a>	Chris Lennard	CORDEX-Africa
			<a href="#">Closing the Gap: Capacity Development and Communicating Science</a>	Andrew Matthews	APN
		b) What can be done to strengthen the understanding of: climate change impacts at 1.5°C and higher levels of warming; adaptation and mitigation options and their costs; and associated co-benefits for society, particularly in developing countries?	<a href="#">Science-policy action in South America: the hotspot of the Southwestern Atlantic Ocean</a>	Omar Defeo	IAI and Universidad de la Republica de Uruguay
			<b><u>Posters</u></b>		
			<a href="#">The Future of Climate Research</a>	Boram Lee	WCRP Joint Scientific Committee
		c) What can be done and where are the synergies to improve access to data and information so as to close knowledge gaps at regional and national level to scale up action?	<a href="#">Best Practices for Science Communication: An Early Career Research Perspective</a>	Fiona Tummon	Yess Community, Young Hydrologic Society and Association of Polar Early Career Scientists
			<a href="#">Cataloguing high impact events</a>	Omar Baddour	WMO
		d) How can the research community optimise its support for the global stocktake?	<a href="#">Key findings in the WMO Statement on the State of the Global Climate in 2017</a>	Omar Baddour	WMO
			<a href="#">Transforming Knowledge for Climate Action</a>	Kaela Slavik	Future Earth
			<a href="#">The IPCC's work on communications</a>	Marion Ferrat	IPCC working group III TSU
			<a href="#">Mitigation scenarios relevant for policymaking: IPCC Working Group III approach in the Sixth Assessment Cycle</a>	Marion Ferrat Jim Skea	IPCC working group III TSU
			<a href="#">Office for Climate Education - An international initiative on Climate Change Education</a>	Pierre Léna David Wilgenbus Lydie Lescarmontier	Office for Climate Education

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SBS TA	RD	Themes	Presentation and poster titles	Presenter	Organization / Party
			<a href="#">The importance of 2030 action for reaching the Paris climate goals</a>	Elmar Kriegler	Potsdam Institute for Climate Impact Research
			<a href="#">Changes in the occurrence of extreme events at different levels of global warming</a>	Elmar Kriegler	Potsdam Institute for Climate Impact Research
			<a href="#">The sea level legacy of delayed mitigation action</a>	Carl-Friedrich Schleussner	Climate Analytics
			<a href="#">Key Climate Change Indicators from the Ocean: 2017 Update</a>	Anny Cazennave	WMO
			<a href="#">Essential Climate Variables for addressing the Paris Agreement</a>	Cat Downy	European Space Agency / Committee on Earth Observation Satellites
			<a href="#">GEO Work Programme and the Paris Agreement</a>	André Obregon Steven Ramage	GEO
			<a href="#">Sustained Observations to support the Paris Agreement</a>	Carolin Richter	GCOS
			<a href="#">Lima Adaptation Knowledge Initiative: Closing climate change adaptation knowledge gaps</a>	Barney Dickson	UN Environment
			<a href="#">Climate scenario data for NAPs</a>	Claas Teichmann	GERICS
			<a href="#">The WCRP Coordinated Regional Climate Downscaling Experiments (CORDEX)</a>	Chris Lennard	WCRP
			<a href="#">The CORDEX-Africa Impacts Atlas</a>	Chris Lennard	CORDEX-Africa, WCRP
			<a href="#">Communicating Climate Change Information through Climate Risk Narratives</a>	Chris Lennard C. Jack	University of Cape Town (FRACTAL)
			<a href="#">The Caribbean Regional Climate Science Initiative</a>	Kimberly Stephenson	University of West Indies
			<a href="#">Recent progress of Japan's regional downscaling project (SI-CAT) and CORDEX Asia Empirical-Statistical Downscaling (ESD)</a>	Koji Dairaku	Japan
			<a href="#">Making regional climate scenarios to assess the impact of climate change in Southeast Asian countries - Climate change projection using Non-Hydrostatic Regional Climate Model (NHRCM)</a>	Toshinori Aoyagi	Japan
			<a href="#">Local knowledge networks and climate change adaptation in coastal communities</a>	Jeremy Pittman	IAI & University of Waterloo

