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PROGRESS IN THE PREPARATION OF FIFTH ASSESSMENT REPORT (AR5)

Working Group III Progress Report

(Submitted by the Co-Chairs of the IPCC Working Group III)

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PROGRESS IN THE PREPARATION OF THE AR5 Working Group III Progress Report

1. Background

IPCC-XXXIV/Doc.18 presented to the 34th Session of the IPCC (IPCC-34), described progress in the Working Group III (WGIII) contribution to the Fifth Assessment Report (AR5), including expert meetings, regional meetings and lead author meetings. This document provides a brief update since IPCC-34, and highlights major milestones through the end of 2012.

2. Progress since Working Group III Progress Report to the 34th Session (IPCC-34) in Kampala (Uganda, 18-19 November 2011)

The Co-Chairs of Working Group III are happy to report that very good progress has been made in the development of the Working Group III contribution to the AR5. Below the most important milestones are outlined. In addition to these activities, Working Group III has continuously followed and supported the scenario development process in the scientific community. Progress on this matter is reported in a joint report with Working Group II (IPCC XXXV/Doc. 18).

AR5 Drafting Update

After IPCC-34 the Working Group III Zero Order Draft (ZOD) was completed. The informal review took place 16 December 2011 – 27 January 2012. Authors from all Working Groups and selected experts from the scientific community (at the discretion of the chapter teams) were invited to comment on the ZOD. Overall, 159 experts registered for the review; 56 provided a total of 1789 comments. In preparation of the Second Lead Author Meeting, Co-Chairs and TSU discussed key comments with each chapter team. These discussions were the foundation for the writing of the First Order Draft (FOD), which started ahead of the Second Lead Author Meeting.

Meetings

During the reporting period a series of meetings to benefit AR5 development were held:

- **17-18 March 2012, Second Expert Meeting on Scenarios (SIE-2), Wellington, New Zealand:** Scenarios play a key role in the WGIII contribution to the AR5 as an integrative element. At this second of four expert meetings on scenarios a selection of 20 lead authors was invited to coordinate and integrate the analysis of scenario evidence across chapters. In particular, the meeting aimed at developing synthetic elements for the Working Group III contribution to the AR5, i.e. methodologies and metrics for the consistent analysis of the costs, risks and opportunities associated with a particular transformation pathways and mitigation options. A particular emphasis was placed on the integration of information from top-down and bottom-up analyses.
- **19-23 March 2012, Second Lead Author Meeting (LAM2), Wellington, New Zealand:** The general purpose of the meeting was to work within the chapter teams towards the First Order Draft based on the comments from the ZOD and to make progress on cross-cutting issues across chapters and working groups in carefully selected cross-cutting sessions. A considerable amount of time in the plenary sessions was spent to further develop the shared understanding of the assessment philosophy underlying the Working Group III contribution and to provide tools for its implementation. Substantial progress was made on developing a consistent data basis for the Working Group III contribution, further specifying the division of labour within and across chapters and agreeing on fundamental concepts and definitions for improved cross-chapter consistency in the First Order Draft. Progress on Frequently Asked Questions (FAQs), Glossary

and Summary for Policymakers (SPM) is reported below. Working Group III would like to thank the Government of New Zealand and Victoria University of Wellington for offering to host and organize both the Second Expert Meeting on Scenarios and the Second Lead Author Meeting.

