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ANY OTHER BUSINESS

Report of the workshop on "Integrated research on climate risk and sustainable solutions across IPCC working groups: Lessons learnt from the AR5 to support the AR6" 29-31 August 2016, Stockholm, Sweden

(Submitted by the Secretary of the IPCC)

IPCC Secretariat

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WMO UNEP

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Report on the workshop "**Integrated research on climate risk and sustainable solutions across IPCC working groups: Lessons learnt from the AR5 to support the AR6**" 29-31 August 2016, Stockholm, Royal Swedish Academy of Sciences, Sweden.

Prepared by Kristie Ebi, Johan Rockström, Claire Weill, Thorsten Kiefer, Wendy Broadgate and Owen Gaffney on behalf of the Scientific and Organizing Committees of the workshop:

Scientific Committee

- Shobhakar DHAKAL, Asian Institute of Technology, Thailand
- Kristie EBI, School of Public Health, University of Washington, USA (co-chair)
- Corinne LE QUÉRÉ, Tyndall Centre, University of East Anglia, UK
- Ramon PICHS-MADRUGA, IPCC WGIII Vice-Chair, Centre for World Economy Studies, University of Havana, Cuba
- Debra ROBERTS, IPCC WGII Co-Chair, Environmental Planning and Climate Protection Department, EThekwini Municipality, Durban, South Africa
- Johan ROCKSTRÖM, Stockholm Resilience Centre, Sweden (co-chair)
- Jean-François SOUSSANA, National Institute for Agricultural Research (INRA), France
- Carolina VERA, IPCC WGI Vice-Chair, Center for Atmosphere and Ocean Sciences, University of Buenos Aires, Argentina

Organising Committee

- Wendy BROADGATE, Future Earth Secretariat (Sweden) (chair)
- Thorsten KIEFER, Future Earth Secretariat (France)
- Rebecca OLIVER, Future Earth Secretariat (Sweden)
- Mxolisi SHONGWE, IPCC Secretariat
- Melinda TIGNOR, IPCC WGII Technical Support Unit
- Claire WEILL, Future Earth Secretariat (France)

Introduction

The Paris Agreement in December 2015 demands an urgent response, including from the research community. An immediate priority is greater international coordination of climate research in support of the Intergovernmental Panel on Climate Change's Sixth Assessment Report (IPCC AR6) to inform future development pathways. On 29-31 August, Future Earth and the Global Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PROVIA) organized a scientific workshop co-sponsored by the IPCC. The workshop brought together experts from across the domains of the IPCC three Working Groups to discuss the major scientific issues associated with integrative risk management and sustainable solutions to the climate challenge. It aimed to explore the lessons learnt from the AR5, for example, identifying major gaps in understanding related to the climate system, adaptation, mitigation and vulnerability and examining the strategic research approaches to addressing these issues in the next 3-5 years.

Meeting Summary

The workshop "**Integrated research on climate risk and sustainable solutions across IPCC working groups: Lessons learnt from AR5 to support AR6**" was jointly hosted by Future Earth and the Stockholm Resilience Centre with financial support from MISTRA (The Swedish Foundation for Strategic Environmental Research) and the Stockholm Business Region and was co-sponsored by the IPCC. This broad international event, scheduled nine months ahead of the first IPCC AR6 scoping meeting, attracted a balanced participation from experts across the world, covering diverse disciplines, geographies, sectors and different career stages. The workshop brought together 78 experts and stakeholders from 28 countries of all world regions. 58 participants were directly identified by the Scientific Committee, another 20, including eight Early Career Scientists, were selected from among over 70 applications from an open call.