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SBS TA	RD	Themes	Presentation and poster titles	Presenter	Organization / Party
			<a href="#">Assessing climate-related risks for adaptation planning in West Africa: A science-based service implemented at the West African Science Service Center for Climate Change and Adapted Land Use (WASCAL)</a>	Yvonne Walz	UNU-EHS
		3. Renewable energy economics and co-benefits	<b>Posters</b>		
		<i>Guiding questions</i>	<a href="#">Co-benefits of Climate Change Mitigation: Building New Alliances – Seizing Opportunities – Raising Climate Ambitions in the New Energy World of Renewables</a>	Laura Nagel	Future Earth
		What is the current understanding on the feasible scale of mitigation and what are the research gaps to improve understanding in support of decision making on options and co-benefits in developing countries?	<a href="#">Broad Benefits of Energy Transition towards 2050</a>	Toshiaki Nagata	International Renewable Energy Agency
			<a href="#">Health co-benefits from air pollution and mitigation costs of the Paris Agreement</a>	María José Sanz	Basque Centre for Climate Change
			<a href="#">The Potential, Viability and Co-benefits of Developing Wind Energy to Mitigate Climate Change in the Caribbean</a>	Lawrence Pologne	CIMH
		4. Global research on the carbon cycle, and its observation requirements, in support of the Paris Agreement	<b>Posters</b>		
		<i>Guiding questions</i>	<a href="#">Support of the implementation of the Paris agreement: Role of the Integrated Global Greenhouse Gas Information System (IG3IS)</a>	Phil de Cola	WMO
		a) How are the scientific community supporting a better understanding of the carbon cycle to provide policy-relevant data and information, as well as support the global stocktake?	<a href="#">Climate change and air quality mitigations: why should we do it together</a>	Phil de Cola	WMO
			<a href="#">Integrated and coordinated in-situ carbon and greenhouse gas observations towards policy-relevant knowledge</a>	Emmanuel Salmon	Integrated Carbon Observation System
			<a href="#">Updates from the GEO Carbon and Greenhouse Gas Initiative</a>	Hans Dolman	GEO
			<a href="#">Observations to assess the regional carbon cycle: RECCAP-2</a>	Philippe Ciais Corinne Le Quere	Global Carbon Project
			<a href="#">Advanced Determination of Sources and Sinks of Methane</a>	Franziska Frank	German Aerospace Center

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SBS TA	RD		Presentation and Poster Titles	Presenter	Organisation / Party	
50	11	Introduction to themes 1 and 2 – Climate science update	<a href="#">Introduction to themes 1 and 2 – Climate science update</a>	Boram Lee	World Climate Research Programme (WCRP)	
		Theme 1. Transformation of energy and other sectoral systems to achieve the purpose and long-term goals of the Paris Agreement	Presentations in response to the guiding questions	<a href="#">Elmar Kriegler</a> -	Potsdam Institute for Climate Impact Research (PIK)	
		<i>Guiding Questions</i>		<a href="#">Jim Skea</a>	IPCC Working Group II	
		a. What does the latest research tell us of the key challenges and approaches to achieve the transformation of energy and other systems to hold global warming to well below 2 degrees and pursue efforts to limit it to 1.5 degrees?		<a href="#">Marta Torres Gunfaus</a>	IDDR	
				<a href="#">Riyong Kim</a>	Climate-KIC	
				<a href="#">Carlos Fuller</a>	Belize	
				<a href="#">Harald Winckler</a>	South Africa	
				Posters		
		b. What do you consider to be the priority topics or questions on which we need to develop further research to succeed in the transformation of energy and other systems?		<a href="#">Macroeconomic impact assessment of the Spanish national energy and climate draft plan (NECP)</a>	Maria Sanz	Basque Centre for Climate Change (BC3)
				<a href="#">Research on Enhanced Action and Mitigation Pathways to Keep Paris Goals in Reach</a>	Elmar Kriegler, Heleen van Soest, Detlef van Vuuren, Keywan Riahi	COMMIT and CD-LINKS consortia
		c. How can innovations in social sciences help achieve and manage the necessary social, economic and cultural changes?		<a href="#">The role and potential impacts of using Carbon Dioxide Removal to achieve the Paris Agreement goals</a>	David Keller	GEOMAR Helmholtz Centre for Ocean Research
			<a href="#">Decarbonisation or Defossilisation? Innovative Alternative Fuels for the Aviation in Brazil. An international reference model</a>	Jürgen Kern	German Aerospace Center (DLR) Institute of Engineering Thermodynamics	
			<a href="#">Building capacities to inform short-term choices toward deep decarbonization</a>	Marta Torres Gunfaus	IDDR	
			<a href="#">Interlinkages, Investments, Institutions – Energy for the 21st century</a>	Fabian Wagner and David McCollum	International Institute for Applied Systems Analysis (IIASA)	
			<a href="#">Energy and Sectoral Transition in the Context of the Paris Agreement</a>	Jim Skea, Priyadarshi R. Shukla, Sigourney Luz	IPCC Working Group III	