- **26-28 March 2012, Climate Change Mitigation with Local Communities and Indigenous Peoples: Practices, Lessons Learned and Prospects, Cairns, Australia:** This WGIII co-sponsored meeting was organized by the United Nations University (UNU) Traditional Knowledge Initiative, and Working Group III would like to thank them for hosting and arranging this event. It aimed (1) to gather the wide and diverse range of perspectives concerning indigenous peoples, local communities and climate change mitigation; (2) to support the build-up and understanding of peer-reviewed literature in this field; (3) to compile regional and local data and grey literature that are relevant for understanding climate change mitigation at the local level. Meeting outcomes will be provided in a meeting report and can be considered by WGIII authors in the AR5 writing process to adequately deal with the issue of climate change mitigation in the context of local communities and indigenous people.
- **14-16 May 2012, Netherlands Meeting on New Socioeconomic Pathways for Climate Change Research, The Hague, Netherlands:** This meeting, cosponsored by the Working Group II and III, aims to support further development of the new “Framework for a new generation of socio-economic scenarios for climate change impact, adaptation, vulnerability, and mitigation research” by the scientific community. One emphasis of the meeting will be the further enhancement of developing country participation in this process as well as the refinement and development of the Shared Socioeconomic reference Pathways SSPs for timely inclusion in modeling inter-comparisons. Working Groups II and III would like to thank the government of the Netherlands for offering to host and organize this meeting.

Changes to Outline

During the discussion of common definitions and concepts at the Second Lead Author Meeting, a shared understanding among authors emerged that a clear distinction between the sections ‘Technological, environmental and other risks and uncertainties; and social acceptability’ as well as ‘Co-benefits, tradeoffs, spillover effects’ is extremely challenging. These sections are shared among sector chapters (chapters 7-11) according to the Plenary approved outline.

To avoid excessive overlaps and very short sections in some chapters, authors agreed to merge these two sections in all sector chapters (7-11) into a new section called ‘Co-benefits, risks and spillovers’. This would further avoid that environmental side-effects and risks are artificially separated from each other, although they are usually treated together in most of the available literature. This proposal is supported by the Working Group III Co-Chairs, who will make sure that all relevant topics will be covered.

An agreement with the CLAs of Chapters 5 on ‘Drivers, trends and mitigation’ and Chapter 6 on ‘Assessing transformation pathways’ has been reached to shift the section on ‘Carbon and radiation management and other geoengineering options including environmental risks’ from Chapter 5 to 6. Rather than integrating the discussion of geoengineering options into the analysis of (mainly historic) emission trends and drivers (chapter 5), it seems more appropriately to discuss them in the context of transformation pathways (chapter 6).

The outline of Chapter 10 has been slightly amended to shift the section (10.4 Material substitution, material reuse and waste) to a sub-heading under 10.5 (Mitigation technology options, practices and behavioural aspects). The reason for this change is to incorporate the content - discussing a sub-set of mitigation options focused on material substitution - into the fuller discussion of mitigation options for a more comprehensive, well-rounded presentation.

Chapter 13 has suggested a minor change to its outline. Currently, Section 13.2 is titled ‘Framing concepts *and* an assessment of means for international cooperation’, and the chapter team in agreement with the Co-Chairs of WGIII would like to change the title to the more comprehensive version ‘Framing concepts *for* an assessment of means for international cooperation’.

In preparation for and during the Second Lead Author, Chapter 14 on 'Regional development and cooperation' has re-drafted the outline to their chapter. The updated version is very promising as it avoids some internal inconsistencies and redundancies as experienced in the ZOD and is therefore strongly supported by the Co-Chairs of WGIII. The updated outline is shown below.

- 14.1 Introduction
 - 14.1.1 Overview of Issues
 - 14.1.2 Overview of Chapter
 - 14.1.3 What is meant by regions?
 - 14.1.4 Why regions matter?
 - 14.1.5 Sustainable development and mitigation capacity at the regional level
 - 14.1.6 Links between mitigation, adaptation and development
- 14.2 Development Trends and their Emission Implications at the Regional Level
 - 14.2.1 Overview of trends in economic development and GHG emissions
 - 14.2.2 Energy and development
 - 14.2.3 Urbanization and development
 - 14.2.4 Consumption and production patterns in the context of development
 - 14.2.5 Agriculture and land use change by region
 - 14.2.6 Special Consideration to Least Developed Countries
- 14.3 Low carbon development at the regional level: Opportunities and Barriers
 - 14.3.1 Reconciling development and low carbon options and policies at the regional level: Conceptual challenges (governance, finance, capacity, etc) and Opportunities
 - 14.3.2 Low Carbon development at the regional level: sectoral issues
 - 14.3.3 Technology development and transfer for low-carbon development, including the role of public and private sectors and public private partnerships
 - 14.3.4 Investment and finance, including the role of public and private sectors and public private partnerships
 - 14.3.5 Conclusions for low carbon development options
- 14.4 Regional Cooperation and Mitigation: Opportunities and Barriers
 - 14.4.1 Regional mechanisms: conceptual
 - 14.4.2 Existing regional cooperation processes and their mitigation impacts
 - 14.4.3 Technology development and transfer
 - 14.4.4 Regional Mechanisms for Investments and finance
- 14.5 Taking Stock and Options for the future
- 14.6 Frequently asked questions
- 14.7 References

