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# INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



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**REPORT OF THE TWENTIETH SESSION OF THE  
INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)  
Paris, 19-21 February 2003**

## **REPORT OF THE 20<sup>TH</sup> SESSION OF THE IPCC**

### **1. OPENING OF THE SESSION**

#### **1.1 Call to order**

1.1.1 The Chair, Mr R.K. Pachauri called the session to order at 10.00 hrs on Wednesday, 19 February 2003.

1.1.2 The Session was attended by 322 persons. (Attachment A).

#### **1.2 Opening Addresses**

1.2.1 At 14.30 hours the Chair made his brief opening remarks and introduced His Excellency, the Prime Minister of France, Mr Jean-Pierre Raffarin

1.2.2 His Excellency Mr Jean-Pierre Raffarin, welcomed the IPCC to Paris and delivered the Session's keynote address on France's climate change policies.

1.2.3 The Chair gave his opening address, outlining the issues faced by the Panel in preparing for the Fourth Assessment Report

1.2.4 The Chairman of the Subsidiary Body for Scientific and Technological Advice (SBSTA) of the United Nations Framework Convention on Climate Change (UN FCCC), Dr Halldor Thorgeirsson spoke on the key scientific and technical issues for the Convention process.

1.2.5 The Deputy Secretary-General of the WMO, Mr Michel Jarraud addressed the Session on key climate change issues.

1.2.6 The Deputy Executive-Director of the United Nations Environment Programme (UNEP), Mr Shafaq Kakakhel addressed the Session on key climate and environmental change issues and informed the session about relevant decisions of the 22<sup>nd</sup> session of the UNEP Governing Council.

#### **1.3 Working Arrangements**

1.3.1 The Chair confirmed the working arrangements to be 10.00 to 13.00 hours for the morning sessions and 14.30 to 17.30 hours for the Wednesday afternoon session and 15.00 to 18.00 hours for the remaining afternoon sessions (Thursday and Friday).

#### **1.4 Approval of the Agenda**

1.4.1 The draft agenda (Attachment B) was adopted, noting that it could be changed at any time throughout the Session.

### **2 APPROVAL OF THE DRAFT REPORT OF THE 19<sup>TH</sup> SESSION**

2.1 The draft Report of the 19<sup>th</sup> Session of the Panel was approved without change.

### **3 PROGRESS REPORTS**

#### **3.1 National Greenhouse Gas Inventory Programme (NGGIP) Tasks 1 and 2**

3.1.1 Ms Thelma Krug, co-chair of the Task Force Bureau (TFB) reported on progress with Tasks 1 and 2. She noted that it is proposed to combine Tasks 1 and 2 in a single report. This was agreed. She noted that the timetable for completion of Tasks 1 and 2 is as follows:

- (a) Lead Author meeting in Kuala Lumpur, Malaysia, April 2003
- (b) Government/expert review of second order draft May, June 2003
- (c) Final Lead Author meeting, Sydney, Australia, July 2003
- (d) Acceptance/Adoption by Panel, November 2003
- (e) Submission to CoP 9, December 2003.

3.1.2 The Chair noted the satisfactory progress with Tasks 1 and 2 and the tight timetable to their completion.

### **3.2 Emissions Factors Data Base (EFDB)**

3.2.1 Mr Taka Hiraishi, co-chair of the TFB, introduced a report on the development of the EFDB. He noted, *inter alia*, that the current aim is to develop a recognised library of emissions factors, and that the search for members of the editorial board is not yet complete.

3.2.2 In the discussion that followed the following points were made:

- (a) The work to date seems to be of high quality;
- (b) It is not clear how factors for many developing countries will be obtained;
- (c) The difference between a library and an authoritative database may be a critical one, and the IPCC should be clear in its choice;
- (d) One “operational” distinction between a library and an authoritative database may be that there would be much closer critical review (and more frequent rejection) of submissions to an authoritative database than presently done for the library-type database;
- (e) The EFDB, needs to be used in combination with the Good Practice Guidelines, which provide guidance and the legal basis for application of emission factors. Together the GPG and the EFDB form an “authority” and it is therefore not necessary for the EFDB alone to be authoritative; and,
- (f) Presently the EDFB is being populated with emissions factors and experience gained in this process will provide input for the revision of the guidelines for national greenhouse gas inventories.

### **3.3 Task Group on Scenarios for Climate and Impacts Assessment (TG CIA)**

3.3.1 The Chair opened discussion on this item by suggesting that the interim Chair of the TG CIA, Mr Richard Moss, become the TG CIA Chair for the remainder of the Fourth Assessment period. The Panel and Mr Moss accepted this proposal. The Chair then invited Mr Moss to present his report describing the role, membership and future work programme of the TG CIA.

3.3.2 In the discussion the following points were made in relation to the TG CIA:

- (a) Its role should to be reviewed. In undertaking this review a clear distinction between facilitating the use of data, climate models and scenarios, which was seen as the key role of the TG CIA, and development and design of scenarios, which was not considered a role of the TG CIA, needs to be drawn;
- (b) Its membership should to be refreshed at regular intervals and should reflect balanced geographical representation, with due consideration for the specific scientific and technical requirements of the work;

3.3.3 In response the Chair formed a contact group under the leadership of Mr Richard Odingo to develop a proposal for a revised mandate, work programme and membership of the TG CIA to be agreed by the plenary. In discussion of the proposals of that group consensus could not be reached in the time available and it was agreed that Mr Moss should continue to lead the TG CIA, operating under its existing mandate.

3.3.4 In addition to the issues relating to the TG CIA there was discussion of recent criticisms of the SRES scenarios, most notably by Mr Castles and Mr Henderson. The ensuing discussion concerned two issues:

- (a) How best to respond to the Castles and Henderson criticism; and,

- (b) How to ensure that the AR 4 is not subject to similar criticisms, in particular, that it should further consider the use of purchasing power parity, rather than monetary exchange rates, in any scenarios based on economic projections.

3.3.5 In response to this discussion a contact group, chaired by Mr Bert Metz, was asked to recommend a response strategy.

### **Decision 1**

3.3.6 Based on the recommendations by the contact group the Panel noted the recent criticisms of some methodological aspects of the SRES scenarios and encouraged the Chair and the SRES authors to respond to them. The Panel decided that the Chair, in consultation with the Bureau, should prepare a process to ensure the consistent use of scenarios in the Fourth Assessment, as part of the scoping meetings.

### **3.4 GCOS Adequacy Report**

3.4.1 The Director of the GCOS Programme Office, Mr Alan Thomas, presented a summary of the second adequacy report on the Global Climate Observing System. The Session welcomed the report and noted its concern at the fragile, and sometimes declining state of the global observing networks. The Chair advised the meeting that he would write to the heads of agencies responsible for the coordination of elements of the global observing networks to encourage them to give further support to the GCOS programme.

### **3.5 Outcomes from CoP 8**

3.5.1 The Deputy-Secretary introduced the document reviewing the IPCC's activities during CoP8. Particular note was taken of the Brazilian proposal. The Chair advised that the IPCC would monitor developments with respect to the Brazilian proposal but at this stage he could see no active role that the Panel should play at this stage.

### **3.6 Speech by Her Excellency Ms Roselyne Bachelot-Narquin**

3.6.1 Her Excellency Ms Roselyne Bachelot-Narquin, Minister of Ecology and Sustainable Development for the Government of France, addressed the plenary on issues of climate change and sustainable development.

## **4 A DECISION FRAMEWORK FOR SPECIAL REPORTS, METHODOLOGY REPORTS AND TECHNICAL PAPERS**

4.1 The Panel at its 18<sup>th</sup> Sessions requested the new Bureau to develop a framework and set of criteria for establishing priorities to be approved by the Panel. The Secretary presented a document that has been prepared in response to this decision. The following discussion highlighted the need for guidance in decision making but, at the same time, concerns were expressed about some of the language, and approach, in the document before the Panel.

4.2 The Chair established a contact group, chaired by Mr Tibor Farago, to prepare a revised draft for consideration of the Panel. This work was carried out and formed the basis for the Panel's decision on the matter.

### **Decision 2**

4.3 The Panel decided to adopt a framework and set of criteria (elaborated below) for establishing priorities for Special Reports, Methodology Reports and Technical Papers for the period of the Fourth Assessment. This framework to be applied in accordance with the Principles governing IPCC work, and is to serve to guide, but not prescribe, future decisions by the Panel regarding its work programme, noting that decisions regarding the conduct of these reports will be considered on a case by case basis.

## **Framework and criteria:**

4.4 The Panel decided that for the period of preparation of the AR4:

- Priority should be given to the AR4;
- The IPCC should continue to be responsive to the information needs of UN conventions addressing climate change issues that require some under-pinning scientific and/or technical assessment. Requests from UNFCCC should be accorded higher priority than requests from other Conventions and organisations;
- The IPCC's own initiative would be a key element in formulating and choosing Special Reports. Where appropriate, the IPCC strives to serve the policy community (UNFCCC and other) with relevant information in a pro-active fashion; and,
- The reports need to be consistent with the mandate, the role and the procedures of the IPCC.

4.5 Based on the above considerations, the Panel further decided that:

(A) The following should be considered in guiding decisions relating to Special Reports and Methodological Reports. The:

- Availability of sufficient scientific literature/technical advance to merit analysis at the Special Report/Methodological Report level - i.e enough information available to provide an authoritative scientific/technical assessment on the topic, which is different from that presented elsewhere (e.g., in an earlier IPCC reports);
- Origin of the request (e.g., request from the UNFCCC);
- Subject is directly relevant to the understanding of climate change;
- Relevance of the subject for policy considerations including methodologies and other inputs for decision-making;
- Availability of experts;
- Preparation of this report would not limit the availability of experts for the AR4;
- Timeliness of, and financial and personnel resources required for, preparation of the report, especially if the subject of the report is relevant to AR4; and,
- Issue merits explicit consideration outside the framework of AR4.