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		<a href="#">Global Energy Transformation: A Roadmap to 2050</a>	Gayathri Prakash	International Renewable Energy Agency (IRENA)
		<a href="#">Development of Sustainable, Smart, Secure and Safe Society by Comprehensive Research and Development of Gallium Nitride (GaN)</a>	Shugo Nitta, Maki Kushimoto, Manato Deki, Atsushi Tanaka, Yoshio Honda, and Hiroshi Amano	Center for Integrated Research of Future Electronics, Institute of Materials and Systems for Sustainability, Nagoya University, Japan
	<p>Theme 2. Transformative adaptation and climate resilient development</p> <p><i>Guiding Questions</i></p> <p>a. What does the latest research tell us of the key challenges and approaches to achieve transformative adaptation and climate resilient development?</p> <p>b. What do you consider to be the priority topics or questions on which we need to develop further research to succeed in transformative adaptation and climate resilient development?</p> <p>c. How can innovations in social sciences help achieve and manage the necessary social, economic and cultural changes?</p>	Presentations in response to the guiding questions	<a href="#">Debra Roberts</a>	Working Group II, IPCC
			<a href="#">Hindou Oumarou Ibrahim</a>	IPACC
			<a href="#">Candice Pedersen</a>	Ikaarvik
			<a href="#">Tom Mitchell</a>	Climate-KIC
			<a href="#">Tomohito Yamada</a>	Faculty of Engineering, Hokkaido University, Japan
			<a href="#">Paulina Aldunce</a>	Chile
		Posters		
		<a href="#">M’Bororo indigenous knowledge for climate adaptation and resilience</a>	Hindou Oumarou Ibrahim	Association of Peul Women and Autochthonous Peoples of Chad
		<a href="#">Transformative adaptation in the Asia Pacific region</a>	Andrew Matthews	Asia Pacific Network (APN)
		<a href="#">Global Research and Action Agenda on Cities and Climate Change Science</a>	Boram Lee	CitiesIPCC Partners
		<a href="#">The Copernicus Climate Change Service (C3S): Data and tools to support adaptation actions around the globe</a>	Stijn Vermoote	Copernicus
		<a href="#">Building Climate Resilience through Engagement with Farmers, Communities, and Youth</a>	Allison M. Chatrchyan, Danielle Eiseman	Cornell University, USA
		<a href="#">Limits to climate change adaptation: New evidence and insights</a>	Johanna Nalau	Griffith University, Australia
	<a href="#">Healthy Urban Microbiome Initiative: A Pathway to Climate-Resilient Future</a>	Chris Skelly	Healthy Urban Microbiome Initiative	
	<a href="#">Scaling up local actions in support of Paris Agreement: A guide for local and sub-national governments</a>	Maryke van Staden and Pourya Salehi	ICLEI - Local Governments for sustainability	