The IPCC Trust Fund supported 24 experts from developing countries or countries with economies in transition (DC/EIT), 11 experts from developed countries were supported from the Swedish funds, five American experts from the The U.S. Global Change Research Program (USGCRP), two early-carrer climatologists from World Climate Research Programme (WCRP), and many others from their home institutions. Live streaming of plenary sessions allowed the participation of a larger audience, and remote participants were invited to ask questions via Twitter. Over the three-day workshop, 670 viewers either joined live or watch at their convenience. The senior leadership of IPCC participated in the workshop, including the IPCC Chair Hoesung Lee, vice chair Youba Sokona, co-chairs/vice chairs of IPCC's three Working Groups. The Secretary of the IPCC Abdalah Mokssit and Programme Officer Mxolisi Shongwe also attended. Stakeholders included high-level representation from United Nations Framework Convention on Climate Change (UNFCCC) and the Swedish deputy prime minister Isabella Lövin. Videos of the plenary sessions are available here:
http://futureearth.org/events/future-earth-provia-ipcc-risks-and-solutions-workshop

The meeting structure facilitated interaction across the entire scope of the IPCC assessment processes by organizing work into five topics that cut across the IPCC Working Group structure. A dedicated Task Group addressed each topic throughout the workshop:

1. GAPS - knowledge gaps on climate-resilient and sustainable solutions to support the AR6.
2. SOLUTIONS - catalyzing research, tools, methods, and learning mechanisms to inform development and deployment of sustainable solutions.

3. REGIONAL - sharing information on risks and solution strategies across local to global scales.
4. SCENARIOS - facilitating consistent use of climate and development scenarios across the IPCC Working Groups.
5. RISKS - consistent and effective characterization and visualization of risks and sustainable solutions across IPCC Working Groups.

The IPCC Chair Hoesung Lee mentioned in his opening speech that the political milestones of the 21st Session of the Conference of the Parties (COP21) to the UNFCCC and the Sustainable Development Goals (SDGs) will inevitably influence the shape of the IPCC AR6 assessment cycle and that the IPCC must expand its notion of risk to include these developments. He welcomed the workshop as a means to achieve this goal.

Discussions during the workshop explored a risk and solutions framework within the context of international policy developments such as the Paris Agreement, the Sendai Framework on Disaster Risk Reduction and the Sustainable Development Goals. Workshop participants called for greater integration across IPCC's three working groups. The need for more co-designed, co-produced research arose repeatedly, as were recommendations to include a broader range of expertise into the IPCC process.

This short summary report is submitted as an Information Document to the IPCC for its 44th Session in October 2016. In addition, an extensive workshop report will build on the specific recommendations developed by each Task Group and aim to inform the IPCC's AR6 scoping meeting that will take place in May 2017. A perspectives paper in a peer-reviewed research journal outlining a risk framework for the AR6 that incorporates the new political agenda developed by the participants to the workshop is also foreseen.

Workshop Recommendations

The workshop recommendations can be summarized as follows. The detailed recommendations from the Task Groups will be provided in the extensive report.

Recommendations to IPCC

- Enhance integration across IPCC's three working groups and include a broader range of expertise into the IPCC process.
- Review the use of risk assessment across the Working Groups (WG) and develop guidance for incorporating a risk and response framing that applies to all WGs, considering spatial, temporal, sectoral, and socially differentiated implications.
- Put more focus on understanding and addressing decision-making and implementation needs by different actors, at different scales and levels.
- Enhance consistent approaches to regions across the WGs that consider national and regional trends and circumstances (e.g. emissions and socioeconomic development pathways), their global context, and interlinkages across scales.
- Use the SSP-RCP matrix as an exploratory framework to link assessments of risk at multiple scales in a consistent way and ensuring appropriate regional coverage.
- Expand the sources of evidence through regional collation of grey literature and local and traditional knowledge sources.
- Consider uncertainties in a consistent manner for input into overall risk assessment and develop ways of communicating and visualizing them effectively.
- Develop ways to facilitate stronger engagement between the science community associated with IPCC and different stakeholders early in the AR6 process, mindful of equitable access to and maintaining independence of the process.

- Urge nations to fund research supporting the assessments, taking into account national circumstances, but with the aim to close gaps in knowledge on climate systems that otherwise constitute unaccounted risks toward societal goals of sustainability and resilience.
- Ensure data exchange and use (e.g. CMIP data for WG2) between working groups, and their consistent citation.