(B) Taking into consideration that Technical Papers are based on material already in IPCC Assessment Reports or Special Reports, the following should be considered in guiding decisions relating to Technical Papers:

- An objective, international scientific/technical perspective is essential for the topic in question;
- The origin of the request (e.g., request from the UNFCCC);
- Sufficient information exists in published IPCC reports to address the topic through possible repackaging and the information in published reports is still up to date.
- The level of complexity;
- The relevance of the subject for policy considerations including methodologies and other inputs for decision-making;
- The availability of experts;
- The availability of financial and personnel resources are in coherence with the work plan; and,
- The issue could be better addressed within the framework of AR4 or as a Special Report.

## **5 PREPARATIONS FOR THE FOURTH ASSESSMENT REPORT**

### **5.1 Chairman's overview**

5.1.1 The Chair introduced this item highlighting the need in the Fourth Assessment for:

- (a) Enhanced consideration of regional issues and socio-economic aspects;
- (b) An appropriate geographic balance of experts involved in the work and attracting new authors;
- (c) Full use of scientific publications in languages other than English; and,

- (d) Addressing cross-cutting themes effectively.

5.1.2 The Chair noted the requirement to hold two scoping meetings for the Fourth Assessment Report, the first to develop the structure of the three Working Group reports but also to undertake some preliminary work on the cross-cutting themes and to commence thinking on the type and nature of a possible synthesis report. The second scoping meeting would be to finalise draft outlines for the three Working Group reports, timetables and workplans. The second scoping meeting would also finalise plans for the dealing with cross-cutting themes and prepare a proposal in relation to a synthesis report. The outcome of these meetings to be reported back to plenary 21.

## **5.2 WG I update**

5.2.1 Ms Solomon and Mr Qin, co-chairs of WG I, addressed a number of AR4 issues, including the need to assess:

- (a) aerosols and the hydrological cycle;
- (b) changes in extreme events;
- (c) modes of climate variation (ENSO, NAO, etc) and their links to regional climate;
- (d) palaeoclimate as a context for present changes; and,
- (e) climate sensitivity to greenhouse gases.

5.2.2 As part of the regional climate theme for the AR4 the IPCC intends to support developing country participants to meetings on regional climate including one focussed on drought in November of 2003. It is expected that the regional climate theme will provide further opportunities for outreach and capacity building. In addition, WG I is proposing to establish web-based online access to some key journals for developing country authors of the WG I contribution to the AR4.

5.2.3 In relation to the important issue of climate sensitivity the WG I co-chairs presented a specific proposal to conduct an IPCC workshop on this topic late in 2003 or in 2004.

5.2.4 Delegates commented on aspects of the WG I plans and there were several expressions of support for considering treatment of the regional climate, modes of variability, and climate sensitivity issues.

## **5.3 WG II update**

5.3.1 Mr Parry and Mr Canziani, Co-chairs of WG II, considered plans for addressing a number of AR 4 issues, including:

- (a) The need to get better integration between the WG I, II and III reports;
- (b) To achieve a balance in evaluating impacts and adaptation in exposed fields and systems and regional aspects;
- (c) To address regional climate impacts, including socio-economic issues paying increased attention to regional knowledge; and,
- (d) To access reports in languages other than English.

5.3.2 Four key questions were identified. They related to, what:

- (a) Is the current state of knowledge on impacts of climate change
- (b) Is the state of knowledge on impacts under different levels of adaptation;
- (c) Are the impacts under different levels of mitigation; and,
- (d) Is the state of knowledge concerning observed effects (detection and attribution)?

5.3.3 The issue of climate change and water was addressed (see also item 5) under this item. It was noted that WG II had conducted an expert meeting on the topic (Geneva, Switzerland, 11-12 November 2002) and that as a result of that meeting it is proposed to treat water in an enhanced and more integrated manner in the AR4 rather than prepare a Special Report or Technical Paper on the topic. In addition the Panel may consider the preparation of a Technical Paper after completion of the AR4.

5.3.4 The Panel decided not to prepare a Special Report and to treat water as a cross cutting theme in the AR4. It agreed to scope the cross-cutting theme at the forthcoming Fourth Assessment scoping meetings.

5.3.5 Different views were expressed regarding the timeliness of a decision on a technical paper on climate change and water. The Panel agreed that a scoping paper for a possible Technical Paper be prepared for further consideration at IPCC-21.

## **5.4 WG III update**

5.4.1 Mr Davidson, Co-chair of WG III, spoke briefly to the Working Group's preparations for the Fourth Assessment. He mentioned the high priority to be placed on regional focus, the need for geographic balance and the intention to develop close cooperation with socio-economic groups such as the International Human Dimensions Programme (IHDP).

### *Summary of Item 5*

5.4.2 The discussion on the Chair's and Working Group Co-chairs' presentations focused on a range of issues. The issues that related to "content" were generally addressed by the co-chairs or will be picked up in the scoping process. The issues relating to "process" largely focussed on the conduct of the scoping meetings.

5.4.3 A key content issue was which cross-cutting themes would be addressed. The Chair noted that to date six cross-cutting themes have been tentatively identified, and that Mr Mohan Munasinghe would coordinate cross-cutting theme activities. Mr Munasinghe indicated that while a cross-cutting theme would, by definition, involve more than one Working Group, each cross-cutting theme would have associated with it a Working Group that would take the lead in providing support for its work. The cross-cutting themes identified so far, and the lead Working Group for each are:

- (a) Uncertainty and risk (WG I to lead)
- (b) Integration of adaptation and mitigation (WG III to lead)
- (c) Key vulnerabilities (including issues relating to Article 2 of the UN FCCC) (WG II to lead)
- (d) Sustainable development (WG III to lead)
- (e) Regional (WG I to lead)
- (f) Water (WG II to lead)

5.4.4 The cross-cutting theme titles listed above are abbreviated forms only. In summing up the item the Chair noted that as the cross-cutting themes develop they may have to be modified, and further noted that additional work needs to be done on clarifying how Article 2 can be built into the definition of the "Key vulnerabilities" theme.

5.4.5 There was discussion as to whether Technology should be a cross-cutting theme. Also, arguments were advanced that Article 2 should be a cross-cutting theme in its own right. Concern was expressed that the number of cross-cutting themes could grow to an unmanageable size. The Session endorsed the use of cross-cutting themes and agreed on the inclusion of Technology and issues relating to Article 2 as cross-cutting themes.

5.4.6 In relation to "process" issues the Session emphasised the need for transparency in the planning and conduct of the scoping meetings, and in setting the overall structure and workplan for the Fourth Assessment.

5.4.7 The Chair advised the Session that in many ways the precedent for the two planned scoping meetings was the "Bad Münstereifel meeting" that was held at the commencement of the Third Assessment Report. He noted that the attendees of the Bad Münstereifel meeting were selected by the Chair and Working Group Co-chairs. He further noted that in early February 2003 the IPCC secretariat had sent out over 900 letters to governments and interested organisations advising of the need to scope the IPCC's Fourth Assessment Report and seeking their views on how this might best be done. The IPCC will provide a list of submissions received, and distribute a synthesis of the views provided to the IPCC, at the scoping meetings and via the open web site. The Chair encouraged Panel members to prepare brief submissions on matters relating to their interests.

5.4.8 The Chair noted that for a scoping meeting to be effective the number of participants would need to be limited to around 120 persons. There would need to be good geographical representation in the

participants, and their range of expertise would need to cover all the subjects and themes of the Fourth Assessment Report.

### **Decision 3**

5.4.9 The Panel decided:

- (1) That there should be two scoping meetings before the 21<sup>st</sup> Session of the Panel. These scoping meetings would develop for submission to the 21<sup>st</sup> Panel:
  - (a) draft outlines of the contributions of Working Group I, II and III to the AR4
  - (b) workplans for the preparation of these reports, and
  - (c) a proposal for the AR 4 Synthesis Report which would address whether there is to be a Synthesis Report, and if so, its structure and the workplan for its preparation.
- (2) To conduct stakeholder consultations with the business and environmental non-government organisation communities.
- (3) To conduct a climate sensitivity workshop, as per the Working Group I proposal, in 2004.
- (4) That water should be treated as a cross-cutting theme in the Fourth Assessment

## **6 PROCEDURAL MATTERS**

### **6.1 Procedures for approving Methodology Reports**

6.1.1 The Panel at its Nineteenth Session decided that the approval/acceptance procedures for Tasks 1 and 2 would be addressed by the Twentieth Session of the Panel. It also asked the Task Force co-chairs to arrange for the preparation of draft amendments for the “Procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of IPCC Reports” to cover all methodology reports. The Deputy-Secretary introduced the document proposing changes to the procedures for the preparation, review, acceptance, adoption, approval and publication of IPCC reports that would cover all Methodology Reports, including LULUCF Tasks 1 and 2. In essence it was proposed to treat Methodology Reports in a fashion similar to Special Reports. The only difference would be that instead of a Summary for Policymakers an overview chapter would be adopted. Reports prepared by the Task Force on Greenhouse Gas inventories would be accepted/adopted by the Panel

6.1.2 There was little debate on the subject but it was suggested that while the IPCC urgently needs agreed procedures in place for the approval of the Tasks 1 and 2 Report, it should not to commit, at this stage, to untried procedures. As a result it was proposed to adopt the revised procedures on a provisional basis, to apply to the Tasks 1 and 2 Methodology Reports only, and to delete text in the proposed amendments that would make them applicable to a methodology reports in general. Specific amendments to the draft proposal were suggested that were adopted by the Session.

### **Decision 4**

6.1.3 The Panel decided to revise, on a provisional basis, the; “Procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of IPCC Reports”, as given in the Annex to this Paragraph and to apply the revised procedures for acceptance and adoption of the NGGIP methodology reports on LULUCF Tasks 1 and 2.

### **6.2 Election procedures**

6.2.1 The Chair informed the Panel that the Bureau has established a small group, chaired by Prof. Odingo, for preparing a document on election procedures. He noted that this document is not yet ready for widespread consideration but hoped that it would be shortly.

6.2.2 In the discussion that followed a variety of views were expressed as to the priority this matter should enjoy and to the matters that should be addressed in a document describing IPCC election procedures. In

response the Chair advised that the draft document would be posted on the IPCC web site and that comments made by governments would be collected and incorporated into a subsequent revision before submission of the document to the Panel's 21<sup>st</sup> Session.

