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PROGRESS OF WORKING GROUP III TOWARDS THE IPCC FOURTH ASSESSMENT REPORT (AR4)

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

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1. The AR4 report outline

At its 21st Session, 6-7 November 2003 in Vienna, the Panel approved the outline of the Contribution of Working Group III to the Fourth Assessment Report (Mitigation of Climate Change)¹. This approved outline can be found at <http://www.ipcc.ch/activity/wg3outlines.pdf>.

It contains 13 chapters divided over 4 parts:

- Introduction and framing issues
- Issues related to mitigation in the long-term context
- Specific mitigation in the short and medium term
- Cross-sectoral, national and international dimensions.

Major differences with the chapter outline of the WG III contribution to the TAR are:

- An economic sector approach (energy supply, transport, industry etc) instead of a thematic approach (technological options, policies and measures , costs etc) ,
- A better treatment of issues that cut across the 3 Working Groups (Cross cutting themes).

2. The Author team

2.1. Selection of the authors

Based on 927 Government/organisation nominations for positions in the AR 4 WG III report, the 6th meeting of the Bureau of WG III (27 April 2004, Geneva) has identified and selected Coordinating Lead Authors, Lead Authors and Review Editors for the 13 chapters of the WG III contribution to the Fourth Assessment. The Bureau took into account: the geographical representation, the relative number of TAR/non-TAR authors, and gender. Particular attention was given to introduce authors that were new to the IPCC in order to ensure sufficient 'fresh blood' since the TAR. To date, the author team consists of 159 authors of which 25 coordinating lead authors (2 per chapter except for one) and 22 Review Editors. Currently there are still 4 vacancies for Review Editors (2 per chapter). A few additional lead authors may still be required to fill in gaps identified at the recent first Lead Author meeting in Brehna, Germany (19-21 October 2004).

2.2. Some statistics on the author team (excl. Review Editors)

Geographical representation	Total	Percentage
Africa	18	11%
Asia developing	24	15%
Europe	50	31%
Japan/Korea/Oceania	18	11%
Latin America/Caribbean	18	11%
North America	31	19%
Total	159	100 %

¹ The original proposal and background documentation from the WG III co-chairs tabled at the 21st Panel session can be found at <http://www.ipcc.ch/meet/session21/wg3doc3.pdf> respectively <http://www.ipcc.ch/meet/session21/wg3infl.pdf>. These documents on their turn were based on consultations at the Expert and scoping meetings in 2003.

Ind./DC/EIT	Total	Percent
Industrialized countries	88	55%
Developing Countries	63	40 %
Economies in transition	8	5 %
Total	159	100 %

Gender	Total	Percent
female	20	13 %
male	139	87 %
Total	159	100 %

Previous involvement in IPCC	Total	Percent
TAR authors	63	40%
non-TAR authors	96	60%
Total	159	100 %

2.3. Representation of Cross Cutting Team co-anchors

Working Group III is responsible for 3 of the so-called Cross Cutting Themes (CCTs), as identified at IPCC-20 (see <http://www.ipcc.ch/meet/session20/finalreport20.pdf>, page 6). For each Cross Cutting Theme one co-anchor is represented in the WG III writing team:

- Technology: Jae Edmonds (ch. 2, Framing Issues)
- Sustainable Development (SD): Tom Heller (ch. 12, Sustainable Development)
- Integration of Adaptation and Mitigation (AM): Michael Grubb (ch. 11, Mitigation from a cross-sectoral perspective).

3. **Expert/planning meetings**

In the lead-up to the first Lead Author meeting of WG III, two meetings were organized by WG III.

3.1. IPCC planning meeting on the Cross-cutting themes “Integration of Adaptation and Mitigation” and “Sustainable Development”, 1-2 September 2004, Amsterdam, the Netherlands

This (small) meeting was held in co-operation with Working Group II and was held instead of the originally planned full Expert meeting on the same subject. This was decided due to the heavy workload and tight schedules of WG II and WG III in the second half of 2004. A total of 30 participants from both the writing teams and Bureaus of WG II and III met during 2 days.