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		<a href="#">Transforming coastal-marine governance in the face of climate change</a>	Jeremy Pittman	Inter-American Institute of Global Change Research (IAI) and University of Waterloo, Canada
		<a href="#">A Case Study: Adaptation Measures for Extreme Floods in Japan. Using Huge Ensemble of High-resolution Climate Model Simulation</a>	Tomohito Yamada	Associate Professor, Faculty of Engineering, Hokkaido University, Japan
		<a href="#">Intellectual Capacity Building for a Climate-Resilient Future: the New Humanism Approach</a>	Gaston Meskens and Silke van Cleuvenbergen	New Humanism
		<a href="#">Climate Change Impacts and Adaptation for Transport Networks and Nodes</a>	Lukasz Wyrowski and Martin Dagan	United Nations Economic Commission for Europe (UN-ECE)
		<a href="#">The role of communities' perception in adaptation. An agency approach to understand adaptive capacities related to changes in water availability in El Aguacatemicro-watershed (Paz River, El Salvador)</a>	Blanca Liliana Narvaez Marulanda, Fabrice Renaud, Zita Sebesvari	United Nations University Institute for Environment and Human Security (UNU-EHS)
		<a href="#">Monitoring of and reporting on green infrastructure in the Sendai Framework Monitor: relevance for adaptation</a>	Zita Sebesvari, Yvonne Walz, Blanca Liliana Narvaez Marulanda	UNU-EHS
		<a href="#">Interactive Story map for infrastructure impacts under different scenarios in the Seychelles</a>	Harold Rice, Brett Rolf, Jacob Rumschlag, Daniel Xie	University of Michigan, USA
		<a href="#">CORDEX CORE: Coordinated Output for Regional Evaluation</a>	Chris Rennard, Irene Lake, Bill Gutowski, Silvina Solman	WCRP CORDEX Science Advisory Team
	Theme 3. Changing levels of risk and the attribution of extreme climate events and impacts to climate change	Posters		
	<i>Guiding questions</i>			
	Bearing in mind themes 1 and 2:			
	<ul style="list-style-type: none"> <li>What are the changing levels of risk and associated impacts in terms of extreme climate events and what is known about attribution?</li> <li>What are the critical thresholds for extreme events at 1.5 and 2 degrees of global warming, and</li> </ul>	<a href="#">Weather-related hazards and population change: A study of hurricanes in the US, 1980-2012</a>	Elizabeth Fussel	Brown University, USA
		<a href="#">Knowledge Action Network on Emergent Risks and Extreme Events (Risk-KAN)</a>	Markus Reichstein, Jana Silmann, Dorothea Frank and Boram Lee	Future Earth- Integrated Research on Disaster Risk (IRDR) - WCRP, RISK KAN Development Team
		<a href="#">ISIMIP &amp; ISIpedia - Inter-sectoral impact modeling and communication of national impact assessments</a>	Katja Frieler, Iliusi Vega	Potsdam Institute for Climate Impact Research (PIK)
		<a href="#">Climate change impacts on coastal transport infrastructure in the Caribbean: enhancing the adaptive capacity of SIDS</a>	Regina Asariotis	United Nations Conference on Trade and Development (UNCTAD)

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	their magnitudes and associated social and economic costs?	<a href="#">Understanding convective extremes and related phenomena under changing climate conditions</a>	Bill Gutowski and Silvina Solman	WCRP CORDEX Science Advisory Team
		<a href="#">Quantifying the evidence on environmental migration: A meta-analysis on country level studies</a>	Roman Hoffmann	Wittgenstein Centre for Demography and Global Human Capital
		<a href="#">Changing levels of risk and the attribution of extreme climate events</a>	Blair Trewin	WMO
	Theme 4. Role of the ocean in the climate system	Posters		
	<i>Guiding questions</i>	<a href="#">Global Synthesis of the Response of Marine Taxa to Ocean Acidification</a>	Katja Mintenbeck and Hans Otto Pörtner	Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research (AWI)
	Bearing in mind themes 1 and 2:			
	<ul style="list-style-type: none"> <li>• What is the role of the ocean in climate change and what are the potential tipping points?</li> <li>• How can actions to protect and manage coastal zones (such as blue carbon) as well as wider action for a healthy ocean contribute to mitigation and adaptation?</li> </ul>	<a href="#">Climate vulnerability of fish populations: Integrating lifecycle bottlenecks and emission scenarios</a>	Flemming Dahlke and Hans Otto Pörtner	AWI
		<a href="#">Observing the role of the oceans in the climate system</a>	Simon Eggleston	Global Climate Observing System (GCOS)
		<a href="#">Blue carbon: Science developments of relevance to the UNFCCC</a>	Kirsten Isensee, Katherina Schoo, and Salvatore Aricò	Intergovernmental Oceanographic Commission (IOC)
		<a href="#">A 'stressed' ocean: mitigation and adaptation possibilities applying ecosystem-based management</a>	Salvatore Aricò	IOC
		<a href="#">Acceleration of Ocean Acidification in the Western North Pacific</a>	Toshinori Aoyagi presented on behalf of Hisashi Ono	Japan Meteorological Agency (JMA)
		<a href="#">Ocean-Climate Solutions: moving from science to action</a>	Anna Zivian	Ocean Conservancy / Ocean-Climate Platform
		<a href="#">Future sea-level change: Lessons from the past</a>	Marie-France Loutre and Sarah Eggleston	Past Global Changes Science Community (PAGES)
		<a href="#">Why the Southern Ocean matters</a>	Chandrika Nath and Eoghan Griffin	Scientific Committee on Antarctic Research (SCAR)
	Overarching / Crosscutting Themes	Posters		
	Overarching / Crosscutting Themes	<a href="#">Global Climate Observing System: Supporting observations in Africa</a>	Simon Eggleston	Global Climate Observing System (GCOS)
		<a href="#">The GEO Knowledge Hub for Transformative Solutions through Open Science</a>	Douglas Cripe	Group on Earth Observations (GEO)