### **6.3 Review of IPCC Principles**

6.3.1 The Chair noted that Paragraph 16 of the "Principles Governing IPCC Work" (adopted in 1998) states: "These Principles shall be reviewed every five years and amended as appropriate". The Chair also noted that he considered that the Principles have proved robust and have served the IPCC well. Nevertheless, given the review requirements, a small group of Bureau members would be established to review the Principles and report on their findings to the 21<sup>st</sup> Session of the Panel.

## **7 PROPOSALS FOR SPECIAL REPORTS, METHODOLOGY REPORTS AND TECHNICAL PAPERS**

### **7.1 Proposal for further action in relation to "factoring out human induced changes in carbon stocks" (Task 3)**

7.1.1 The Chair introduced the document on the matter. He noted that the Bureau had concluded that at this stage there is uncertainty as to whether the science is adequate to support the methodologies the UN FCCC has asked for, and, as a consequence, considers that a high level science meeting is required to further scope the issues involved.

7.1.2 The discussion supported the notion that the IPCC should aim to undertake a further detailed survey of the state of the carbon cycle science that would be drawn on in the development of the "factoring out" methodologies. The Session also felt that the science had to be of the highest standard and that to the extent possible the IPCC should endeavour to meet the needs of the UN FCCC.

7.1.3 Several delegations emphasized that input from the IPCC to the UNFCCC process on that matter is crucial for further negotiations and they urged that the possibility of providing a subset of methodologies needs to be explicitly explored. The view was also expressed that at this stage a methodology report containing sub-set of methodologies would be preferable to a special report on the overall scientific issues.

### **Decision 5**

7.1.4 The Panel decided, through the Chair, to establish a steering committee to conduct a high level scientific meeting that would survey the current understanding of the processes affecting carbon stocks and human influences upon them. The steering committee to use the outcomes of the Expert Meeting as a basis for reporting back to the 21<sup>st</sup> Session of the Panel on how to progress Task 3.

### **7.2 Proposal for a Special Report on "Safeguarding the ozone layer and the global climate system: issues related to hydrofluorocarbons and perfluorocarbons"**

7.2.1 Mr Metz introduced this item. The discussion of the issues highlighted that:

- (a) It is a significant issue in developing countries, and consideration needs to be given to the costs associated with converting between gases to meet the needs of various Conventions;
- (b) IPCC procedures for the use of "grey" literature will have to be carefully followed throughout the assessment;
- (c) Regional differences in capability to employ alternatives must be taken into account; and,
- (d) The impact of SF<sub>6</sub>, where it is used as a replacement for an ozone depleting substance, needs to be considered.

### **Decision 6**

7.2.2 The Panel decided to produce a Special Report as proposed. The interim steering committee of Messrs Bert Metz, Ogunalde Davidson and Ms Susan Solomon and three TEAP experts should continue to work on behalf of the IPCC in coordinating the preparation of a Special Report on "Safeguarding the ozone layer and the global climate system: issues related to hydrofluorocarbons and perfluorocarbons". The

content and timetable for the preparation of the Special Report is as given in the Annex to this Paragraph. Attachment 1 to the Annex to this paragraph are the Terms of Reference for the Steering Committee that is charged with overseeing this work.

### **7.3 Proposal for a Special Report on carbon dioxide capture and storage**

7.3.1 Mr Metz gave the background to this proposal. The ensuing discussion included the following matters:

- (a) The title should make it clear that the Report will not address carbon sequestration by biomass,
- (b) The uncertainties associated with the permanence of the storage methods must be properly dealt with; and,
- (c) Economic costs and legal issues must also be covered.

### **Decision 7**

7.3.2 The Panel decided that Working Group III should prepare a Special Report addressing the issues of carbon dioxide capture and storage according to the content, structure, work programme and timetable described in the Annex to this Paragraph.

### **7.4 Proposal to revise the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories***

7.4.1 Ms Thelma Krug introduced this Item. She noted that in response to a request from the UN FCCC/SBSTA 17 the TFB is proposing to develop a plan to revise the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* that would see the request fulfilled by early 2006.

### **Decision 8**

7.4.2 The Panel was supportive of the TFB proposal to revise the *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories* and decided that the TFB should adopt the following four-step approach to their revision:

- (1) Definition of the task (beginning after IPCC XX approval through late 2003).
- (2) Preparation for the Scoping meeting.
- (3) Scoping meeting (September 2003, timing to be confirmed).
- (4) Preparation of the Revised Guidelines (2004 – early 2006).

The TFB to submit to the 21<sup>st</sup> Session of the Panel the proposed timetable, terms of reference, table of contents and work plan to complete the task.

### **7.5 Proposal for a Technical Paper on *Levels of Greenhouse Gases in the Atmosphere Preventing Dangerous Anthropogenic Interference with the Climate System***

7.5.1 The Chair introduced this Item. He noted that further work on the matter of levels of greenhouse gases in the atmosphere preventing dangerous anthropogenic interference with the climate system would be picked up as a cross-cutting theme in the Fourth Assessment.

7.5.2 Prof. Izrael referred the Chair to the report of the expert meeting on the topic (Geneva, Switzerland, Jan 21-22, 2003) and in particular to the four options it had recommended the Panel consider when addressing the issue.

7.5.3 The Panel considered that issues related to Article 2 of the UN Framework Convention on Climate Change should be dealt with as a cross-cutting issue in the Fourth Assessment Report. Furthermore, the scoping of this cross-cutting issue should be carried out by the co-chairs of Working Group II and Prof. Izrael. In undertaking this scoping work they should treat the issue on the same basis as for other proposed cross-cutting themes.

## **8 OUTREACH**

8.1 When introducing this Item the Chair noted the need to establish an open-ended Task Group on outreach and proposed that Ms Maria Martello and Mr John Stone co-chair such a group for the duration of the Fourth Assessment, but with a small number of members forming the core of this Task Group.

8.2 Mr Stone reported on a strategic vision for IPCC outreach and the Deputy-Secretary reported on the secretariat's outreach activities. In the discussion that followed emphasis was placed upon the need for the secretariat to provide good web access to IPCC reports (including graphics) in all the UN languages, and for members to take every opportunity to make available the results of IPCC assessments on a regional and national basis. The secretariat was encouraged to improve its web capabilities to the extent possible.

### **Decision 10: Outreach Task Group**

8.3 The Panel decided to establish, for the duration of the Fourth Assessment, an open-ended Outreach Task Group (OTG) with Ms Maria Martello and Mr John Stone as co-chairs with an identified core group for continuity.

## **9 IPCC PROGRAMME AND BUDGET FOR 2003 TO 2007**

9.1 When introducing this Item the Chair noted the need to establish an open-ended Financial Task Team (FiTT) and proposed that Mr Marc Gillet (France) and Mr Zhenlin Chen (China) co-chair such a group for the duration of the Fourth Assessment.

### **Decision 11**

9.2 The Panel decided:

- (1) To establish an open-ended Financial Task Team under the co-chairs of Mr Marc Gillet and Mr Zhenlin Chen; and,
- (2) To adopt the budget as Annexed to this Paragraph.

## **10 OTHER BUSINESS**

10.1 Prof. Izrael (Russia) spoke briefly about the planned World Climate Change Conference to be held in Moscow in September/October 2003.

10.2 Mr Calvo (Peru) spoke briefly on an international event being planned for October 2003 by the Centre for the Study of El Niño in Peru.

10.3 Mr Wang (China) spoke briefly on the International Symposium on Climate Change to be held in Beijing in March/April 2003.

## **11 TIME AND PLACE OF THE NEXT SESSION**

11.1 The next Session of the Panel will be conducted in Vienna, Austria, from 3-7 November 2003.

## **CLOSING OF THE SESSION**

The Session closed at 17.45 hrs on Friday, 21 February 2003.

**Provisionally Revised Appendix A**

Appendix A to the Principles Governing IPCC Work as provisionally amended by IPCC-XX, Paris, 19-21 February 2003

**PROCEDURES FOR THE PREPARATION, REVIEW, ACCEPTANCE, ADOPTION, APPROVAL AND PUBLICATION OF IPCC REPORTS (Prov. Rev.1)**

CONTENTS

1. INTRODUCTION
  2. DEFINITIONS
  3. IPCC MATERIAL
  4. ASSESSMENT REPORTS, SYNTHESIS REPORTS, SPECIAL REPORTS AND **METHODOLOGY REPORTS**
    - 4.1 Introduction to Review Process
    - 4.2 Reports Accepted by Working Groups **and Reports prepared by the Task Force on National Greenhouse Gas Inventories**
      - 4.2.1 *Compilation of Lists of Coordinating Lead Authors, Lead Authors, Contributing Authors, Expert Reviewers, Review Editors and Government Focal Points*
      - 4.2.2 *Selection of Lead Authors*
      - 4.2.3 *Preparation of Draft Report*
      - 4.2.4 *Review*
        - 4.2.4.1.1 *First Review (by Experts)*
        - 4.2.4.1.2 *Second Review (by Governments and Experts)*
      - 4.2.5 *Preparation of Final Draft Report*
    - 4.3 Approval and Acceptance of Summaries for Policymakers **and Adoption of Overview Chapters of Methodology Reports**
    - 4.4 Reports Approved and/or Adopted by the Panel
      - 4.4.1 *The Synthesis Report*
  5. TECHNICAL PAPERS
  6. IPCC SUPPORTING MATERIAL
    - 6.1 Workshops and Expert Meetings
    - 6.2 Co-sponsored Workshops and Expert Meetings
- ANNEX 1** TASKS AND RESPONSIBILITIES FOR LEAD AUTHORS, COORDINATING LEAD AUTHORS, CONTRIBUTING AUTHORS, EXPERT REVIEWERS AND REVIEW EDITORS OF IPCC REPORTS AND GOVERNMENT FOCAL POINTS
- ANNEX 2** PROCEDURES FOR USING NON-PUBLISHED/NON-PEER-REVIEWED SOURCES IN IPCC REPORTS

## 1. INTRODUCTION

This revised Appendix to the Principles Governing IPCC Work contains the procedures for the preparation, review, acceptance, adoption, approval and publication of IPCC reports and other materials relevant to methodologies. This Appendix complements the Procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of IPCC Reports, which was adopted at the Fifteenth Session of the IPCC (San Jose, 15-18 April 1999). In order to facilitate easy reading, all modified or new provisions of the procedures are shown below by *special fonts*.