Recommendations to the scientific community

- Develop an integrated risk framework for climate research, which can be implemented consistently across working groups.
- Advance research on substantial and pressing knowledge gaps related to our understanding of the climate system, our ability to predict risk of climate change on Earth's ecosystems and inhabitants, and our ability to identify best options for mitigation and adaptation.
- Promote research on integrated research questions, such as adaptation, mitigation, sustainable development, and co-benefits.
- Extend, downscale, and improve the SSP-RCP framework, to include specific scenarios for achieving the Paris Agreement, Agenda 2030, and other policy targets. Consider assessing effectiveness of policies and distributional/equity implications of pathways.
- Advance the capacity on co-production of knowledge and decision-making on adaptation and mitigation, including risk perception and analysis, policy sciences, social learning, communities of practice, decision sciences, communication of risk, climate services, evaluation of co-production outcomes, and technology innovation.
- Evaluate the impact of decisions and what makes the science that informed it useful and usable.
- Develop the empirical basis for the assessment of conditions for sustained change through a meta-analysis of learning on transformation.
- Define a typology of levels of success of responses to climate change, taking regional and national contexts into account, and assess success factors and support mechanisms for localisation and generalisation of solutions.
- Review and further develop indicators and methods for evaluating adaptation and mitigation over different temporal and spatial scales and for different actors.
- Develop methods for integrating multiple types of knowledge, such as top-down transformation pathways studies and meta-analysis of bottom-up case studies.
- Identify regional hotspots for response actions with respect to rates of change, vulnerabilities, the costs and benefits of different responses, understanding the role of emergent risks at regional levels, and defining the data resolution needed to support regional responses.
- Promote and coordinate efforts to improve access to grey literature of high quality.
- Encourage, promote and fund capacity building for research in developing countries and local communities that are currently underrepresented in climate change science, thereby gradually reducing existing information gaps in the scientific literature.

Annex 1

Scoping Paper that was approved by the ExCom (4 May 2016)

Future Earth/ PROVIA/ IPCC Workshop on Climate-Change Impacts, Adaptation and Vulnerability: Lessons Learned from AR5

'Assessment to Inform Risk Management in a Changing World'

Scoping Paper

Co-organized by Future Earth and the Global Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PROVIA).

Co-sponsored by the Intergovernmental Panel on Climate Change (IPCC).

Background

The recently published Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC) highlights the character and severity of climate-change impacts on human and natural systems that result from the interaction among physical hazards, exposure of people, ecosystems, and assets, and their vulnerability or susceptibility to harm. Working Group II (WGII) in the AR5 increased the focus on risks of climate change and on the role of interacting stressors and responses to these risks through adaptation. The WGII AR5 combined quantitative and qualitative evidence using multi-criteria processes of expert judgment to evaluate changing risks. The successful implementation of this approach in the AR5 highlighted opportunities for extending these approaches to make them deeply embedded and more sophisticated for the AR6.

The combination of quantitative and qualitative evidence, plus expert judgment, provided the foundation for the WGII findings on detection/attribution, regional and sectoral key risks and global reasons for concern. This approach also supported an improved conceptualization of risk and mechanisms for managing it, embracing the concept that values and priorities almost always play a major role in specific risk assignments.

Several challenges limit the ability of risk assessments to inform policy decisions. Prominent challenges include (1) limited information on the 'tails' of possible outcomes (including risk due to both climate and societal components), (2) spatial resolution of hazard, vulnerability and exposure, (3) multi-sector interactions that constrain ability to model risks, (4) limits to comparability among diverse metrics of risk, and (5) deep uncertainty about future dynamics of vulnerability and exposure, especially many decades in the future. All of these challenges have exciting opportunities for improvement through future research.

The IPCC received proposals from PROVIA and IGBP to organize workshops on lessons learnt from the AR5, in particular the WGII contribution to the AR5. IGBP proposed a workshop that would deliberate on cross-cutting issues, spanning the physical climate system, climate change impacts, vulnerability and adaptation, and mitigation. PROVIA expressed interest in a meeting that would reflect on the AR5 assessment, paying particular attention to knowledge gaps identified in the WGII AR5. At the 40th Session of the IPCC, the IPCC Panel approved a combined event to be held focusing on lessons learnt from the WGII AR5, and a budget was approved to cover the required costs. Because IGPB officially dissolved at the end of 2015, IPCC invited Future Earth, which continues several of the IGPB projects, to join as a co-organizer.

