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PROGRESS REPORT

Special Report on Carbon Dioxide Capture and Storage

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

Progress report
Special report on carbon dioxide capture and storage
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1. Background

1.1 The UNFCCC at its Seventh Conference of the Parties (COP) expressed its interest in carbon capture and storage by inviting the IPCC to prepare a Technical Paper on geological carbon storage technologies and report on it for the consideration of the 2nd COP/MOP. The IPCC noted that a Technical Paper would be repetitious with the very limited material covered in the IPCC TAR. At its 19th session in Geneva, April 2002 the Panel therefore decided to hold a workshop to consider the issues associated with geological and oceanic carbon separation, capture and storage and to advise to the Panel whether to develop a Special Report on this topic or to incorporate the issue in the Fourth Assessment Report. The workshop held from 18-21 November 2002, in Regina, Canada recommended a Special Report. A rough outline for the Special Report was also proposed (IPCC-XX/Doc.19). In a decision made 21 February 2003, the 20th IPCC Plenary meeting approved the development of a Special Report on Carbon Dioxide Capture and Storage by Working Group III.

2. Progress to date

2.1 In conjunction with the nomination of the participants to the IPCC Workshop on Carbon Dioxide Capture and Storage in June 2002, the government focal points were invited to nominate authors and reviewers to the Special Report, which was approved by IPCC XX. Based on these nominations and in accordance with the IPCC Principles and Procedures, the Bureau of Working Group III selected the CLAs, LAs and REs on March 18, 2003.

2.2 The Special Report is being written by 100 (Coordinating) Lead Authors. The reviews are overseen by 19 Review Editors. About 30% of the (Coordinating) Lead Authors comes from developing countries or economies in transition. (<http://www.ipcc.ch/activity/srcarbonauthors.pdf>)

2.3 In addition to the nine chapters, three crosscutting themes were identified: on costs, environmental impact and safety aspects and legal and regulatory issues and public perception. Each crosscutting theme has a chair responsible for handling these themes during and between LA meetings.

2.4 From July 2-4, 2003, the First Lead Author meeting of the Special Report on carbon dioxide capture and storage was held on the kind invitation of the Norwegian government at the Norwegian Pollution Control Authority in Oslo. About 90 CLAs and LAs (25 received funding from the Trust Fund) attended the meeting. The programme of the meeting was aimed at making progress on the practical issues of the Special Report. The chapter agreed on a task distribution, a detailed and annotated table of contents, a list of subject areas for Contributing Authors, and a page allocation within the chapter. The group of CLAs and chairs of the crosscutting groups met regularly to discuss overarching issues. This resulted in a constructive process with a good end result.

2.5 The Zero-Order-Draft was written in the time after the First Lead Author meeting. An internal review process took place from October 13th to November 21st, 2003. Forty authors commented on the Zero-Order-Draft at this stage.

2.6 From December 16th to 18th, the Second Lead Author meeting was held, in Canberra, Australia, on kind invitation of the Australian government, and hosted by the Cooperative Research Centre for greenhouse gas technologies. Analogue to the "Canada Day" in Regina preceding the IPCC Workshop, the CO2CRC organized an Australia Day called "Australia Downunder" on December 15, informing the present authors on the state of research in Australia. During the meeting, the co-chairs presented a list of general and detailed comments on the Zero-Order-Draft, which the authors