## 2. DEFINITIONS

The definitions of terms used in this document are as follows:

“*acceptance*” of IPCC Reports at a Session of the Working Group or Panel signifies that the material has not been subject to line by line discussion and agreement, but nevertheless presents a comprehensive, objective and balanced view of the subject matter.

“*adoption*” of IPCC Reports is a process of endorsement section by section (and not line by line) *used* for the longer report of the Synthesis Report as described in section 4.3 *and for Overview Chapters of Methodology Reports*

“*approval*” of IPCC Summaries for Policymakers signifies that the material has been subjected to detailed, line by line discussion and agreement.

“*Assessment Reports*” are published materials composed of the full scientific and technical assessment of climate change, generally in three volumes, one for each of the Working Groups of the IPCC. Each of the volumes may be composed of two or more sections including: (a) a Summary for Policymakers (b) an optional technical summary and (c) individual chapters and their executive summaries.

“*Members of the IPCC*” are countries who are Members of WMO and/or UNEP.

~~“*Methodology Guidelines*” provide practical guidelines for the preparation of, for example, greenhouse gas inventories.~~

*“Methodology Reports” are published materials, which provide practical guidelines for the preparation of greenhouse gas inventories. Such reports may be composed of two or more sections including: (a) an Overview Chapter, which broadly describes the background, structure and major features of the report, (b) individual chapters and (c) technical Annexes. “Reports” refer to the main IPCC materials (including Assessments, Synthesis, Methodology and Special Reports and their Summaries for Policy Makers and Overview Chapters).*

“*Session of a Working Group*” refers to a series of meetings at the plenary level of the governmental representatives to a Working Group of the IPCC.

“*Session of the Bureau*” refers to a series of meetings of the elected members of the IPCC Bureau who may be accompanied by a representative of their government.

*“Task Force Bureau” refers to the elected members of the Bureau of the Task Force on National Greenhouse Gas Inventories. It is chaired by two Co-chairs, referred to in the following as Task Force Bureau Co-chairs.*

“*Session of the Panel*” refers to a series of meetings at the plenary level of the governmental representatives to the IPCC.

“*Special Report*” is an assessment of a specific issue and generally follows the same structure as a volume of an Assessment Report.

“*Summary for Policymakers*” is a component of a Report, such as an Assessment, Special or Synthesis Report, which provides a policy-relevant but policy-neutral summary of that Report.

“*Supporting Material*” consists of published material, workshop proceedings and material from expert meetings which are either commissioned or supported by the IPCC. *Supporting material may include software or databases to facilitate the use of the IPCC Methodology Reports.*

“*Synthesis Reports*” synthesise and integrate materials contained within the Assessment Reports and Special Reports and are written in a non-technical style suitable for policymakers and address a broad-range of policy-relevant but policy-neutral questions. They are composed of two sections as follows: (a) a Summary for Policymakers and (b) a longer report.

“*Technical Papers*” are based on the material already in the Assessment Reports and Special Reports and are prepared on topics for which an objective international scientific/technical perspective is deemed essential.

### 3. IPCC MATERIAL

There are three main classes of IPCC materials, each of which is defined in Section 2.

- A. IPCC Reports (which include Assessments, Synthesis and Special Reports and their Summaries for Policymakers and Methodology Guidelines Reports)
- B. Technical Papers
- C. Supporting Materials

The different classes of material are subject as appropriate to different levels of formal endorsement. These levels are described in terms of acceptance, adoption and approval as defined in Section 2.

The different levels of endorsement for the different classes of IPCC material are as follows:

- A. In general, IPCC Reports are accepted by the appropriate Working Group. Reports prepared by the Task Force on National Greenhouse Gas Inventories are accepted by the Panel. Summaries for Policymakers are approved by the appropriate Working Groups. (Section 4.2) and subsequently accepted by the Panel (Section 4.3). Overview chapters of Methodology Reports are adopted, section by section, by the appropriate Working Group or in case of reports prepared by the Task Force on National Greenhouse Gas Inventories by the Panel. ~~The Panel may also accept and/or approve Reports not prepared by a Working Group.~~ In the case of the Synthesis Report the Panel adopts the underlying Report, section by section, and approves the Summary for Policymakers. The definition of the terms “acceptance”, “adoption” and “approval” will be included in the IPCC published Reports (Section 4.4).
- B. Technical Papers are not accepted, approved or adopted by the Working Groups or the Panel but are finalised in consultation with the Bureau (Section 5)
- C. Supporting Materials are not accepted, approved or adopted (Section 6).

### 4. ASSESSMENT REPORTS, SYNTHESIS REPORTS, SPECIAL REPORTS AND METHODOLOGY REPORTS

#### 4.1 Introduction to Review Process

The review process generally takes place in three stages: expert review of IPCC Reports, government/expert review of IPCC Reports, government review of the Summaries for Policymakers, Overview Chapters and/or the Synthesis Report. Working Group/Task Force Bureau Co-Chairs should aim to avoid (or at least minimise) the overlap of government review periods for different IPCC Reports and with Sessions of the Conference of Parties of the United Nations Framework Convention of Climate Change and its subsidiary bodies.

Expert review should normally be eight weeks, but not less than six weeks, except to the extent decided by the Panel. Government and government/expert reviews should not be less than eight weeks, except to the extent decided by the Panel.

All written expert, and government review comments will be made available to reviewers on request during the review process and will be retained in an open archive in a location determined by the IPCC Secretariat on completion of the Report for a period of at least five years.

#### 4.2 Reports Accepted by Working Groups and Reports prepared by the Task Force on National Greenhouse Gas Inventories

Reports presented for acceptance at Sessions of the Working Groups, or in case of reports prepared by the Task Force on National Greenhouse Gas Inventories reports presented for acceptance by the Panel, are the full scientific, technical and socio-economic Assessment Reports of the Working Groups, Special Reports and Methodology Reports, *that is*, the IPCC Guidelines for National Greenhouse Gas Inventories ~~or the IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptations.~~

The subject matter of these Reports shall conform to the terms of reference of the relevant Working Groups, or the Task Force on National Greenhouse Gas Inventories and to the work plan approved by the Panel.

Reports to be accepted by the Working Groups, and reports prepared by the Task Force on National Greenhouse Gas Inventories will undergo expert and government/expert reviews. The purpose of these reviews is to ensure that the Reports present a comprehensive, objective, and balanced view of the areas they cover. While the large volume and technical detail of this material places practical limitations upon the extent to which changes to these Reports will normally be made at Sessions of Working Groups or the Panel, "acceptance" signifies the view of the Working Group or the Panel that this purpose has been achieved. The content of the authored chapters is the responsibility of the Lead Authors, subject to Working Group or Panel acceptance. Changes (other than grammatical or minor editorial changes) made after acceptance by the Working Group or the Panel shall be those necessary to ensure consistency with the Summary for Policymakers or the Overview Chapter. These changes shall be identified by the Lead Authors in writing and made available to the Panel at the time it is asked to accept the Summary for Policymakers, in case of reports prepared by the Task Force on National Greenhouse Gas Inventories by the end of the session of the Panel which adopts/accepts the report.

Reports accepted by Working Groups, or prepared by the Task Force on National Greenhouse Gas Inventories should be formally and prominently described on the front and other introductory covers as:

"A report accepted by Working Group X of the IPCC [-OR – A report prepared by the Task Force on National Greenhouse Gas Inventories of the IPCC and accepted by the Panel] but not approved in detail."

It is essential that Working Group and Task Force on National Greenhouse Gas Inventories work programmes allow enough time in their schedules, according to procedures, for a full review by experts and governments and for the acceptance of the report. The Working Group/Task Force Bureau Co-Chairs are responsible for implementing the work programme and ensuring that proper review of the material occurs in a timely manner.

To ensure proper preparation and review, the following steps should be undertaken:

1. Compilation of lists of Coordinating Lead Authors, Lead Authors, Contributing Authors, Expert Reviewers, Review Editors and Government Focal Points.
2. Selection of Lead Authors.
3. Preparation of draft Report.
4. Review.
  - a. First review (by experts).
  - b. Second review (by governments and experts).
5. Preparation of final draft Report.
6. Acceptance of Report at a Session of the Working Group(s) or the Panel respectively.

#### **4.2.1 Compilation of Lists of Coordinating Lead Authors, Lead Authors, Contributing Authors, Expert Reviewers, Review Editors and Government Focal Points**

At the request of Working Group/Task Force Bureau Co-Chairs through their respective Working Group/Task Force Bureau, and the IPCC Secretariat, governments, and participating organisations and the Working Group/Task Force Bureau should identify appropriate experts for each area in the Report who can act as potential Coordinating Lead Authors, Lead Authors, Contributing Authors, expert reviewers or Review Editors. To facilitate the identification of experts and later review by governments, governments should also designate their respective Focal Points. IPCC Bureau Members and Members of the Task Force Bureau should contribute where necessary to identifying appropriate Coordinating Lead Authors, Lead Authors, Contributing Authors, expert reviewers, and Review Editors in cooperation with the Government Focal Points within their region to ensure an appropriate representation of experts from developing and developed countries and countries with economies in transition. These should be assembled into lists available to all IPCC Members and maintained by the IPCC Secretariat. The tasks and responsibilities of Coordinating Lead Authors, Lead Authors, Contributing Authors, expert reviewers, Review Editors and government Focal Points are outlined in Annex 1.

#### 4.2.2 Selection of Lead Authors

Coordinating Lead Authors and Lead Authors are selected by the relevant Working Group/Task Force Bureau, under general guidance and review provided by the Session of the Working Group or, in case of reports prepared by the Task Force on National Greenhouse Gas Inventories, the Panel, from those experts cited in the lists provided by governments and participating organisations, and other experts as appropriate, known through their publications and works. The composition of the group of Coordinating Lead Authors and Lead Authors for a section or chapter of a Report shall reflect the need to aim for a range of views, expertise and geographical representation (ensuring appropriate representation of experts from developing and developed countries and countries with economies in transition). There should be at least one and normally two or more from developing countries. The Coordinating Lead Authors and Lead Authors selected by the Working Group/Task Force Bureau may enlist other experts as Contributing Authors to assist with the work.