Objectives:

- (1) To develop “Working Principles” for the implementation of the CCTs AM and SD in WG II and III;
- (2) To agree on the organizational arrangements to ensure the proper integration of AM-SD CCT issues into AR4 during the writing process,
- (3) To discuss the need and scope for a joint WG II and III AM-SD expert meeting in 2005.

Results:

- A set of working principles to guide authors with respect to the treatment of AM-SD related issues within the AR4,

- Annotations to the approved chapter outlines providing specific guidance on AM-SD elements that should be covered in the WG II and WG III contributions to AR4,
- A proposal for coordination of AM-SD CCT issues in the writing and reviewing process in the AR4 by means of a so-called 'Virtual Co-ordination Group',
- A first outline for an IPCC AM-SD Expert meeting. If the 22nd Panel Session approves, this meeting will take place 16-18 February 2005, La Reunion Island, kindly hosted by the General Council of La Reunion through the Government of France. This meeting would be 3 days, consisting of two parts; one part in which the relevant authors of WG II and WG III will mutually discuss the Zero-Order drafts (as far as there are ready), with a view to ensure consistency and complementarities between the two WGs; and one part addressing new views and literature related to these CCTs.

The meeting results can be found at <http://www.ipcc-wg3.org/>, see 'meeting report' and 'Guidance note to the authors of WG II and WG III'.

3.2. Expert Meeting on Industrial Technology Development, Diffusion and Transfer, Tokyo, 21-23 September 2004

The meeting was based on the following considerations:

- The Third Assessment Report (TAR) had limited inputs by industry,
- Research, development, transfer, and diffusion of Technology will play a key role in both short and long term GHG mitigation,
- In the AR4, IPCC wants more focus on the research, development, transfer and diffusion of Technology than in the TAR; IPCC needs to further build on the Special Report on Technology Transfer from the TAR period.

In order to generate input to the Expert meeting, a world-wide call for papers was submitted to industries related to climate technology, kindly assisted by the International Chamber of Commerce (ICC) and, through ICC, the World Business Council on Sustainable Development (WBCSD) and the International Petroleum Industry Environmental Conservation Association (IPIECA). The Japanese Ministry of Economy, Trade and Industry (METI) offered to host the IPCC expert meeting on Industrial Technology Development, Diffusion and Transfer. At the meeting were 86 participants from 21 countries, 50 % WG III lead authors and 50 % experts (mainly industrial) and a total of 31 papers were presented. The Experts came from the three Industrial sectors and associations that produce the majority of global greenhouse gas emissions such as the energy-intensive industry, energy-intensive consumer goods and electricity production and energy carriers. The objectives of the meeting were:

- To identify key drivers on industrial technology development, transfer, deployment and diffusion to be addressed in the AR4,
- To contribute to building the conceptual framework for the assessment,
- To gain access to industrial information networks,
- To explicitly involve experts working in industry in the WG III AR4 process (mainly as contributing authors and expert reviewers).

These objectives were all successfully met. A short meeting report is available listing the key drivers and suggestions on how to continue to explicitly involve industry experts in the WG III AR4 process: see <http://www.ipcc-wg3.org/>, 'short meeting report'. The proceedings with peer-reviewed papers should become available early 2005. The proceedings will serve as an input to the development of the WG III AR4.

Several authors of the writing team including from chapter 5 (Transport) participated also in an IPIECA workshop on Transportation and Climate Change, 12-13 October, Maryland, USA.