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			<a href="#">Special Report on Ocean and Cryosphere in a Changing Climate</a>	Hans Otto Pörtner	IPCC Working Group II
			<a href="#">AR6 Climate Change 2021: Impacts, Adaptation and Vulnerability</a>	Hans Otto Pörtner	IPCC Working Group II
			<a href="#">IPCC Special Report on Climate Change and Land (SRCCCL)</a>	Jim Skea	IPCC Working Group III
			<a href="#">World Climate Research Programme: Climate Science for Society</a>	Boram Lee	WCRP science community
			<a href="#">An integrated approach to Earth Energy Imbalance</a>	Boram Lee	WCRP science community
			<a href="#">GFCS Climate services information system – Regional climate focus including data and products for service delivery</a>	Maxx Dilley	WMO
			<a href="#">Green Climate Fund climate rationale</a>	Amir Delju	WMO

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-	12	<p><b>Theme 1: Updates on advancements in research and modelling</b></p> <p><i>Guiding question:</i></p> <p>a) With regards to the topic presented, what is the latest scientific research and information available, and its implications for policy makers, to accelerate the sustainable way forwards post-COVID 19 towards resilience and a global net-zero society?</p>	<p>Presentations</p> <p><a href="#">World climate research programme: Update</a></p> <p><a href="#">The World Adaptation Science Programme (WASP): Emerging Research Directions and Core Activities</a></p> <p><a href="#">Insights from IAM studies: COVID-19 implications, net-zero scenarios, and bridging the gap</a></p> <p><a href="#">Understanding carbon dioxide removal for net zero - opportunities, risks and benefits</a></p> <p><a href="#">Scientific and societal assessment of potential ocean interventions for climate change mitigation</a></p> <p><a href="#">5th Global Biodiversity Outlook (GBO-5): Biodiversity, climate change and transitions to a more sustainable future</a></p> <p>Posters</p> <p><a href="#">The impact of COVID-19 and the greenness of recovery packages on climate change mitigation scenarios</a></p>	<p>Michael Sparrow</p> <p>Anand Patwardhan and Minpeng Chen</p> <p>Bas van Ruijven</p> <p>Andy Reisinger</p> <p>Chris Vivian</p> <p>Hesiquio Benitez Diaz</p> <p>Bas van Ruijven</p>	<p>WCRP</p> <p>WASP, World Adaptation Science Programme</p> <p>IIASA, Integrated Assessment Modelling Community</p> <p>Principal Scientist, Climate Change, Ministry for the Environment, New Zealand (Personal Capacity)</p> <p>GESAMP WG 41</p> <p>UN Convention on Biological Diversity Secretariat</p> <p>IIASA, Integrated Assessment Modelling Community</p>

