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PROGRESS REPORT

**Scenario Development and Coordination with the Scientific
Community**

(Submitted by the Co-Chairs of the IPCC Working Groups I, II and III)

PROGRESS REPORT

Scenario Development and Coordination with the Scientific Community

An important feature of the IPCC Fifth Assessment Report (AR5) will be the assessment of research employing new scenarios to evaluate projected climate change, its impacts, and adaptation and mitigation policies. The IPCC Expert Meeting on New Scenarios in Noordwijkerhout, Netherlands (19-21 September 2007) laid out a multi-phase process for development of new scenarios by the relevant research communities. The first preparatory phase (completed) identified Representative Concentration Pathways (RCPs) of greenhouse gas emissions and associated levels of radiative forcing. With these RCPs, the earth system modeling communities are performing model ensemble runs, and the integrated assessment modeling communities are identifying emission pathways consistent with the RCPs. A parallel phase now underway is the development of quantitative socioeconomic pathways and qualitative narratives consistent with the RCPs.

WG III/II Workshop on Socioeconomic Scenarios for Climate Change Impact and Response Assessment

Working Groups III and II organized a Joint IPCC Workshop on Socioeconomic Scenarios for Climate Change Impact and Response Assessment, held 1-3 November 2010 in Berlin, Germany. In the archive prepared for IPCC-XXXI (Bali, Indonesia • 26-29 October 2009), refer to IPCC-XXXI/Doc.10 for the workshop proposal. The workshop aimed to catalyze the development of socioeconomic pathways and narratives by the integrated assessment modeling communities and the impacts and adaptation communities. The workshop identified key socioeconomic parameters and uncertainties that need to be reflected in these pathways and narratives to maximize their utility for impacts, adaptation, and mitigation research. It also stimulated a plan for further development and implementation of socioeconomic pathways and narratives in the relevant research communities, including the drafting of a framework paper by a core writing team identified at the workshop.

The workshop included 99 participants, consisting of invited experts; Working Group II and III AR5 Coordinating Lead Authors, Lead Authors, and Review Editors; Working Group II and III Co-Chairs and Bureau members; IPCC officials (including the IPCC Chair and Secretary); and Working Group II and III TSU staff.

A report for the workshop is currently under development. It will include a short summary of the workshop's discussions and perspectives, the workshop agenda, the workshop proposal, and the list of participants.

Framework Paper for a New Generation of Socioeconomic Scenarios

At the Workshop on Socioeconomic Scenarios for Climate Change Impact and Response Assessment, a group of experts agreed to draft a framework paper for a new generation of socioeconomic scenarios for climate change impacts, adaptation, and mitigation research, to be widely circulated across the scientific community. The core writing team is being led by Nigel Arnell and Tom Kram; members include Timothy Carter, Kristie Ebi, Jae Edmonds, Stéphane Hallegatte, Elmar Kriegler, Ritu Mathur, Brian O'Neill, Keywan Riahi, Harald Winkler, Detlef van Vuuren, and Timm Zwicker.

The framework for development of socioeconomic scenarios presented in the framework paper will be a shared point of reference for researchers in the impacts, adaptation and vulnerability and the integrated assessment modeling research communities. Scenarios developed under this framework will provide qualitative (narrative) and quantitative descriptions of potential socioeconomic conditions that are largely decoupled from emissions

pathways and therefore the magnitude of climate change. They also will be flexible enough to allow compatibility with other scenarios defined at regional or local scales. Overall, the new socioeconomic scenarios will allow more sophisticated understanding of impacts, adaptation, and mitigation in the context of different socioeconomic conditions, and more meaningful comparisons of the effects of policy responses.

Next Steps

While the framework paper is being drafted, a small group of experts has begun the preparation of quantitative socioeconomic scenarios (e.g., including GDP and population projections). These initial scenarios will be circulated to the scientific community for review and comment. Then, they will be further discussed and refined at a workshop on the formulation of shared socioeconomic pathways and their use in the new scenario matrix architecture that is being organized by the community without IPCC involvement. The workshop will be held in mid to late 2011. More intensive scenario development will follow the workshop.