After further consultations among the three organizations it is suggested that the workshop will be organized by Future Earth and PROVIA and would be Co-sponsored by the IPCC.

Objectives

The overall objective of the co-sponsored workshop is to reflect on the lessons learnt from the AR5, centered on WGII and its interfaces with WGI and WGIII, and to collect the best available scientific ideas required to advance research on multi-criteria expert judgment, integrating quantitative and qualitative information on climate-change risks and responses in a multi-stressor world. The goal is to make these approaches more powerful, deeply embedded, and sophisticated for the AR6, as well as integrated in terms of the inputs needed and the potential co-benefits that may be achieved across the WGs.

The specific aims include:

- Identifying limits on available data and how those limits might be addressed in order to improve scientific knowledge and better inform decisions on adaptation and mitigation measures;
- Considering opportunities for enhancing the effectiveness of the scenario approaches used to frame future risk;
- Assessing prospects for improving the methods used that integrates quantitative and qualitative information on climate-change risks in a multi-stressor world, inter alia multi-criteria expert judgment ;
- Exploring options for increasingly quantitative characterizations of vulnerability, exposure and multi-sector interactions;
- Explore responses to climate risks emphasizing the opportunities for co-benefits through identification of strategies that address simultaneously adaptation, mitigation and sustainable development;
- Understanding how the assessment and response to risk varies at a regional level.

Content and Agenda

The workshop will involve plenary sessions with invited presentations, organized panels, breakout groups, and general discussions, with an emphasis on discussion. The Programme will be set by the Scientific Steering Committee. Participants will include experts from disciplines that span the topics of the WGII assessment, with additional input from relevant areas covered in WGI and WGIII, including experts on decision support, risk management approaches, systems, scenarios and other tools relevant to decision making.

Scientific Steering Committee

The Scientific Steering Committee will be led by the Co-Chairs of Future Earth, PROVIA, and IPCC WGII for the AR6 and will include experts from AR5 from all three working groups, representing the full range of relevant expertise. The Scientific Steering Committee will be supported by the WGII TSU for the AR6 and the secretariats of Future Earth and PROVIA.

Outcomes

A workshop report will be prepared under the guidance of the Scientific Steering Committee with inputs from meeting participants. This report will provide a summary of the meeting discussions and present options for the research community to address all of the meeting objectives. The proceedings of the meeting will be delivered on time to inform the scoping process of AR6. These proceedings will:

- include a full list of participants;
- indicate when and by whom they were prepared;
- indicate whether and by whom they were reviewed prior to publication;
- specify all sources of funding and other support;
- prominently display the following disclaimer at the beginning of the document:

"IPCC co-sponsorship does not imply IPCC endorsement or approval of these proceedings or any recommendations or conclusions contained herein. Neither the papers presented at the Workshop nor the report of its proceedings have been subject to IPCC review"

Location and Timeline

The meeting will be held in Stockholm, Sweden. The proposed duration of the workshop is three days in September or early October. Events leading and following the co-sponsored workshop and their proposed timelines are shown below:

March 2016	Planning calls between PROVIA, Future Earth and IPCC WGII Co-Chairs
April 2016	Scoping paper discussed by the IPCC Executive Committee, pending decisions still to be made on other near-term IPCC products
April 2016	Scientific Steering Committee established, including experts from Future Earth, PROVIA and all three IPCC WGs
June 2016	Invitations sent to participants
June/July 2016	Finalize Programme, including speakers/chairs/rapporteurs
September 2016	Co-sponsored Workshop held
October 2016	Co-sponsored Workshop Report prepared

Participants

The workshop will include approximately 70 participants with expertise relevant to the theme of the workshop, including 30 experts from developing countries or countries with economies in transition (DC/EIT) to be supported by the IPCC Trust Fund. Participants will include government experts as well as experts from non-governmental organizations participating in the work of the IPCC.

Financial Implications

The budget includes travel for 30 experts from DC/EITs who are eligible for travel support from the IPCC Trust Fund. The numbers could increase to accommodate more experts from DC/EITs if additional funding from the co-organizers is made available. Funds for the meeting venue and associated expenses will be raised by the organizers and the IPCC would contribute up to 20,400 SFr to meet these costs.