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		<a href="#">Good-practice policies can help bridge the emissions gap towards a low-carbon future</a>	Detlef van Vuuren	PBL, Integrated Assessment Modelling Community
		<a href="#">GESAMP Working Group 41 on Ocean Interventions for Climate Change Mitigation -Potential contribution for enabling ocean carbon dioxide removal to achieve net zero and green recovery</a>	Salvatore Arico; Chris Vivian	IOC UNESCO; GESAMP WG 41
		<a href="#">Navigating Climate Neutrality: A Framework for Local and Regional Governments to Achieve Net Zero GHG Emissions</a>	Pourya Salehi, Maryke van Staden, Yunus Arikan	ICLEI - Local Governments for Sustainability (World Secretariat)
		<a href="#">Carbon Dioxide Removal: Boosting promising approaches indispensable to meet Swiss and global climate targets</a>	Switzerland	
		<a href="#">Circular Carbon Economy</a>	Saudi Arabia	
	<p><b>Theme 2: Factors for enhancing understanding to accelerate adaptation and mitigation</b></p> <p><i>Guiding questions:</i></p> <p>a) What are some of the research disciplines and/or research capacity building options that must be considered and better understood with regards to understanding how to accelerate action on climate change and sustainable development?</p> <p>b) What are the opportunities, gaps and needs in research knowledge, access to research, capacity building for research, as well as in support to unlock understanding?</p>	Presentations		
		<a href="#">Reaching Zero with Renewables: understanding the potential of renewable-based solutions for industry and transport in support of the 1.5-degree-C goal</a>	Paul Durant	IRENA
		<a href="#">Understanding research on consumption and behaviour in decision making for net zero</a>	Joyashree Roy	Asian Institute of Technology, Thailand; Jadavpur University, India (Personal Capacity)
		<a href="#">Understanding research on climate finance in a challenging macroeconomic environment</a>	Silvia Kreibiehl	Frankfurt School - UNEP Collaborating Centre for Climate & Sustainable Energy Finance
		<a href="#">Regional action on climate adaptation and mitigation: APN synthesis, community-based approaches, and future direction</a>	Linda Anne Stevenson	Asia Pacific Network for Global Change
		<a href="#">Welcoming complexity in adaptation research, policy and action</a>	Daniel Morchain	IISD / NAP Global Network
		<a href="#">Accelerating action on climate change: Engaging with the practical, political, and personal spheres of transformation</a>	Karen O'Brien	University of Oslo
		Posters		
		<a href="#">Managing transboundary climate risks to meet the global challenge of adaptation</a>	Katy Harris, Frida Lager	Adaptation Without Borders /Stockholm Environment Institute
		<a href="#">The HKH Call to Action: From science to coordinated regional adaptation</a>	Arun B. Shrestha	ICIMOD

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		<a href="#">Why equity matters in adaptation and mitigation actions in the ground? Insights from the Sahel</a>	Houria Djoudi	CIFOR Senior Scientist
		<a href="#">Co-production for decision support in Future Climate for Africa</a>	Future Climate for Africa researchers	Future Climate for Africa
		<a href="#">Interconnections of Earth-Human systems: Visualization and projection of future climate, ecosystem, water, energy, and food</a>	Tokuta Yokohata	National Institute for Environmental Studies (NIES), Japan
		<a href="#">Climate Change Research in Asia: A knowledge synthesis of Asia-Pacific Network for Global Change Research (2013-2018)</a>	Xiaojun Deng, Linda Anne Stevenson, Christmas Uchiyama	Asia Pacific Network for Global Change
		<a href="#">Enhancing the capacity of researchers, policymakers and civil society to talk to one another and strengthen the climate science-policy-action interface: Capacity-building Knowledge to Action Days</a>	Marie-Eve Landry and Walter Ubal; Mahawan Karuniasa and Marzena Chodor; Daniel Morchain	International Development Research Centre (IDRC); PCCB; NAP Global Network / International Institute for Sustainable Development (IISD)
		<a href="#">Large-scale carbon dioxide removal: Are we ready? How can governance help?</a>	C2G initiative / Carnegie Council for Ethics in International Affairs	
		<a href="#">Risk and adaptation to climate change in RIOCC countries</a>	José Manuel Moreno Rodríguez	Department of Environmental Sciences, University of Castilla-La Mancha
	<b><a href="#">World Adaptation Science Programme Special event</a></b>  WASP Science for Adaptation Policy Briefs: Launch and Stakeholder Engagement	Introduction to the Science for Policy Briefs	Jean Palutikof	WASP, World Adaptation Science Programme
		Policy Brief #1: Adaptation decision-support tools and platforms	Roger Street and Jean Palutikof	
		Policy Brief #2: Transboundary climate risk and adaptation	Magnus Benzie & Katy Harris	Adaptation Without Borders /Stockholm Environment Institute
		Policy Brief #3: High-End Climate Change and Adaptation	Richard Betts	UK Met Office, Hadley Centre

