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SIXTH ASSESSMENT REPORT (AR6) PRODUCTS

Expert Meeting on Mitigation, Sustainability and Climate Stabilization Scenarios

(Submitted by the Secretary of the IPCC)

IPCC Secretariat

c/o WMO • 7bis, Avenue de la Paix • C.P. 2300 • 1211 Geneva 2 • Switzerland
telephone : +41 (0) 22 730 8208 / 54 / 84 • fax : +41 (0) 22 730 8025 / 13 • email : IPCC-Sec@wmo.int • www.ipcc.ch



SIXTH ASSESSMENT REPORT (AR6) PRODUCTS

Expert Meeting on Mitigation, Sustainability and Stabilization Scenarios

Rule 7.1 on IPCC Workshops and Expert Meetings in the Appendix A to the Principles Governing IPCC Work establishes, inter alia, that “IPCC Workshops and Expert Meetings are those that have been agreed upon in advance by an IPCC Working Group, or by the Panel as useful or necessary for the completion of the work plan of a Working Group, the Task Force on National Greenhouse Gas Inventories or a task of the IPCC. Only such activities may be designated as “IPCC” Workshops or Expert Meetings. Their funding should include full and complete provision for participation of experts from developing countries and countries with economies in transition”....”An IPCC Expert Meeting focuses on a specific topic bringing together a limited number of relevant experts. The relevant Working Group/Task Force Bureaux, or the IPCC Chair, will identify and select participants to Expert Meetings”....”Proposals for IPCC Workshops or Expert Meetings will be submitted to the Panel for its decision through the relevant Working Group/Task Force Bureaux, or the IPCC Chair. The proposals will include descriptions of the topic(s), and clarify the choice for an Expert Meeting or a Workshop”.

Table 2 of Decision IPCC/XLIII-1 on the IPCC Programme and Budget includes in its forecast 2017 budget noted by IPCC-XLIII a budget line on “Expert meetings/workshops (contingency)” providing for 60 journeys, CHF 240,000.

The proposal for an Expert Meeting on Mitigation, Sustainability and Stabilization Scenarios contained in Annex 1 has been prepared under the leadership of the Co-chairs of Working Group III and its Bureaux.

The IPCC is invited to consider this proposal and authorize the use of the above mentioned budget line for the funding of the Expert Meeting.

Proposal for an IPCC Expert Meeting on Mitigation, Sustainability and Stabilization Scenarios

(Prepared by the Co-chairs of Working Group III)

1. Context

Two of the central challenges facing IPCC, and Working Group III (WG III) in particular, in the Sixth Assessment Report (AR6) are:

- a) the need to assess the linkages between high-level climate stabilization goals and scenarios on the one hand and the practical steps needed in the short- and medium-term to make the realization of these goals possible; and
- b) the need to anchor climate responses firmly in the context of development needs. Practical steps need to be articulated in ways that are meaningful to stakeholders, in government, business and civil society, as they formulate their responses to climate change. The Sustainable Development Goals (SDGs) now provide an internationally agreed framework for exploring climate response-sustainability linkages.

These twin challenges have been recognised by governments and IPCC observer organizations in proposals for the AR6 Special Reports notably the proposal from the Government of Norway on *Mitigation, climate stabilization scenarios and sustainability* (IPCC-XLII/INF.13, Corr.1, Add.2) and from CAN International on *Decarbonisation and low carbon development* (IPCC-XLII/INF. 13, Corr. 1). The premise underlying this proposal for an Expert Meeting is that stronger links between the scientific communities that will contribute to AR6 need to be forged if these challenges are to be met.

2. What was achieved in the Fifth Assessment Report (AR5) and science gaps

AR5 made some progress in addressing these challenges. The WG III report compared high-level scenarios developed using Integrated Assessment Models (IAMs) with sectoral approaches. It also interpreted high-level scenarios and derived implied indicators of change, especially in the energy supply system and energy demand sectors. However the flow of information was largely one-way. A two-way exchange of information and insights between those with detailed knowledge of specific sectors and technologies with those developing high-level scenarios. Greater transparency about assumptions underlying IAMs will facilitate this dialogue.

The AR5 also started to open up the linkage between the SDGs and climate responses by addressing co-benefits, specifically in terms of air quality and energy security as measured by import dependence. However more effort is needed to explore these linkages in a coherent and comprehensive manner. A fuller range of SDGs, notably that relating to energy access, need to be explored more systematically.

Furthermore, more effort is need to understand how climate responses that jointly address mitigation and adaptation challenges can be formulated, especially in human settlements, agriculture, forestry and land use. This requires communication, to a far greater extent than achieved in the AR5, between the mitigation research communities and those concerned with impacts, adaptation and vulnerability.

A final gap relates to the sustainability implications, not only of climate change itself, but also the mitigation measures required to achieve ambitious stabilization pathways involving negative emission technologies (NETs).

3. Recent initiatives

The science gaps have been recognised by the research community and have begun to be addressed through IPCC meetings and workshops and initiatives from third parties. Relevant IPCC meetings include: the IPCC Expert Meeting on Scenarios, held on 18-20 May 2015 in Laxenburg, Austria; and the IPCC Workshop on Regional Climate Projections and their Use in Impacts and Risk analysis Studies, held on 15-18 September 2015 in Sao Jose dos Campos, Brazil. In addition, the International Institute for Applied Systems Analysis (IIASA) is undertaking the project “the world in 2050” (TWI2050) using scenarios to address the linkage between climate responses and the Sustainable Development Goals (SDGs), the Integrated Assessment Modelling Consortium (IAMC) continues to foster modelling comparison exercises, including those that implement the Shared Socio-Economic Pathways (SSPs) and the Inter-Sectoral Impact Model Intercomparison Project (ISIMIP) project which takes a scenario-based approach to impact assessment.

The aim of this Expert Meeting is to build on rather than duplicate these activities, specifically by developing engagement between scenario-builders and modellers and those with a more sectoral, bottom-up perspective.

4. Goals of the Expert Meeting

The expert meeting would have the following aims:

- To develop dialogue between different research communities that can be advanced later through cross-cutting groups linking different chapters of the AR6 reports.

What forms of data could be used to underpin dialogue between scenario builders and others, including those concerned with mitigation at the sectoral level and those primarily concerned with sustainable development? How can scenarios, models and their input assumptions build plausibly on the insights derived from sectoral or regional perspectives? Conversely, what are the implications do top-down stabilization scenarios hold for the pace of change in specific sectors?

- To stimulate interdisciplinary research activity that will lead to new literature that can be assessed during the AR6 cycle.

5. Participation

The Expert Meeting would primarily engage research communities and stakeholders concerned with mitigation but would also need to include representatives of WGI and WGII science. Relevant communities include:

- Integrated assessment modellers and scenario builders
- Sectoral experts (energy supply, AFOLU, energy demand sectors)
- Policy scientists
- Risk assessment experts
- Development experts
- Impacts, adaptation and vulnerability experts
- Climate modellers

6. Timing

In order to inform the Scoping Meeting for the AR6, we propose that the meeting take place in late March 2017. In the event that this deadline proves infeasible, a second option is July 2017 in time to inform the 46th Session of the IPCC which will approve the outline of the AR6.

7. Hosting

Norway has indicated its willingness to host such an Expert Meeting.