Finally, the Co-Chairs of WGIII have suggested for every chapter to include a section on knowledge gaps. At present, only the sector chapters 7-11 have a section on 'Gaps in knowledge and data', but it was deemed important that other chapters (2-6 and 12-16) provide a clear picture of knowledge gaps in conjunction with their assessments as well.

Summary for Policymakers

During the Second Lead Author Meeting in Wellington, one of the management team meetings was devoted towards starting the writing process for the SPM. The Co-Chairs of Working Group III feel that an early start of the SPM process will help in the development of the individual chapters. Most importantly, an initial outline was agreed upon in the session, in which the CLAs of all chapters participated. Moreover, it was agreed that an internally reviewed draft of the SPM will be available

for the Third Lead Author Meeting. The writing of the SPM will mainly take place after the submission of the First Order Draft. The SPM writing team will be composed of Co-Chairs, CLAs as well as Co-Chair selected TSU members and other members of the Working Group III AR5 team. CLAs will be able to nominate contributing authors for the SPM to their discretion. Further time was devoted in the session for creating a shared understanding of how to apply the IPCC Guidance Note on Uncertainty to ensure policy relevance of statements.

Frequently Asked Questions (FAQs)

Implementing the decision to have FAQs in all chapters of the Working Group III contribution to the AR5, Jim Skea, Vice-Chair of WGIII, and the TSU have initiated a process to include three FAQs per chapter in the FOD. Feedback on initial suggestions and guidance on further elaboration has been provided to all author teams, aiming for a consistent approach across all chapters. FAQs will be displayed in boxes where appropriate in the chapter context. Additionally, the FAQs from all chapters have been designed in a way that they can be presented in a separate document for communication purposes.

Glossary

The WGIII AR5 glossary process was initiated prior to the Second Lead Author Meeting (LAM2) by the five Glossary Editors supported by representatives of all chapters with the goal to produce a draft glossary before the FOD is due. Priorities include clear definitions on terms used by multiple chapters and harmonization of glossary entries for terms common across the Working Groups.

Writing Team Developments

- Chapter 2: Edgar Ortiz (Mexico) resigned as lead author (LA). The replacement process is ongoing.
- Chapter 3: Eduardo Gudynas (Uruguay) resigned as LA but remains part of the writing team as contributing author (CA). The replacement process is ongoing. Philippe Aghion (USA) resigned as LA but remains part of the writing team as CA. The replacement process is ongoing.
- Chapter 4: Ambuj Sagar (India) has replaced Sivan Kartha (USA) as LA, who has been elevated to coordinating lead author (CLA) at the beginning of the writing process. Mauricio de Maria Campos did not have time to contribute to the AR5 process as a lead author. The replacement process is ongoing.
- Chapter 5: Gabriel Blanco (Argentina), who has previously been LA in this chapter, and Sangwon Suh (Republic of Korea) have replaced Emilio La Rovere (Brazil) as CLA.
- Chapter 6: Mustafa Babiker (Saudi Arabia/ Sudan) has replaced Ibrahim Abdel Gelil (Bahrain) as LA.
- Chapter 7: Damon Honnery (Australia) has replaced Thorsteinn Ingi Sigfusson (Iceland) as LA. Yacob Mulugetta (Ethiopia), previously lead author in chapter 10, replaces Anthony Adegbulugbe (Nigeria) as CLA.
- Chapter 8: Robert Sausen (Germany) has resigned as LA but remains part of the writing team as CA. He has been replaced by Alan McKinnon (Germany). Geetam Tivari (India) replaces Kebin He (China) as LA.
- Chapter 10: Dario Gómez (Argentina) has resigned as LA. Yacob Mulugetta (Ethiopia) moved as new CLA to chapter 7. Monique Hoogwijk has resigned as a review editor. The replacement processes are ongoing.
- Chapter 12: Three out of the four vacant LA positions have been filled with Hilda Blanco (USA), David Dewar (South Africa) and Shu-Li Huang (China). The filling of the one remaining vacant LA position is currently on-going.
- Chapter 13: Mariana Conte Grand (Argentina) has replaced Jorge Leiva (Chile), who resigned as LA but remains part of the writing team as CA.