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-	13	Theme 1: Climate system dynamics and modelling: New knowledge and its implications for decision making <i>Guiding question:</i>	<b>Presentations</b> <a href="#">The World Climate Research Programme: Future Climate Research</a>	Michael Sparrow	WCRP
			<a href="#">Science for Society: CORDEX</a>	Daniela Jacob	WCRP

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	<p>a) What are the latest climate research findings and implications for decision making?</p> <p>b) What is needed to strengthen scientific support for decision-making?</p>	<a href="#">Navigating climate projections for decision making at regional and local level</a>	Ted Shepherd	University of Reading, UK		
		<a href="#">New Climate and Adaptation Science and Implications for Decision Making</a>	Cynthia Rosenzweig	WASP		
		<a href="#">Insights from recent mitigation pathways and related activities by the scientific community</a>	Keywan Riahi,	IIASA		
		<a href="#">Country-level experience of incorporating scientific information for decision making and needed future directions for science and scientific capacity building</a>	Ajani Alleyne and Isaac Ryan-Glassie	Jamaica and the Cook Islands on behalf of AOSIS		
		<b>Posters</b>				
		<a href="#">Advances in estimating and tracking the remaining carbon budget</a>	Joeri Rogelji	IIASA		
		<a href="#">Integrating impacts in mitigation pathway analysis reinforces need for ambitious climate action</a>	Franziska Piontek and Johannes Emmerling	PIK and CMCC		
		<a href="#">Balancing global sources and sinks under the Paris Agreement decreases overall feasibility concerns but requires faster mitigation early on</a>	Bas van Rujiven and Elina Brutschin, and Silvia Pianta	IIASA and CMCC		
		<a href="#">Understanding the impact of methane on the climate and human systems</a>	Nathan Borgford-Parnell and Drew Shindell	CCAC, UNEP Secretariat		
		<a href="#">Improved modelling of permafrost thaw strengthens case for more ambitious emission cuts to meet Paris targets</a>	Pierre Friedlingstein, Sophie Hebden, Gustar Hugelius, Tatiana Ilyina, Ted Schuur, Merritt Turetsky	Future Earth		
		<a href="#">Findings from the Reduced Complexity Model Intercomparison Project</a>	Junichi Tsutsui	Central Research Institute of Electric Power Industry, Japan		
		<a href="#">Climate Change Information for Risk Assessment and Decision Making</a>	Erika Hayami, Aya Takatsuki, and Atsushi Minami	Japan Meteorological Agency (JMA) and Ministry of Education, Culture, Sports, Science and Technology-Japan (MEXT)		
		<a href="#">A framework for complex climate change risk assessment: How to increase clarity regarding the interactions that generate risk, including the role of adaptation and mitigation responses</a>	Nicholas P. Simpson and Christopher H. Trisos	University of Cape Town, South Africa		
<a href="#">Characterization of the Climate System, from past to the future for risk assessment</a>	Maxx Dilley, Amir Delju and Ilaria Galo	WMO				
<a href="#">Climate Services for Adaptation: Case studies</a>	Veronica Grasso, Nakiete Msemoand Maxx Dilley	WMO GFCS				