Integrating science across the IPCC on climate risk and sustainable solutions: Lessons learnt from AR5 to inform AR6

29-31 August 2016.
Royal Swedish Academy of Sciences, Stockholm, Sweden
Plenary Sessions will be live streamed

Monday August 29th

08:00 *Depart from hotel (guide at each hotel foyer)*
08:30 *Registration and coffee in the Beijer foyer*

Beijersalen

09:00 Opening of meeting

Welcomes
Wendy Broadgate, Director Future Earth Global Hub, Sweden
Göran Hansson, Secretary General Royal Swedish Academy of Sciences, Sweden

Climate research and assessment following the Paris Agreement
Patricia Espinosa, UNFCCC Executive Secretary (pre-recorded video)
Hoesung Lee, Chair of the IPCC

Framing of the meeting
Johan Rockström, Stockholm Resilience Centre, Sweden
Kristie Ebi, School of Public Health, Univ. Washington, USA

09:45 Plenary: IPCC Fifth Assessment Report: gaps identified, and needs for AR6

A Perspective from WG I: ***Sonia Seneviratne***, Institute for Atmospheric and Climate Science at ETH, Switzerland (pre-recorded video)

A Perspective from WG II: ***Jose Moreno***, University of Castilla-La Mancha, Spain

A Perspective from WG III: ***Ramon Pichs-Madruga***, Centre for World Economy Studies, University of Havana, Cuba

10:30 *Coffee and Tea in the Beijer foyer*

Acknowledgements

The workshop organisers greatly appreciate financial support from the IPCC, Stockholm Resilience Centre, Stockholm Business Region and the Swedish Foundation for Strategic Environmental Research (Mistra). The World Climate Research Programme (WCRP) and self-funded participants are also acknowledged for travel support.

Beijersalen

11:00 **Panel discussion: research gaps and needs for the Sixth Assessment Report.**

Panellists:

Valerie Masson Delmotte, Climate and Environment Sciences Laboratory (LSCE) France

Jose Moreno, University of Castilla-La Mancha, Spain

Ramon Pichs-Madruga, Centre for World Economy Studies, University of Havana, Cuba

Moderator: ***Corinne Le Quéré***, Tyndall Centre, University of East Anglia, UK

11:45 **Proposed outcomes and products of the meeting**

Johan Rockström, Stockholm Resilience Centre, Sweden

Kristie Ebi, School of Public Health, University of Washington, USA

12:00 *LUNCH at "Klubbvillan" next to the Academy*

13:00 After lunch walk through the Bergianska Botanical Gardens
(departure from the steps of the Academy at 13.00 sharp)

Beijersalen

13:30 **Plenary: Introducing the Task Groups.**

Moderator: ***Thorsten Kiefer***, Director Future Earth Global Hub Paris, France

13:40 Task Group 1. GAPS - ***Kristie Ebi***, School of Public Health, Univ. Washington, USA

13:50 Task Group 2. SOLUTIONS - ***Debra Roberts***, Environmental Planning & Climate Protection Department, eThekwini Municipality, Durban, South Africa

14:00 Task Group 3. REGIONAL - ***Shobhakar Dhakal***, Asian Institute of Technology, Thailand

14:10 Task Group 4. SCENARIOS - ***Ramon Pichs-Madruga***, National Institute for Agricultural Research (INRA) France

14:20 Task Group 5. RISKS - ***Johan Rockström***, Stockholm Resilience Centre, Sweden

14:40 Open Conversation with the floor (15 mins)

15:00 *Coffee and Tea in the Foyer*

TG rooms

15:30	**Task Groups work in parallel**	**Room**
	Task Group 1: GAPS	**Förmaket**
	Task Group 2: SOLUTIONS	**Linnésalen**
	Task Group 3: REGIONAL	**Tornrummet**
	Task Group 4: SCENARIOS	**Nobelrummet**
	Task Group 5: RISKS	**Styrelserummet**