At the earliest opportunity, the IPCC Secretariat should inform all governments and participating organisations who the Coordinating Lead Authors and Lead Authors are for different chapters and indicate the general content area that the person will contribute to the chapter.

#### 4.2.3 Preparation of Draft Report

Preparation of the first draft of a Report should be undertaken by Coordinating Lead Authors and Lead Authors. Experts who wish to contribute material for consideration in the first draft should submit it directly to the Lead Authors. Contributions should be supported as far as possible with references from the peer-reviewed and internationally available literature, and with copies of any unpublished material cited. Clear indications of how to access the latter should be included in the contributions. For material available in electronic format only, a hard copy should be archived and the location where such material may be accessed should be cited.

Lead Authors will work on the basis of these contributions, the peer-reviewed and internationally-available literature, including manuscripts that can be made available for IPCC review and selected non-peer review literature according to Annex 2 and IPCC Supporting Material (see section 6). Material which is not published but which is available to experts and reviewers may be included provided that its inclusion is fully justified in the context of the IPCC assessment process (see Annex 2).

In preparing the first draft, and at subsequent stages of revision after review, Lead Authors should clearly identify disparate views for which there is significant scientific or technical support, together with the relevant arguments. Technical summaries provided will be prepared under the leadership of the Working Group/Task Force Bureaux.

#### 4.2.4 Review

Three principles governing the review should be borne in mind. First, the best possible scientific and technical advice should be included so that the IPCC Reports represent the latest scientific, technical and socio-economic findings and are as comprehensive as possible.

Secondly, a wide circulation process, ensuring representation of independent experts ( i.e. experts not involved in the preparation of that particular chapter) from developing and developed countries and countries with economies in transition should aim to involve as many experts as possible in the IPCC process. Thirdly, the review process should be objective, open and transparent.

To help ensure that Reports provide a balanced and complete assessment of current information, ~~the Bureau~~ ~~of~~ each Working Group/Task Force Bureau should normally select two Review Editors per chapter (including the executive summaries) and per technical summary of each Report.

Review Editors should normally consist of a member of the Working Group/Task Force Bureau, and an independent expert based on the lists provided by governments and participating organisations. Review Editors should not be involved in the preparation or review of material for which they are an editor. In selecting Review Editors, the Bureaux should select from developed and developing countries and from

countries with economies in transition, and should aim for a balanced representation of scientific, technical, and socio-economic views.

#### 4.2.4.1 *First Review (by Experts)*

First draft Reports should be circulated by Working Group/***Task Force Bureau*** Co-Chairs for review by experts selected by the Working Group/***Task Force Bureau*** and, in addition, those on the lists provided by governments and participating organisations, noting the need to aim for a range of views, expertise, and geographical representation. The review circulation should include:

- Experts who have significant expertise and/or publications in particular areas covered by the Report.
- Experts nominated by governments as Coordinating Lead Authors, Lead Authors, contributing authors or expert reviewers as included in lists maintained by the IPCC Secretariat.
- Expert reviewers nominated by appropriate organisations.

The first draft Reports should be sent to Government Focal Points, for information, along with a list of those to whom the Report has been sent for review in that country.

The Working Group/***Task Force Bureau*** Co-Chairs should make available to reviewers on request during the review process specific material referenced in the document being reviewed, which is not available in the international published literature.

Expert reviewers should provide the comments to the appropriate Lead Authors through the relevant Working Group/***Task Force Bureau*** Co-Chairs with a copy, if required, to their Government Focal Point.

Coordinating Lead Authors, in consultation with the Review Editors and in coordination with the respective Working Group/***Task Force Bureau*** Co-Chairs and the IPCC Secretariat, are encouraged to supplement the draft revision process by organising a wider meeting with principal Contributing Authors and expert reviewers, if time and funding permit, in order to pay special attention to particular points of assessment or areas of major differences.

#### 4.2.4.2 *Second Review (by Governments and Experts)*

A revised draft should be distributed by the appropriate Working Group/***Task Force Bureau Co-chairs*** or through the IPCC Secretariat to governments through the designated Government Focal Points, and to all the coordinating lead authors, lead authors and contributing authors and expert reviewers.

Governments should send one integrated set of comments for each Report to the appropriate Working Group/***Task Force Bureau Co-chairs*** through their Government Focal Points.

Non-government reviewers should send their further comments to the appropriate Working Group/***Task Force Bureau*** Co-Chairs with a copy to their appropriate Government Focal Point.

#### 4.2.5 *Preparation of Final Draft Report*

Preparation of a final draft Report taking into account government and expert comments for submission to a Session of a Working Group ***or, in case of a report prepared by the Task Force on National Greenhouse Gas Inventories, of the Panel*** for acceptance should be undertaken by Coordinating Lead Authors and Lead Authors in consultation with the Review Editors. If necessary, and timing and funding permitting, a wider meeting with principal Contributing Authors and expert and government reviewers is encouraged in order to pay special attention to particular points of assessment or areas of major differences. It is important that Reports describe different (possibly controversial) scientific, technical, and socio-economic views on a subject, particularly if they are relevant to the policy debate. The final draft should credit all Coordinating Lead Authors, Lead Authors, Contributing Authors, reviewers and Review Editors by name and affiliation (at the end of the Report).

### 4.3 ***Approval and Acceptance of Summaries for Policymakers and Adoption of Overview Chapters of Methodology Reports Related to Greenhouse Gas Inventories***

Summary sections of Reports approved by the Working Groups and accepted by the Panel will principally be the Summaries for Policymakers, prepared by the respective Working Groups of their full scientific, technical and socio-economic assessments, and Summaries for Policymakers of Special Reports prepared by the Working Groups. The Summaries for Policy Makers should be subject to simultaneous review by both experts and governments and to a final line by line approval by a Session of the Working Group. Responsibility for preparing first drafts and revised drafts of Summaries for Policymakers, lies with the respective Working Group Co-Chairs. The Summaries for Policymakers should be prepared concurrently with the preparation of the main Reports.

Approval of the Summary for Policymakers at the Session of the Working Group, signifies that it is consistent with the factual material contained in the full scientific, technical and socioeconomic assessment or Special Report accepted by the Working Group. Coordinating lead authors may be asked to provide technical assistance in ensuring that consistency has been achieved. These Summaries for Policymakers should be formally and prominently described as:

"A Report of [Working Group X of] the Intergovernmental Panel on Climate Change."

For a Summary for Policymakers approved by a Working Group to be endorsed as an IPCC Report, it must be accepted at a Session of the Panel. Because the Working Group approval process is open to all governments, Working Group approval of a Summary for Policymakers means that the Panel cannot change it. However, it is necessary for the Panel to review the Report at a Session, note any substantial disagreements, (in accordance with Principle 10 of the Principles Governing IPCC Work) and formally accept it.

**Overview Chapters of Methodology Reports prepared by the Task Force on National Greenhouse Gas Inventories will be adopted section-by-section by the Panel. The Overview Chapters should be subject to simultaneous review by both experts and governments. Responsibility for preparing first drafts and revised drafts lies with the respective Working Group/Task Force Bureau Co-Chairs. The Overview Chapters should be prepared concurrently with the preparation of the main Reports.**

#### **4.4 Reports Approved and/or Adopted by the Panel**

Reports approved and/or adopted by the Panel will be the Synthesis Report of the Assessment Reports and other Reports as decided by the Panel whereby Section 4.3 applies *mutatis mutandis*.

##### **4.4.1 The Synthesis Report**

The Synthesis Report will synthesise and integrate materials contained within the Assessment Reports and Special Reports and should be written in a non-technical style suitable for policymakers and address a broad range of policy-relevant but policy-neutral questions approved by the Panel. The Synthesis Report is composed of two sections as follows: (a) a Summary for Policymakers and (b) a longer report. The IPCC Chair will lead a writing team whose composition is agreed by the Bureau, noting the need to aim for a range of views, expertise and geographical representation. An approval and adoption procedure will allow Sessions of the Panel to approve the SPM line by line and to ensure that the SPM and the longer report of the Synthesis Report are consistent, and the Synthesis Report is consistent with the underlying Assessment Reports and Special Reports from which the information has been synthesised and integrated. This approach will take 5-7 working days of a Session of the Panel.

Step 1: The longer report (30-50 pages) and the SPM (5-10 pages) of the Synthesis Report are prepared by the writing team.

Step 2: The longer report and the SPM of the Synthesis Report undergo simultaneous expert/government review.

Step 3: The longer report and the SPM of the Synthesis Report are then revised by Lead Authors, with the assistance of the Review Editors.

Step 4: The revised drafts of the longer report and the SPM of the Synthesis Report are submitted to Governments and participating organisations eight weeks before the Session of the Panel.

Step 5: The longer report and the SPM of the Synthesis Report are both tabled for discussion in the Session of the Panel:

- The Session of the Panel will first provisionally approve the SPM line by line.
- The Session of the Panel will review and adopt the longer report of the Synthesis Report, section by section, i.e. roughly one page or less at a time. The review and adoption process for the longer report of the Synthesis Report should be accomplished in the following manner:
  - When changes in the longer report of the Synthesis Report are required either to conform it to the SPM or to ensure consistency with the underlying Assessment Reports, the Panel and authors will note where changes are required in the longer report of the Synthesis Report to ensure consistency in tone and content. The authors of the longer report of the Synthesis Report will then make changes in the longer report of the Synthesis Report. Those Bureau members who are not authors will act as Review Editors to ensure that these documents are consistent and follow the directions of the Session of the Panel
  - The longer report of the Synthesis Report is then brought back to the Session of the Panel for the review and adoption of the revised sections, section by section. If inconsistencies are still identified by the Panel, the longer report of the Synthesis Report is further refined by the Authors with the Assistance of the Review Editors for review and adoption by the Panel. This process is conducted section by section, not line by line.
- The final text of the longer report of the Synthesis Report will be adopted and the SPM approved by the Session of the Panel.

