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FOR INFORMATION

Proposed themes for Special Reports during the Sixth Assessment Report (AR6) cycle

(Submitted by the Acting Secretary of the IPCC)

Submission by Norway

Mitigation, climate stabilization scenarios and sustainability

Relevance of the topic for climate change

This Special Report will provide an integrated scientific assessment of policy options for meeting both medium and long-term climate goals. It could also support the newly adopted Sustainable Development Goals (SDGs) that are most relevant for climate change. The assessment will focus on the potential, efficiency and feasibility of a broad set of emission reduction options and possible policy measures and instruments.

Relevance of the topic for policy-making

The Special Report will provide timely and easily available information that will support policy-makers and business in prioritizing and implementing mitigation measures in upcoming decades. It will provide transparent and specific information on how transition to low-emission pathways can be achieved and provide a scientific basis for assessing policy options in the context of the UNFCCC. The Special Report would also be useful for assessing how mitigation options can be seen in relation to developing sustainable adaptation strategies. It will provide a sound scientific foundation for implementing the Paris agreement and the evolving future needs of the UNFCCC, and a more detailed scoping of such a report should therefore be done after we see the outcome of the Paris summit.

Justification for the need of a Special Report

The AR5 showed that mitigation options are available in every major sector. Mitigation can be more cost-effective if using an integrated approach that combines measures to reduce energy use and the greenhouse gas intensity of end-use sectors, decarbonize energy supply, reduce net emissions and enhance carbon sinks in land-based sectors. The AR5 WGIII stated that: "At the global level, scenarios reaching about 450 ppm CO₂-eq are also characterized by more rapid improvements in energy efficiency and a tripling to nearly a quadrupling of the share of zero- and low-carbon energy supply from renewables, nuclear energy and fossil energy with carbon dioxide capture and storage (CCS), or bioenergy with CCS (BECCS) by the year 2050". It is further stated that: "There are strong interdependencies in mitigation scenarios between the pace of introducing mitigation measures in energy supply and energy end-use and developments in the AFOLU sector (high confidence). The distribution of the mitigation effort across sectors is strongly influenced by the availability and performance of BECCS and large scale afforestation".

The Special Report could explore and update these issues further in an integrated context. This may include an assessment of how sustainable mitigation strategies can be developed and how they may support various sustainable development goals. For instance, the relationship between the increased need for renewable biological resources, food security, water availability and biodiversity. It will require input from all three workings-groups, such as: climate sensitivity, limitations on cumulative CO₂ emissions and other gases, scenarios, the associated impacts and risks, adaptation, emission reductions, economic costs, measures and instruments.

In summary, the report will provide a transparent and integrated perspective on a set of climate stabilization targets, the corresponding emission reductions and possible technology and policy measures and instruments. A Special Report involving all three working groups will be the best way to give an integrated perspective on emission reductions, in a format that is easily accessible and well-timed for policy-makers.

Key issues proposed to be addressed in the Special Report

This Special Report integrates perspectives from several of the proposed themes relating to mitigation and similar issues in the Inf. document prepared by the secretariat for IPCC-42 (IPCC-XLII/INF.13).

Key issues:

- Linking emission reductions compatible with stabilization targets to technology and policy measures.
- Analyzing various climate stabilization pathways in combination with other sustainable development goals, including co-benefits between climate policies, health and human welfare.
- Mitigation options in relation to developing sustainable adaptation strategies in key sector and regions.
- Integration of sectoral knowledge on emission reduction options with cross-sectoral options and integrated scenarios.
- Feasibility, timing and potential related to possible economic measures and instruments.
- International cooperation, such as global, regional and sectoral agreements and initiatives, including INDCs.
- Further quantifying the relationship between limitations on cumulative CO₂ emissions and reductions of other greenhouse gases (such as, CH₄ and N₂O and other Kyoto gases).
- Identifying and assessing the physical, environmental, technological and economic potential and constraints related to options for emissions reductions, including measures with negative emissions.

Time schedule

To be adapted by 2018/19, taking into account the needs of the UNFCCC. The scoping of such a report should be done after we see the outcome of the Paris summit.