17:30 ***End of Day 1***

18:00 *Buffé dinner in "Klubbvillan" next to the Academy*

Tuesday, August 30th

08:30	*Fruit and water available in the Beijer foyer*
Beijersalen	
09:00	**Plenary: Science and design needs at the interfaces between the IPCC Working Groups - focus on risks and solutions**
	Jean Palutikof, National Climate Change Adaptation Research Facility, Griffith University, Australia
	Nebojsa Nakicenovic, International Institute for Applied Systems Analysis (IIASA), Austria
	Carolina Vera, Center for Atmosphere and Ocean Sciences, Univ. Buenos Aires, Argentina
	Michael Hayne, 2 degrees Investing Initiative, UK
	Moderator: ***Kristie Ebi***, School of Public Health, Univ. Washington, USA
09:40	Panel discussion with the above four speakers, including discussion with audience.
	Moderator: ***Kristie Ebi***, School of Public Health, Univ. Washington, USA
10:30	*Coffee and Tea in the Beijer Foyer*
Beijersalen	
11:00	**Plenary: Reporting Back from Task Group discussions**
	10 minute reports from each of the Task Groups.
11:00	Task Group 1: GAPS
11:10	Task Group 2: SOLUTIONS
11:20	Task Group 3: REGIONAL
11:30	Task Group 4: SCENARIOS
11:40	Task Group 5: RISKS
11:50	Moderated discussion about how they relate to or influence each other. Moderator: ***Ramon Pichs Madruga***, Centre for World Economy Studies, Univ. of Havana, Cuba
12:30	*LUNCH in "Klubbvillan" next to the Academy*
TG rooms	
13:30	**Task Groups work in parallel**
15:30	*Coffee and Tea in the Foyer*
16:00	**Task Groups work in parallel**
17:30	***End of day 2***
18:30	***Welcome drink at Grillska Huset***
	Venue: Grillska Huset, a house from 1600 in the main square of the old town, just a couple of minutes walk from the hotels. Address: Stortorget 3-5
19:00	***Dinner at Grillska Huset***

Wednesday, August 31st

08:30	*Fruit and water available in the Beijer foyer*
Beijersalen	
09:00	**Plenary: Mobilising the science community for IPCC AR6**
	Joydeep Gupta, Journalist, The Third Pole India ***Corinne Le Quéré***, Tyndall Centre, Univ. East Anglia, UK ***Florin Vladu,*** UNFCCC Secretariat Moderator/host: ***Youba Sokona***, The South Centre, Mali/Switzerland
09:40	**Plenary: Report from Task Groups:** outline of main points for report/paper
	Moderator: ***Carolina Vera,*** Center for Atmosphere and Ocean Sciences, Univ. Buenos Aires, Argentina
09:40	Task Group 1: GAPS
09:50	Task Group 2: SOLUTIONS
10:00	Task Group 3: REGIONAL
10:10	Task Group 4: SCENARIOS
10:20	Task Group 5: RISKS
10:30	*Coffee and Tea in the Foyer*
Beijersalen	
11:00	**Plenary: Moderated discussion on the interactions between Task Groups.**
	Moderator: ***Carolina Vera,*** Center for Atmosphere and Ocean Sciences, Univ. Buenos Aires, Argentina
TG rooms	
11:30	**Parallel sessions: Task Groups resume** Incorporate feedback from other Task Groups
12:45	*LUNCH with COFFEE in "Klubbvillan" next to the Academy*
Beijersalen	
14:00	**Final plenary: Conclusions, recommendations and workshop outputs** Moderator: ***Rebecca Oliver,*** Future Earth Global Hub, Sweden
	Task Group Summary Conversation between Task Group representatives
	Science Policy Conversation ***Isabella Lövin,*** Minister for Climate and Development and Deputy Prime-Minister of Sweden and workshop co-chairs ***Johan Rockström*** and ***Kristie Ebi***
	Karin Wanngård, Mayor of Stockholm
	Conclusions and way forward ***Johan Rockström*** and ***Kristie Ebi***
15:45	***End of Workshop*** *(Cofffe Tea and cake)*