The Report consisting of the longer report and the SPM of the Synthesis Report is an IPCC Report and should be formally and prominently described as:

"A Report of the Intergovernmental Panel on Climate Change."

## 5. TECHNICAL PAPERS

IPCC Technical Papers are prepared on topics for which an objective, international scientific/technical perspective is deemed essential. They:

- a. are based on the material already in the IPCC Assessment Reports, Special Reports *or Methodology Reports*;
- b. are initiated: (i) in response to a formal request from the Conference of the Parties to the UN Framework Convention on Climate Change or its subsidiary bodies and agreed by the IPCC Bureau; or (ii) as decided by the Panel;
- c. are prepared by a team of Lead Authors, including a Coordinating Lead Author, selected by the Working Group/*Task Force* Bureaux in accordance with the provisions of Sections 4.2.1 and 4.2.2 for the selection of Lead Authors and Coordinating Lead Authors.
- d. are submitted in draft form for simultaneous expert and government review with circulation to expert reviewers and Government Focal Points in accordance with Section 4.2.4.1 at least four weeks before the comments are due;
- e. are revised by the Lead Authors based upon the comments received in the step above;
- f. are submitted for final government review at least four weeks before the comments are due;
- g. are finalised by the Lead Authors, in consultation with the IPCC Bureau which functions in the role of an Editorial Board, based on the comments received; and,
- h. if necessary, as determined by the IPCC Bureau, would include in a footnote differing views, based on comments made during final government review, not otherwise adequately reflected in the paper.

The following Guidelines should be used in interpreting requirement (a) above: The scientific, technical and socio-economic information in Technical Papers must be derived from:

(a) The text of IPCC Assessment Reports and Special Reports and the portions of material in cited studies that were relied upon in these Reports.

(b) Relevant models with their assumptions, and scenarios based on socio-economic assumptions, as they were used to provide information in those IPCC Reports, as well as emission profiles for sensitivity studies, if the basis of their construction and use is fully explained in the Technical Paper.

The Technical Papers must reflect the balance and objectivity of those Reports and support and/or explain the conclusions contained in those Reports.

Information in the Technical Papers should be referenced as far as possible to the subsection of the relevant IPCC Reports and related material.

Such Technical Papers are then made available to the Conference of the Parties or its subsidiary bodies, in response to its request, and thereafter publicly. If initiated by the Panel, Technical Papers are made available publicly. In either case, IPCC Technical Papers prominently should state in the beginning:

"This is a Technical Paper of the Intergovernmental Panel on Climate Change prepared in response to a [request from [the Conference of the Parties to]/[a subsidiary body of] the United Nations Framework Convention on Climate Change] / [decision of the Panel]. The material herein has undergone expert and government review but has not been considered by the Panel for formal acceptance or approval."

## 6. IPCC SUPPORTING MATERIAL

Supporting material consists of (i) published reports and proceedings from workshops and expert meetings within the scope of the IPCC work programme that have IPCC recognition, and (ii) material including databases and software, commissioned by Working Groups, or by the Bureau of the Task Force on National Greenhouse Gas Inventories in support of the assessment or methodology development, process which IPCC decides should have wide dissemination. Procedures for the recognition of workshops and expert meetings are given in Sections 6.1 and 6.2. Arrangements for publication of supporting material should be agreed as part of the process of IPCC recognition or commissioned by Working Groups/the Task Force Bureau to prepare specific supporting material. All supporting material should be formally and prominently described on the front and other introductory covers as:

"Supporting material prepared for consideration by the Intergovernmental Panel on Climate Change. This supporting material has not been subject to formal IPCC review processes."

### 6.1 Workshops and Expert Meetings

IPCC workshops and expert meetings are those that have been agreed upon in advance by an IPCC Working Group ~~or~~ by the Panel as useful or necessary for the completion of the work plan of a Working Group ~~workplan~~, the Task Force on National Greenhouse Gas Inventories or a task of the IPCC. Only such activities may be designated as "IPCC" workshops or expert meetings. Their funding should include full and complete provision for participation of experts from developing countries and countries with economies in transition.

The proceedings of IPCC workshops and expert meetings should normally be published summarising the range of views presented at the meeting. Such proceedings should:

- include a full list of participants;
- indicate when and by whom they were prepared;
- indicate whether and by whom they were reviewed prior to publication;
- acknowledge all sources of funding and other support;

- indicate prominently at the beginning of the document that the activity was held pursuant to a decision of the relevant Working Group or the Panel but that such decision does not imply Working Group or Panel endorsement or approval of the proceedings or any recommendations or conclusions contained therein.

## **6.2 Co-sponsored Workshops and Expert Meetings**

IPCC co-sponsorship may be extended to other workshops or expert meetings if the IPCC Chair, as well as the Co-Chairs of the relevant Working Group/***Task Force Bureau*** determine in advance that the activity will be useful to the work of the IPCC. IPCC co-sponsorship of such an activity does not convey any obligation by the IPCC to provide financial or other support. In considering whether to extend IPCC co-sponsorship, the following factors should be taken into account:

- whether full funding for the activity will be available from sources other than the IPCC;
- whether the activity will be open to government experts as well as experts from nongovernmental organisations participating in the work of the IPCC;
- whether provision will be made for participation of experts from developing countries and countries with economies in transition;
- whether the proceedings will be published and made available to the IPCC in a time frame relevant to its work;
- whether the proceedings will:
  - include a full list of participants;
  - indicate when and by whom they were prepared;
  - indicate whether and by whom they were reviewed prior to publication;
  - specify all sources of funding and other support;
  - prominently display the following disclaimer at the beginning of the document:

"IPCC co-sponsorship does not imply IPCC endorsement or approval of these proceedings or any recommendations or conclusions contained herein. Neither the papers presented at the workshop/expert meeting nor the report of its proceedings have been subjected to IPCC review."

## **TASKS AND RESPONSIBILITIES FOR LEAD AUTHORS, COORDINATING LEAD AUTHORS, CONTRIBUTING AUTHORS, EXPERT REVIEWERS AND REVIEW EDITORS OF IPCC REPORTS AND GOVERNMENT FOCAL POINTS**

### **1. LEAD AUTHORS**

Function:

To be responsible for the production of designated sections addressing items of the work programme on the basis of the best scientific, technical and socio-economic information available.

Comment:

Lead Authors will typically work as small groups which have responsibility for ensuring that the various components of their sections are brought together on time, are of uniformly high quality and conform to any overall standards of style set for the document as a whole.

The task of Lead Authors is a demanding one and in recognition of this the names of Lead Authors will appear prominently in the final Report. During the final stages of Report preparation, when the workload is often particularly heavy and when Lead Authors are heavily dependent upon each other to read and edit material, and to agree to changes promptly, it is essential that the work should be accorded the highest priority.

The essence of the Lead Authors' task is synthesis of material drawn from available literature as defined in Section 4.2.3. Lead Authors, in conjunction with Review Editors, are also required to take account of expert and government review comments when revising text. Lead Authors may not necessarily write original text themselves, but they must have the proven ability to develop text that is scientifically, technically and socio-economically sound and that faithfully represents, to the extent that this is possible, contributions by a wide variety of experts. The ability to work to deadlines is also a necessary practical requirement. Lead Authors are required to record in the Report views which cannot be reconciled with a consensus view but which are nonetheless scientifically or technically valid.

Lead Authors may convene meetings with Contributing Authors, as appropriate, in the preparations of their sections or to discuss expert or government review comments and to suggest any workshops or expert meetings in their relevant areas to the Working Group/Task Force Bureau Co-Chairs. The names of all Lead Authors will be acknowledged in the Reports.

### **2. COORDINATING LEAD AUTHORS**

Function:

To take overall responsibility for coordinating major sections of a Report

Comment:

Coordinating Lead Authors will be Lead Authors with the added responsibility of ensuring that major sections of the Report are completed to a high standard, are collated and delivered to the Working Group/Task Force Bureau Co-Chairs in a timely manner and conform to any overall standards of style set for the document.

Coordinating Lead Authors will play a leading role in ensuring that any crosscutting scientific or technical issues which may involve several sections of a Report are addressed in a complete and coherent manner and reflect the latest information available.

The skills and resources required of Coordinating Lead Authors are those required of Lead Authors with the additional organisational skills needed to coordinate a section of a Report.

The names of all Coordinating Lead Authors will be acknowledged in the Reports.

### 3. CONTRIBUTING AUTHORS

Function:

To prepare technical information in the form of text, graphs or data for assimilation by the Lead Authors into the draft section.

Comment:

Input from a wide range of contributors is a key element in the success of IPCC assessments, and the names of all contributors will be acknowledged in the Reports. Contributions are sometimes solicited by Lead Authors but unprompted contributions are encouraged.

Contributions should be supported as far as possible with references from the peer reviewed and internationally available literature, and with copies of any unpublished material cited; clear indications of how to access the latter should be included in the contributions. For material available in electronic format only, the location where such material may be accessed should be cited.

Contributed material may be edited, merged and if necessary, amended, in the course of developing the overall draft text.

### 4. EXPERT REVIEWERS

Function:

To comment on the accuracy and completeness of the scientific/technical/socio-economic content and the overall scientific/technical/socio-economic balance of the drafts.

Comment:

Expert reviewers will comment on the text according to their own knowledge and experience. They may be nominated by Governments, national and international organisations, Working Group/**Task Force** Bureaux, Lead Authors and Contributing Authors.

### 5. REVIEW EDITORS

Function:

Review Editors will assist the Working Group/**Task Force** Bureaux in identifying reviewers for the expert review process, ensure that all substantive expert and government review comments are afforded appropriate consideration, advise lead authors on how to handle contentious/controversial issues and ensure genuine controversies are reflected adequately in the text of the Report.