<p><b>Theme 2:</b> Resilience for and by nature: Building knowledge and understanding to weave the protection and restoration of nature into decision making on mitigation and adaptation</p> <p><i>Guiding questions:</i></p> <p>a) What are the views on needs and priorities for research, research capacity building, knowledge sharing and communication moving forward?</p>	<b>Presentations</b>		
	<a href="#">Current and projected relationships between climate change and biodiversity and system risks</a>	Hans-Otto Pörtner	IPCC
	<a href="#">Nature-based Solutions to climate change –relevance, scope, and future directions</a>	Minna Epps	IUCN
	<a href="#">Potential synergies between mitigation and adaptation for the land sink and how to evaluate opportunities and tradeoffs</a>	Philippe Ciais,	Institut Pierre-Simon Laplace (IPSL), France
	<a href="#">Potential synergies between mitigation and adaptation for the ocean carbon sink and how to evaluate opportunities and tradeoffs</a>	Minhan Dai	Xiamen University, China
	<a href="#">Going beyond what works in climate: Science and data for decision making and being future-fit</a>	Jyotsna Puri	IFAD
	<b>Posters</b>		
	<a href="#">Adjusting land mitigation pathways improves the assessment of global climate progress</a>	Giacomo Grassi	Joint Research Centre of the European Commission
	<a href="#">Land-based mitigation potentials within the agenda for sustainable development</a>	Stefan Frank, Mykola Gusti, Petr Havlík, Pekka Lauri, Fulvio DiFulvio, Nicklas Forsell, Tomoko Hasegawa, Tamás Krisztin, Amanda Palazzo and Hugo Valin	IIASA
	<a href="#">State and future of boreal forest natural climate solutions</a>	Julia Pongratz,	LMU Munich
	<a href="#">Enhancing Climate Mitigation and Adaptation Co-Benefits with NOAA's Blue Carbon Inventory Project</a>	Alec Shub and Lisa Vaughan, Stephen Crooks	NOAA and Silvestrum Climate Associates
	<a href="#">Outcomes of nature-based solutions for biodiversity &amp; ecosystem health</a>	Isabel Keyand Nathalie Seddon	University of Oxford, UK
	<a href="#">Building knowledge to weave the protection and restoration of coastal Blue Carbon ecosystems into decision making on mitigation and adaptation to climate change</a>	Elisabetta Bonotto and Kirsten Isensee	IOC-UNESCO
	<a href="#">Vida Manglar: Scientific and traditional mangrove knowledge in practice</a>	Paula Cristina Sierra-Correa	Invemar
<a href="#">The use of environmental services information by social forestry communities and forest management units to support improved forest management in Aceh, Indonesia</a>	Jay H. Samek	Global Observatory for Ecosystem Services, Michigan State University, USA	
<a href="#">Local perception as scientific evidence for managing blue carbon ecosystems for climate mitigation and adaptation</a>	Ryo Kohsaka	Graduate School of Environmental Studies, Nagoya University, Japan	



**Research Dialogue**

			<a href="#">Overview and perspectives of Nature-based Solutions in climate and biodiversity governance</a>	Nan Zeng and Li Huo, Qihui Gao, Yuanyuan Qin, and Xiang Gao	The Nature Conservancy (TNC) and the National Center for Climate Change Strategy, and International Cooperation (NCSC)
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Themes suggested for future dialogues					
			Low emissions climate-resilient development: the human dimension (including social, behavioral, and cultural information).		
			Outputs from downscaling techniques for global climate reanalysis and models / Dynamical regional downscaling using reanalysis		
			Communicating climate change science		
			Building greater resilience to extreme events. Tropical cyclone impacts and measures for building resilience		
			Incorporating risk into asset management and investment decisions		
			Adaptation limits and risk-cascades		
			Costing adaptation needs in developing countries		
			Mitigation and adaptation technologies necessary for achievement of the NDCs		
			Climate change attribution		
			Future cities and city planning, and other relevant urban issues, including sustainable mobility.		
			Climate positive recovery from the COVID-19 pandemic, and the risks and impacts of the pandemic on peoples already exposed to the effects of climate change		
			How to further support climate services institutions for the provision of eg. Early warning systems, vulnerability mapping, and modelling for adaptation planning		
			Tipping points and uncertainties in the biological and physical systems of the ocean		
			The ocean-climate nexus: mitigation and adaptation options; ecosystem, societal, and economic impacts; the marine carbon flux		

## Research Dialogue

			Geoengineering, including in the oceans. Risks, challenges, and benefits		
			How climate models (eg. CMIP6) are enhancing knowledge and adaptive capacity in developing countries		
			Co-benefits of the shift to renewable energy, risks of stranded assets, including in the LDCs		
			Climate action and the SDGs		
			Technologies for adapting to the impacts of systems with long response times, and for climate-vulnerable hotspots		
			Behaviour change and its role in achieving low-emission climate resilient development pathways		
			Climate and health		
			Climate and infrastructure relevant to adaptation		