Annex 3 - List of participants

Surname	Name	Affiliation	Gender	Country	Task group
Aldrian	Edvin	Center for Research and Development, BMKG	M	Indonesia	1
Andersson	Leif	Department of Marine Sciences, University of Gothenburg	M	Sweden	1
Anisimov	Oleg	State Hydrological Institute, St Petersburg	M	Russia	2
Anson	Lesley	Global Sustainability Journal editor	F	UK	
Artaxo	Paolo	University of Sao Paolo	M	Brazil	3
Bednarsek	Nina	IPCC WG II Technical Support Unit	F	Germany	1
Bondre	Ninad	Elevate Scientific	M	Sweden	
Borges	Pablo	Federal University of Santa Catarina (UFSC)	M	Brazil	3
Broadgate	Wendy	Future Earth Secretariat	F	Sweden	4
Bustamante	Mercedes	Department of Ecology, University of Brasília	F	Brazil	3
Carlson	Dave	World Climate Research Programme, WMO	M	Switzerland	1
Chacon	Noemi	Venezuelan Institute for Scientific Research (IVIC)	F	Venezuela	5
Chen	Deliang	Department of Earth Sciences,University of Gothenburg	M	Sweden	5
Cornell	Sarah	Stockholm Resilience Centre	F	Sweden	5
Dairaku	Koji	National Research Institute for Earth Science and Disaster Resilience	M	Japan	5
Dasgupta	Purnamita	College of Basic and Applied Sciences	F	India	1
Destouni	Georgia	FORMAS	F	Sweden	
Dhakal	Shobhakar	Asian Institute of Technology	M	Thailand	3
Dilley	Maxx	WMO	M	Switzerland	5
Dobrota	Susanna	Future Earth Secretariat	F	Sweden	
Ebi	Kristie	School of Public Health, University of Washington	F	USA	1
Elmqvist	Thomas	Stockholm Resilience Centre	M	Sweden	2
Flach	Rafaela	Hamburg University	F	Brazil/Germany	5
Forster	Piers	Priestley International Centre for Climate	M	UK	4
Fuss	Sabine	Mercator Research Institute on Global Commons and Climate Change (MCC)	F	Germany	3
Gaffney	Owen	Future Earth Secretariat	M	Sweden	
Giri	Madhav	PROVIA	M	Nepal	1
Githaiga	Cicilia	National Environment Management Authority in Kenya	F	KENYA	2
Gordon	Chris	Institute for Environment and Sanitation Studies, University of Ghana	M	Ghana	3
Gramkow	Camila	Tyndall Centre for Climate Change Research	F	UK	2
Gulizia	Carla	Center for Atmosphere and Ocean Sciences, University of Buenos Aires	F	Argentina	3
Gupta	Joydeep	Journalist, The Third Pole	M	India	5
Hansson	Göran K.	Royal Swedish Academy of Sciences	M	Sweden	
Hansson	H-C	Department of Env Science and Analytical Chem, Stockholm University	M	Sweden	1
Harrison	Paula	Centre for Ecology & Hydrology (CEH), Lancaster Environment Centre	F	UK	4
Hartman	Steven	Mid Sweden University Eco-Humanities Hub (ECOHUM)	M	Sweden	2
Hayne	Michael	2 Degrees Investing	M	France	4
Huang-Lachmann	Jo-Ting	Faculty of Economics and Management, TU Dresden	F	Germany	3
Iverfeldt	Åke	MISTRA, The Swedish Foundation for Strategic Environmental Research	M	Sweden	
Juhola	Sirkku	Department of Environmental Sciences, University of Helsinki	F	Finland	2
Kabisa	Mulako	Indaba Agricultural Policy Research Institute	F	Zambia	4
Kiefer	Thorsten	Future Earth Secretariat	M	France	5
Kram	Tom	PBL Netherlands Environmental Assessment Agency	M	Netherlands	4
Kriegler	Elmar	Potsdam Institute for Climate Impact Research	M	Germany	4
Lange	Manfred	Science and Technology in Archaeology Research Center, The Cyprus Institute	M	Cyprus	3
Le Quere	Corinne	Tyndall Centre, University of East Anglia	F	UK	1