Comment:

There will be one or two Review Editors per chapter (including their executive summaries) and per technical summary. In order to carry out these tasks, Review Editors will need to have a broad understanding of the wider scientific and technical issues being addressed. The workload will be particularly heavy during the final stages of the Report preparation. This includes attending those meetings where writing teams are considering the results of the two review rounds. Review Editors are not actively engaged in drafting Reports and cannot serve as reviewers of those chapters of which they are Authors. Review Editors can be members of a Working Group/**Task Force** Bureau or outside experts agreed by the Working Group/**Task Force** Bureau.

Although responsibility for the final text remains with the Lead Authors, Review Editors will need to ensure that where significant differences of opinion on scientific issues remain, such differences are described in an annex to the Report. Review Editors must submit a written report to the Working Group Sessions **or the Panel** and where appropriate, will be requested to attend Sessions of the Working Group and of the IPCC to communicate their findings from the review process and to assist in finalising the Summary for Policymakers, **Overview Chapters of Methodology Reports** and Synthesis Reports. The names of all Review Editors will be acknowledged in the Reports.

## 6. GOVERNMENT FOCAL POINTS

### Function:

To prepare and update the list of national experts as required to help implement the IPCC work programme, and to arrange the provision of integrated comments on the accuracy and completeness of the scientific and/or technical content and the overall scientific and/or technical balance of the drafts.

### Comment:

Government review will typically be carried out within and between a number of Departments and Ministries.

For administrative convenience, each government and participating organisation should designate one Focal Point for all IPCC activities, provide full information on this Focal Point to the IPCC Secretariat and notify the Secretariat of any changes in this information. The Focal Point should liaise with the IPCC Secretariat regarding the logistics of the review process(es). Of particular importance is the full exchange of information.

## PROCEDURE FOR USING NON-PUBLISHED/NON-PEER-REVIEWED SOURCES IN IPCC REPORTS

Because it is increasingly apparent that materials relevant to IPCC Reports, in particular, information about the experience and practice of the private sector in mitigation and adaptation activities, are found in sources that have not been published or peer-reviewed (e.g., industry journals, internal organisational publications, non-peer reviewed reports or working papers of research institutions, proceedings of workshops etc) the following additional procedures are provided. These have been designed to make all references used in IPCC Reports easily accessible and to ensure that the IPCC process remains open and transparent.

### 1. Responsibilities of Coordinating, Lead and Contributing Authors

Authors who wish to include information from a non-published/non-peer-reviewed source are requested to:

a. Critically assess any source that they wish to include. This option may be used for instance to obtain case study materials from private sector sources for assessment of adaptation and mitigation options. Each chapter team should review the quality and validity of each source before incorporating results from the source into an IPCC Report.

b. Send the following materials to the Working Group/*Task Force Bureau* Co-Chairs who are coordinating the Report:

- One copy of each unpublished source to be used in the IPCC Report
- The following information for each source:
  - Title
  - Author(s)
  - Name of journal or other publication in which it appears, if applicable
  - Information on the availability of underlying data to the public
  - English-language executive summary or abstract, if the source is written in a non English language
  - Names and contact information for 1-2 people who can be contacted for more information about the source.

### 2. Responsibilities of the Review Editors

The Review Editors will ensure that these sources are selected and used in a consistent manner across the Report.

### 3. Responsibilities of the Working Group/*Task Force Bureau* Co-Chairs

The Working Group/*Task Force Bureau* Co-Chairs coordinating the Report will (a) collect and index the sources received from authors, as well as the accompanying information received about each source and (b) send copies of unpublished sources to reviewers who request them during the review process.

### 4. Responsibilities of the IPCC Secretariat

The IPCC Secretariat will (a) store the complete sets of indexed, non-published sources for each IPCC Report not prepared by a working group/*the Task Force on National Greenhouse Gas Inventories* (b) send copies of non-published sources to reviewers who request them.

### 5. Treatment in IPCC Reports

Non-peer-reviewed sources will be listed in the reference sections of IPCC Reports. These will be integrated with references for the peer-reviewed sources. These will be integrated with references to the peer reviewed sources stating how the material can be accessed, but will be followed by a statement that they are not published.

**1. Content of the Special Report on Safeguarding the ozone layer and the global climate system: issues related to hydrofluorocarbons and perfluorocarbons**

Summary for Policy Makers

General Introduction

- Liability Disclaimer
- Requests from UNFCCC and Montreal Protocol in 2002 and its background
- Reference to earlier work of IPCC, TEAP, UNEP and other on this issue
- Directions for Use: where to find what in this Special Report

**Part A: Ozone depletion and the Climate system**

This part will contain a brief summary of relevant findings regarding the relation of ozone layer depletion and global warming based upon the TAR and UNEP/WMO 1998 and 2002 reports. It will be co-ordinated by WG I of IPCC.

**Chapter A.1 Ozone and Climate: A Review of Interconnections .**

Short summary of relevant processes as well as key conclusions, drawing where appropriate from the UNEP/WMO Scientific Assessment of Ozone Depletion, 2002 and IPCC TAR, 2001, covering:

- Introduction: processes linking ozone chemistry to temperature/dynamics in various parts of the stratosphere (lower, upper, mid-latitude, polar); processes linking temperature/dynamics to radiative forcing agents in troposphere and stratosphere.
- Review of assessment conclusions regarding (i) effects of ozone depletion on climate change and (ii) effects of climate change on ozone depletion.

**Chapter A.2 Chemical and Radiative Effects of HFCs, PFCs, and Their Possible Replacements**

This part will include an assessment of toxicity, atmospheric chemistry effects (e.g., air quality) and potential build up of degradation products in the atmosphere, as well as build-up of the parent gases.

- Radiative properties (infrared absorption characteristics)
- Time series of available concentrations and relation with emission data
- Decomposition products (including TFA, toxicity),
- GWP updates and estimated radiative forcings for given scenarios (to be defined)
- Interface with air quality issues

**Part B: Options for ODS phaseout and reducing GHG emissions**

This part will cover relevant considerations in choosing among options to replace ozone-depleting substances. The choice among options involves a number of environmental, health, safety, availability and technical performance considerations in addition to consideration of direct and indirect greenhouse gas emissions. For each chemical application the Special Report will cover the relevant technical/scientific considerations, including:

- Technical information relevant to the evaluation, including cost, availability, health, environment and safety considerations, technical performance, energy and resource efficiency and all greenhouse gas emissions, using a systematic approach, such as the total equivalent warming impact (TEWI) and Life Cycle Climate Performance (LCCP), to be co-ordinated by IPCC WG III and TEAP.
- Technical options to reduce greenhouse gas emissions, e.g. through containment, recovery, recycling, destruction, the use of alternative fluids and not-in-kind technologies. Where appropriate, reference should be made to examples of relevant policies and measures. This part will be co-ordinated by IPCC WG III and TEAP. The industrial and consumer health/safety considerations will be co-ordinated by TEAP. The SR will have an appropriate liability disclaimer.

The following division in chapters and sub sections is chosen:

## **B. 1 Methodologies**

(This chapter provides a description of available methodologies to characterize or analyze technologies, enabling the user to evaluate and compare different options)

- Technical performance characteristics
- Characteristics in respect to health and safety
- Costing approaches
- Comparing energy efficiency
- Assessing climate and environmental impacts
  - Total equivalent warming impact (TEWI)
  - Lifecycle climate performance (LCCP)
  - Lifecycle assessment (LCA)
- Other systems based approaches
- Future developments

## **B.2 Sub-sectors, Practices and Technologies**

The chapters of this part are structured along the relevant sub-sectors with each an introductory and concluding chapter. The selection of the sectors and sub-sectors is based on the 1999 TEAP Task Force Report and Annex to chapter 3 of Working Group III of the IPCC Third Assessment Report, supplemented with information on new HFC, PFC applications as substitutes and alternatives to ozone-depleting substances controlled under the Montreal Protocol:

It is further proposed that the chapters on each sub-sector are structured in a similar manner, first listing and discussing *relevant practices* to reduce emissions of HFCs and PFCs and net global warming impact, and then listing, discussing and comparing *alternative technologies* that can be used in that sub-sector. An overview of each sector and technologies used will be given. Consumption and emission of HFCs and PFCs in each sector will be reviewed. The comparison of the practices and technologies should include lists and tables to provide a summarized overview.

### **B.2.1 Refrigeration, Air Conditioning and Heat Pumps**

- B.2.1.1 Mobile Air Conditioning
- B.2.1.2 Domestic Refrigeration
- B.2.1.3 Commercial Refrigeration
- B.2.1.4 Residential and Commercial Air Conditioning and Heating
- B.2.1.5 Food processing and Cold Storage
- B.2.1.6 Industrial Refrigeration
- B.2.1.7 Transport Refrigeration
- B.2.1.8 Miscellaneous

### **B. 2.2 Foams**

- B.2.2.1 Insulating<sup>1</sup> Foams in Appliances
- B.2.2.2 Insulating Foams in Residential Buildings
- B.2.2.3 Insulating Foams in Commercial Buildings
- B.2.2.4 Insulating Foams in Transportation
- B.2.2.5 Other Insulating Foams
- B.2.2.6 Non-Insulating Foams (Safety, packaging, etc.)
- B.2.2.7. Miscellaneous

### **B. 2.3 Solvents, Coatings, Adhesives**

- B.2.3.1 Solvents
- B.2.3.2 Coatings
- B.2.3.3 Adhesives
- B.2.3.4 Other

### **B. 2.4 Aerosol Products**

- B.2.4.1 Cosmetic and Convenience Aerosol Products
- B.2.4.2 Technical and Pharmaceutical Aerosol Products

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<sup>1</sup> Both thermal and acoustic insulation will be taken into account.

B.2.4.3 MDIs for oral inhalation for the treatment of Asthma and Chronic Obstructive Pulmonary Diseases (COPD)

B.2.4.4 Other Aerosol Products

## **B. 2.5 Fire Protection**

B.2.5.1. Portable systems

B.2.5.2. Fixed systems

## **B. 2.6 Miscellaneous**

This part will address those fluorinated compounds that are directly related to the phase-out of Ozone Depleting Substances, but do not belong to the applications mentioned above for instance HFC –23 emissions coming from HCFC-22 production.

Furthermore, TEAP will provide an appropriate summary of a forthcoming report on HCFCs in Developing Countries.