- Chapter 14: Axel Michaelowa (Switzerland) moved as a LA from Chapter 14 to Chapter 13. He continues to contribute to Chapter 14 as a CA. Thomas Cottier (Switzerland) was added as a new LA to the chapter. One more developing country author will be added to keep the regional balance in the overall writing team. The process is on-going.
- Chapter 15: Juan-Pablo Montero (Chile) has replaced Manuel Angeles (Mexico), who resigned as LA but will remain part of the writing team as CA. Larry Goulder (USA) replaces Nathaniel Keohane (USA) as LA. Thomas Sterner (Sweden) was elevated from LA to be a third CLA of the chapter.
- Chapter 16: Erik Haites (Canada) has replaced Giulio Boccaletti (UK / Italy) as LA.

Change in Expert Review Period

In consultation with WGIII authors, the Co-Chairs decided to slightly delay the expert review period in order to provide more time to authors to implement the agreements reached in Wellington already for the First Order Draft. The review will start on 20 July and will end 14 September 2012. Prior to IPCC-35 Working Group III will issue a call for expert reviewers, who will be able to register for the review through the Working Group III website.

Conflict of Interest Policy

WGIII has started with the implementation of the IPCC-wide Conflict of Interest Policy as approved at the IPCC-33 and IPCC-34 Plenary sessions. This will supersede the interim arrangements initiated at the First Lead Author Meeting of Working Group III in Changwon City, Republic of Korea, 12 – 15 July 2011.

Synthesis Report

WGIII Co-chairs worked closely with the IPCC Chair on identifying authors and Review Editors to appropriately cover issues identified in the outline of the Synthesis Report. The Bureau approved nine authors and three Review Editors to support coverage of WGIII relevant topics in the Synthesis Report. More information is provided in IPCC-XXXV/Doc 7.

3. Work Plan

There are the following key dates for 2012 in the Working Group III schedule:

- **2 July 2012, First Order Draft Deadline**: The TSU will subsequently compile the FOD for distribution to registered experts.
- **20 July – 14 September 2012, Expert Review of the First Order Draft**: In preparation for the first public review period in the WGIII AR5 cycle, WGIII will put out a call for expert reviewers. This will also include an invitation to government focal points and observer organizations to name potential expert reviewers, who will subsequently be contacted by the TSU. Experts can register for the review process and will then be provided access to the FOD on 20 July 2012. They will submit their comments to the TSU via a secure website.
- **6-8 August 2012, Expert Review Meeting for Businesses and NGOs, Washington D.C., USA**: Building on the good experiences gained throughout the SRREN, WGIII will organize and execute an Expert Review Meeting for Businesses and NGOs. The meeting aims to gather structured input from these stakeholder groups for consideration by the AR5 authors based on the FOD.
- **3-4 November 2012, Third Expert Meeting on Scenarios (SIE3), Vigo, Spain.**
- **5-9 November 2012, Third Lead Author Meeting (LAM3), Vigo, Spain.**
- **25 February – 22 April 2013, Government and Expert Review.**
- **29-30 June 2013, Fourth Expert Meeting on Scenarios (SIE4), tbc.**
- **1-5 July 2013, Fourth Lead Author Meeting (LAM4), tbc.**