Surname	Name	Affiliation	Gender	Country	Task group
Lee	Hoesung	Intergovernmental Panel on Climate Change	M	Korea	2
Lemos	Maria Carmen	GLISA, University of Michigan	F	USA	1
Leuzinger	Sebastian	Institute for Applied Ecology	M	New Zealand	4
Masson-Delmotte	Valérie	LSCE: Climate and Environment Sciences Laboratory	F	France	4
Mearns	Linda	National Center for Atmospheric Research	F	USA	5
Mix	Alan	College of Earth, Ocean, & Atmospheric Sciences, Oregon State University	M	USA	1
Mokbul	Ahmad	Asian Institute of Technology	M	Thailand/Bengladesh	5
Mokssit	Abdalah	Intergovernmental Panel on Climate Change Secretariat	M	Switzerland	3
Montana	Jasper	Department of Geography, University of Cambridge	M	UK	2
Moreno	Jose	Department of Environmental Sciences, University of Castilla-La Mancha	M	Spain	3
Mukerji	Rupa	Institute of Rural Management, India and HELVETAS Swiss Intercooperation	F	India	3
Nakicenovic	Naki	International Institute for Applied Systems Analysis (IIASA)	M	Austria	1
Narang	Sonali	Panjab University	F	India	5
Oliver	Rebecca	Future Earth Secretariat	F	Sweden	
Palutikof	Jean	National Climate Change Adaptation Research Facility, Griffith University	F	Australia	1
Pan	Jia Hua	Chinese Academy of Social Sciences	M	China	4
Panmao	Zhai	China Meteorological Administration, Beijing	M	China	3
Pichs-Madruga	Ramon	Centre for World Economy Studies, University of Havana	M	Cuba	4
Pihl	Erik	Future Earth Secretariat	M	Sweden	
Poloczanska	Elvira	IPCC WG II Technical Support Unit	F	Germany	4
Portner	Hans-Otto	Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research	M	Germany	5
Preston	Benjamin	Climate Change Science Institute, Oak Ridge National Laboratory	M	USA	2
Pulwarty	Roger	NOAA	M	USA	2
Rahimi	Mohammad	Semnan University	M	Iran	2
Reyers	Belinda	Stockholm Resilience Centre	F	S. Africa/Sweden	4
Roberts	Debra	EThekwini Municipality, Durban	F	South Africa	2
Rockström	Johan	Stockholm Resilience Centre	M	Sweden	5
Rogelj	Joeri	International Institute for Applied Systems Analysis (IIASA)	M	Austria	4
Romson	Åsa	Swedish Ministry of the Environment	F	Sweden	2
Roy	Joyashree	Global Change Programme, Jadavpur University	F	India	2
Rummukainen	Markku	Centre for Environmental and Climate Research (CEC), Lund University	M	Sweden	4
Schapiro	Mark	Environmental Journalist and Author	M	USA	2
Seitzinger	Sybil	Pacific Institute for Climate Solutions, University of Victoria	F	Canada	1
Shongwe	Mxolisi	Intergovernmental Panel on Climate Change Secretariat	M	Switzerland	5
Sillmann	Jana	CICERO	F	Norway	5
Sokona	Youba	The South Centre	M	Mali/Switzerland	1
St. Clair	Asun	DNV GL	F	Norway	5
Stafford Smith	Mark	Commonwealth Scientific and Industrial Research Organisation (CSIRO)	M	Australia	3
Stafström	Sven	Swedish Research Council	M	Sweden	
Stockhause	Martina	World Data Center for Climate (WDCC)	F	Germany	4
Sörensson	Anna	Center for Atmosphere and Ocean Sciences, University of Buenos Aires	F	France/Argentina	5
Tignor	Melinda	IPCC WG II Technical Support Unit	F	Germany	3
Urquhart	Penny	Independent analyst: climate resilient development	F	South Africa	2
Weill	Claire	Future Earth Secretariat	F	France	2
Vera	Carolina	Center for Atmosphere and Ocean Sciences, University of Buenos Aires	F	Argentina	3
Vladu	Florin	UNFCCC	M	Germany	1
Vogel	Coleen	University of the Witwatersrand, Johannesburg	F	South Africa	1