4. First Lead Author meeting of Working Group III, 19-21 October 2004, Brehna, Germany

4.1 Chapter outlines and planning

The First Lead Author meeting of WG III was held in Brehna (near Leipzig), kindly hosted by the German Government. Since the majority of the writing team was new to IPCC, the participants received a book with introductory material from the TSU WG III and information from the Secretary of IPCC Renate Christ. Except for 10 people the complete writing team participated in the chapter teams. These delivered for all 13 chapters:

- Detailed outlines for the Zero-Order Draft (ZOD),
- Assignments of writing tasks for the ZOD,
- Identification of Contributing Authors for filling in gaps in expertise (ongoing),
- A detailed time planning up to the next Lead author meeting
- Allocation of pages. The number of pages is limited. The objective is to reduce the volume of the AR4 with 20 % (to 600 pages) compared to the TAR (was 753 pages), following the wish expressed by the Panel for shorter assessment reports.

4.2. Cross cutting issues

A number of issues were identified that cut across the chapters, including the CCTs. Breakout groups with chapter representatives discussed how to handle overlaps and ensure consistency on the treatment of: costs, mitigation potentials, technologies, uncertainties, integration of adaptation and mitigation, sustainable development, regional issues, air pollution, policies and cooperative arrangements, decision making, Article 2 / key vulnerabilities, fluorinated gases, and the common template to the sectoral chapters 4-10 (see approved outline). For some issues (costs & potentials, uncertainties, AM-SD, common box chapters 4-10) small groups were formed that are currently further developing recommendations how to handle these issues in the ZOD.

4.3. Relation to the Special Reports on Fluorinated Gases and Carbon Dioxide Capture and Storage

These IPCC reports are expected in the course of 2005. The WG III AR4 in 2007 will provide a brief update on these issues. The mitigation options of those fluorinated greenhouse gases that are not replacements for ozone-depleting substances, (such as: SF₆, PFCs from Aluminium production) will be covered in the WG III AR4.

5. Next steps

5.1. Interactive website for writing team

The TSU of WG III plans to install an interactive website for the writing team, with one area for each chapter, comparable to the facilities of the TSU of WGII.

5.2. Time table

- A Zero-Order draft should be completed in March 2005.
- An 8 weeks period is reserved for an informal, internal review in April/May 2005.
- The results of the informal review will be incorporated at the Second Lead Author Meeting, 7-9 June 2005 in Lima, Peru. This meeting will set the stage for the First Order Draft (FOD)
- The review data for the FOD are expected in the first 2 months of 2006.
- The Third Lead Author meeting will be held in China (TBC) in March or April 2006 (dates pending decisions on the SYR planning)
- The second Expert/Government review will be in the 2nd half of 2006
- The Fourth Lead Author meeting will be held in New Zealand in November or December 2006 (dates pending decisions on the SYR planning)

- The WG III plenary approval session is expected in June 2007.

5.3. First IPCC expert meeting on Emission scenario's, 12-14 January 2005, Washington DC

This meeting is particularly of interest to the writing team of ch. 3: Issues related to mitigation in the long-term context. The meeting will provide input to their ZOD. To that end, the meeting will address:

- How to deal with multi-gas scenarios
- Use of probabilistic approaches.
- Criticism on the SRES scenarios and implications for their use for AR4
- Possibilities to use simple climate models to evaluate the climate implications of stabilization and mitigation scenarios
- Impact of climate change for these mitigation and stabilization scenarios
- Practical links with WG I and WG II (briefly)

A second IPCC Emission scenario meeting/ workshop is proposed for 29 June-1 July 2005 in Laxenburg, Austria, focusing on emission scenario's beyond the AR4 period.

5.4. IPCC Expert meeting 'Integration of Adaptation and Mitigation' and 'Sustainable development (AM-SD meeting), 16-18 February 2005

See para 3.1, last indent. In Brehna, it was suggested that the WG II-III co-operation on the related CCT "article 2/KV" should be discussed at this meeting as well. For the preparation of this meeting, a WG II-III 'Virtual Coordination Group' (see also 3.1) is being installed . This group will consist of authors from both teams and will be facilitated by the TSUs of WG II and III.