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**SCOPING FOR THE IPCC 5<sup>TH</sup> ASSESSMENT REPORT**

**Concept paper for an IPCC Expert Meeting on the Socio-Economic  
Consequences of Low Stabilization Scenarios**

(Submitted by Working Group III Co-Chairs)

# SCOPING FOR THE IPCC 5<sup>TH</sup> ASSESSMENT REPORT

## Concept paper for an IPCC Expert Meeting on the Socio-Economic Consequences of Low Stabilization Scenarios

### 1. Background

The Panel at its 28<sup>th</sup> session identified the development of new set of scenarios as a key scientific issue that needs to be addressed in AR5. The agreement to create a “revised set of scenarios of socio-economic, climate and environmental conditions” was followed by an expert meeting that was held in Noordwijkerhout in September 2007 and a subsequent report (IPCC-XXXVIII/Doc.8).

The expert meeting developed so-called representative concentration pathways (RCPs) that serve simultaneously as a benchmark for climate models and as targets for economic models. In addition, by addressing this cross-cutting issue it also strengthens consistency and coherence across the three working groups.

At the expert meeting it became evident that there is a particular interest of policy makers in low stabilization pathways that have a peak in emissions and declining emissions thereafter and the socio-economic consequences of this set of scenarios. However, there is only a limited availability of scenarios in this class.

Therefore we need further research on the features and implications of scenarios below 3 W/m<sup>2</sup>. Once a final decision is made on the RCP, climate models should identify the emission and concentration paths which are consistent with these low radiating forcing target. Then, socio-economic models should identify the technological feasibility and the socio-economic conditions for these emission paths to be attained.

The focus of the proposed expert meeting(s) (one or two) will indeed be on the technological feasibility and the socioeconomic and policy implications of low stabilization scenarios. The Reliance on the RCP, once decided, will ensure consistency and comparability across all three working groups of IPCC.

In light of the 28<sup>th</sup> panel’s request for a “strengthened contribution from socio-economic disciplines” and the following research agenda set out in the Noordwijkerhout-Report, the integrated assessment modelling community is invited to explore the technological prerequisites and the political and socioeconomic conditions that are consistent with these low concentration pathways.

### 2. The Expert Meeting(s)

In light of the particular interest in low stabilization scenarios and their limited availability, the aim of the proposed expert meeting(s) (one or two) is to further specify and substantiate the political premises, technological prerequisites and the socioeconomic implications of this scenario group. In terms of technologies, this would also include advanced carbon management techniques that influence the carbon cycle (e.g. biomass in combination with CCS, atmospheric carbon scrubbing, biochar production, etc). However, it would exclude direct control of the balance of radiative forcing. The latter issue would necessitate a very close cooperation with WGI and WG II.

Through the expert meeting(s) the IPCC intends to assess recent scientific achievements and to identify knowledge gaps. The following properties shall be discussed in more detail:

- Second best scenarios I: implications of delayed participation and fragmented policy regimes (“transition scenarios”);
- Second best scenarios II: implications of limited availability of specific technologies and resources or technology failures (switch on/off experiments and sensitivity analyses);
- Advanced carbon management scenarios: biomass combined with CCS, atmospheric scrubbing and others (excluding radiation management).

In the end the effort should result in the creation of a “library” of stabilization scenarios and should provide an understanding about the limitations of the feasibility of low stabilisation in terms of policies and technologies.

### **3. Organization**

Timing: in the course of 2010

Duration: 2x3 days

Participants:

For each meeting about 50 participants in total, with broad international representation. It is proposed that for each meeting 20 journeys for experts from developing countries and economies in transition including WGIII Vice-Chairs are allocated as part of the line item “expert meetings related to the AR5” in the already agreed IPCC Trust Fund budget for 2009.