- could discuss in their chapter meetings. Also, the internal review comments were discussed and incorporated. Also during this meeting, the group of CLAs and chairs of the crosscutting groups met regularly to discuss overarching issues.
- 2.7 The co-chairs, the CLAs of the chapters, the chairs of the crosscutting groups and the TSU have held teleconferences at regular intervals. Teleconferences were held at:
- August 26th, 2003
 - September 25th, 2003
 - November 24th, 2003
 - February 5th, 2004
 - March 29th, 2004
 - May 18th, 2004
- 2.8 The quality of the Zero-Order-Draft was such that the co-chairs of Working Group III decided that it would be a great improvement if the tight planning of the Special Report could be loosened by a couple of months, allowing for an extra informal review which would look specifically at overlap, redundancy, and consistency between chapters. This was discussed with the authors during the Second Lead Author meeting and met with much endorsement. The IPCC Chair and Acting Secretary also agreed. The planning was adjusted accordingly. The presentation of the Special Report is now planned at COP-11.
- 2.9 The First Order Draft of the Special Report was finalised on May 14th and sent for Expert Review, as required in the IPCC Procedures, to over 300 Expert Reviewers (28% from developing countries or Economies in Transition). By July 30th, over 100 of them had responded with over 4000 comments for the total of the report. The distribution of comments over the chapters was reasonable, with exceptions of many comments for the introductory chapter and the chapter on geological storage of CO₂.
- 2.10 As announced in the XX Bureau of IPCC, this Expert review was conducted anonymously – the names of the reviewers were not communicated to the authors, only their comments – identified by a number. This was carried out as an experiment with a view to further improve the objectivity of the handling of the Expert Comments by the Authors. Fully consistent with the IPCC procedures, the names of the Experts will be published in an Annex to the Final report (see also 2.13).
- 2.11 On June 23rd, a Zero-Order-Draft of the Summary for Policymakers and the Technical Summary was distributed by the co-chairs of WGIII to all authors in the report. About forty authors provided comments.
- 2.12 The Third Lead Author meeting was held in Salvador, Brazil, on the kind invitation of the Brazilian government and hosted by Petrobras. The results of the Expert Review were extensively discussed by the chapters, leading in some cases to an entirely new set-up of the chapter. Several other crosscutting groups were temporarily established to discuss overarching issues, notably on storage effectiveness, energy requirements, technical & economic potential, impurities in CO₂, and on the glossary. The Zero-Order-Drafts of the Summary for Policymakers and the Technical Summary were discussed both in chapter teams and in the plenary of the meeting. The comments were gathered and the co-chairs are currently in the process of drafting new Summaries, in close consultation with the CLAs and the LAs.
- 2.13 At the Third Lead Author meeting, the anonymous expert review was evaluated by Review Editors and authors. The anonymity was well received – it was felt that each comment has been considered on equal footing, independent of its sender. In addition, it forced the authors only to respond on basis of the content of the comment, not on the person behind it. A very few people felt that it was a drawback not to know the name of the expert, because they could not decide whether or not to take a certain comment seriously. To most of the participants this was exactly the reason why the expert review should indeed be conducted anonymously. During the meeting the authors were offered ways to get the name and contact details of a specific expert reviewer in case they would need to contact an Expert Reviewer for clarification purposes in real time. No lead author made use of that possibility.

- 2.14 A closed website has been constructed in order to communicate with the contributors to the Special Report. The closed website has been expanded with a possibility for chapters to post new drafts, a literature database and a conference announcement board. It serves as the main communication channel from the co-chairs and the TSU to the authors.
- 2.15 From September 5th - 9th, the 7th Greenhouse Gas Technologies conference took place in Vancouver. The conference has yielded many relevant papers, which went through a peer-review process to serve the needs of inclusion in the Special Report on Carbon dioxide Capture and storage.

3. Future work

- 3.1 The deadline for delivering a draft Second Order Draft, which will first be circulated among the authors to ensure internal consistency, is November 1st. The First Order Drafts of the Summary for Policymakers and the Technical Summary will be included in the Second Order Draft of the SRCCS and will also be subjected to the Government and Expert review.
- 3.2 The Government and Expert review will begin on January 10th and will end on March 7th, 2005. The Governments and the Expert Reviewers will be notified of the availability of the Second-Order-Draft on a closed website. They will provide their comments in a specialised format.
- 3.3 The Expert part of the review will again be anonymous considering the positive experiences in the first Expert Review round (see 2.10 and 2.13). There are no plans to treat the Government review anonymously as the LAs should be enabled to consider regional, national or local dimensions of the government comments.
- 3.4 The Fourth Lead Author meeting will be held in Oviedo, Spain, from April 25th - 28th, 2005, on the kind invitation of the Spanish government and hosted by the National Institute for Carbon of the Spanish Council for Scientific Research. The first day is only necessary for those chapters that enjoy many comments in the preceding review. This meeting will discuss the Government and Expert Review comments and will also be attended by the Review Editors. It will also discuss further progress on the Summary for Policymakers and the Technical Summary. On April 29th, a CLA-only meeting with co-chairs and TSU will take place to determine the next steps of the Summary for Policymakers and the Technical Summary.
- 3.5 The IPCC Approval Plenary for the Special Report on Carbon Dioxide Capture and Storage is envisaged to take place from September 27th to 29th, 2005. To date there is no decision on the location.