Within each chapter B.2.1 - B.2.6, the description of the practices, technologies, and options to reduce GHG emissions will be given.. The description should as far as reliable information is available and relevant - include the following elements in the indicated order:

**Relevant Practices** to reduce HFC and PFC emissions during a life cycle: production, process improvement in applications, improved containment, end-of-life recovery, recycling, disposal and destruction

- Name
- Description
- Direct and indirect greenhouse gas emission reduction
- Consideration of health, safety, resource efficiency and other environmental effects
- Cost – regionally differentiated
- Current market data and availability in different regions
- References to any policies regarding this practice
- Sources of additional information

**Alternative Technologies** for HFCs and PFCs

*(Using HFCs / PFCs or other fluids, gases or aerosols with negligible or lower global warming potential, or not-in-kind technologies including systems with reduced end energy consumption)*

- Name
- Description
- Technical performance
- direct and indirect greenhouse gas emissions (using LCCP, TEWI)
- Other environmental effects
- Resource efficiency, including energy use
- Health, safety considerations
- Cost – regionally differentiated (as far as available)
- Current market availability in different regions
- References to any policies regarding this technology
- Sources of additional information.

## **Part C: Future estimation and availability of HFCs and PFCs**

This part will cover publicly available information on currently installed and planned global production capacities. Additionally, a summary will be provided of available demand and emission projections of HFCs and PFCs from previous IPCC and TEAP reports. This part will be co-ordinated by TEAP, subject to IPCC procedures.

The following division is chosen:

- Installed and planned production capacities including regional distribution

- Summarized estimates of future HFC and PFC demand and /or emissions, including regional distribution, drawn upon available IPCC and TEAP reports
- Comparison of HFC and PFC production capacities and demand

## 2. Planning and Costs

### 2.1 Time table:

- Call for nominations of CLA, LAs and RE have gone out in January. Deadline 20 March 2003
- A written approval of the selected CLA, LAs and REs will be done by the Bureaux of WG I and WG III in April
- Stakeholder consultations in May 2003 by Steering Committee
- Date first LA meeting: 3 days, June 2003
- Date second LA meeting: following COP 9, December 2003
- June 2004, December 2004 third and Fourth LA meetings
- March/April 2005, combined WG I/WG III plenary with approval of the SPM and acceptance of the main Special Report

### 2.2 Deliverables:

- Final Text and approved SPM will be available before SBSTA 22 and the Open Ended Working Group of the Montreal Protocol in June 2005
- Hard Copy Book, a CD ROM will be available by September 2005
- Outreach activities will be 2<sup>nd</sup> half of 2005

### 2.3 IPCC budget:

- |   |                  |
|---|------------------|
| • 2003: 2 LA meetings, 2 * 25 journeys from DC, | 315.700 CHF      |
| • 2004: 2 LA meetings, 2 * 25 journeys from DC, | 315.700 CHF      |
| • 2005: WG I/WG III panel combined with         |                  |
| • SR CO2 storage, 120 journeys                  | 844.800 CHF      |
| • Outreach activities, CD ROM                   | to be determined |

**PROPOSED TERMS OF REFERENCE**  
**IPCC/TEAP STEERING COMMITTEE FOR SPECIAL REPORT:**  
**SAFEGUARDING THE OZONE LAYER AND THE GLOBAL CLIMATE SYSTEM: ISSUES**  
**RELATED TO HYDROFLUOROCARBONS AND PERFLUOROCARBONS**

1. In response to the decisions by the Eight Conference of Parties to the UN Framework Convention on Climate Change (UNFCCC) and the Fourteenth Meeting of the Parties to the Montreal Protocol, the 20<sup>th</sup> Session of the Intergovernmental Panel on Climate Change has established a Steering Committee to oversee the preparation of a Special Report entitled: Safeguarding the ozone layer and the global climate system: issues related to hydrofluorocarbons and perfluorocarbons, with the role and terms of reference as given below.

**Role**

2. The Steering Committee will act in a fashion consistent with the processes of the IPCC and the TEAP to produce the Special Report. A single integrated report is recommended by the Steering Committee, by the UNFCCC, and by the Montreal Protocol.

3. The role of the Steering Committee is to oversee the preparation of the above Special Report with an aim to complete the task so that the report can be submitted to the 22<sup>nd</sup> session of the UNFCCC-SBSTA meeting and to the Montreal Protocol 25<sup>th</sup> Open-ended Working Group, which both take place in the second quarter of 2005.

4. To this end, the Steering Committee shall prepare any draft decisions it considers necessary on the matter for submission to the IPCC Plenary.

**Composition**

5. The Steering Committee will be comprised of:
- (a) Three representatives nominated by the TEAP; and
  - (b) Three representatives nominated by the IPCC.
6. The Steering Committee will elect its own Chair.

**Report Preparation**

7. The Special report will contain three distinct parts to be coordinated by IPCC WG I, WG III, and/or TEAP, drawing upon the experience and technical focus of each. A high degree of cooperation and interaction is envisaged in all cases:

- (a) Part (a) will cover a brief summary of relevant findings regarding the relation of ozone layer depletion and global warming based upon the TAR and UNEP/WMO 1998 and 2002 reports. This part will also cover an assessment of toxicity, atmospheric chemistry effects (e.g., air quality) and potential build up of degradation products in the atmosphere, as well as build-up of the parent gases. This part will be co-ordinated by WG I of IPCC.
- (b) Part (b) will cover relevant considerations in choosing among options to replace ozone-depleting substances. The choice among options involves a number of environmental, health, safety, availability and technical performance considerations in addition to consideration of direct and indirect greenhouse gas emissions.

For each chemical application the Special Report will cover the relevant technical/scientific considerations, including:

- Technical information relevant to the evaluation, including cost, availability, health, environment and safety considerations, technical performance, energy and resource efficiency and all greenhouse gas emissions, using a systematic approach, such as the total equivalent warming impact (TEWI) and Life Cycle Climate Performance (LCCP), to be co-ordinated by IPCC WG III and TEAP.

- Technical options to reduce greenhouse gas emissions, e.g. through containment, recovery, recycling, destruction, the use of alternative fluids and not-in-kind technologies. Where appropriate, reference should be made to examples of relevant policies and measures. This part will be co-ordinated by IPCC WG III and TEAP. It is noted that industrial and consumer health/safety considerations will be co-ordinated by TEAP. The SR will have an appropriate liability disclaimer.
- (c) Part (c) will cover publicly available information on currently installed and planned global production capacities. Additionally, a summary will be provided of available demand and emission projections of HFCs and PFCs from previous IPCC and TEAP reports. No new assessment of future demand will be made. This part will be co-ordinated by TEAP, subject to IPCC procedures.
8. The Steering Committee will take account of overlaps and synergies between TEAP, IPCC WG III, and WG I. The Steering Committee will guarantee a high degree of co-operation between the three groups. The Steering Committee will make every effort to produce a user-friendly report.
9. Expert author teams are expected to include experts drawn from the TEAP and IPCC WG I and III communities. The Steering Committee will be responsible for proposing a slate of lead authors and review editors to the IPCC Bureau.
10. The Steering Committee will be responsible for supervising the timeline and for staying within the budget of the IPCC Trust Fund as approved by the IPCC Sessions for the preparation of the Special Report, and for staying within the budget of the Montreal protocol trust Fund where it concerns participation of developing country experts.

### **Reporting Arrangements**

11. The Chair of the Steering Committee will, in person or through a delegate, regularly report on progress with the preparation of the Special Report(s) to the Subsidiary Body on Scientific and Technical Advice (SBSTA) of the UN FCCC, to the Open ended Working Group and the Meeting of the Parties under the Montreal Protocol, and the IPCC Plenary.

## 1. Content of the Special Report on Carbon Dioxide Capture and Storage

### *Title*

1.1 The 19<sup>th</sup> session of IPCC gave a mandate to hold a workshop on *carbon capture and storage*. As a matter of fact, it is not “carbon” but “carbon dioxide“ that is stored. Therefore, the title will be “*carbon dioxide capture and storage*”

### *Contents*

1.2 The following structure was felt to ensure the best possible treatment of the Carbon Dioxide Capture and Storage issues:

1. Introduction (CO<sub>2</sub> emissions and projections; stabilisation options of GHG concentrations; possible role of carbon dioxide capture and storage for deep CO<sub>2</sub> emission reductions; CO<sub>2</sub> storage in relation to other mitigation options; general explanation and guidance with system diagrams; the importance of carbon dioxide retention time-scales)
2. Sources (characterisation of emission sources; geographical distribution of emission sources; matching of sources and sinks; climate neutral energy carriers and system transitions and the implications for CO<sub>2</sub> sources from direct fuel use)
3. Capture (capture systems; technological options for separation; system integration; optimisation of capture; advances in capture systems and enabling technologies; hydrogen; distributed applications; monitoring, risk, and legal aspects for capture systems; capture costs)
4. Transport (Pipelines (regional, national); ships; monitoring, risk and legal aspects for transport systems; transport costs)
5. Geological storage
  - 5.1. Introduction
  - 5.2. Storage formations and capacity (depleted gas fields, oil fields, unminable coal seams, and saline aquifers)
  - 5.3. Site selection and performance assessment
  - 5.4. Injection technology and well field operations
  - 5.5. Monitoring technologies
  - 5.6. Verification
  - 5.7. Environmental impacts and risks (e.g. leakage)
  - 5.8. Legal issues and public acceptance
  - 5.9. Costs
6. Ocean storage
  - 6.1. Introduction
  - 6.2. Storage formations and capacity (mid-ocean injection, sea floor options, and carbonate neutralisation)
  - 6.3. Site selection and performance assessment
  - 6.4. Injection technology and well field operations
  - 6.5. Monitoring technologies
  - 6.6. Verification
  - 6.7. Environmental impacts and risks (e.g. leakage)
  - 6.8. Legal issues and public acceptance
  - 6.9. Costs
7. Re-use and other storage options (re-use technologies and other storage technologies such as mineralisation; potential in terms of avoided CO<sub>2</sub> emissions; energy use, life cycle analysis and practical feasibility)

8. Total costs and market potential (model approaches and assumptions; building up the full cost chain; potential for cost reduction; economic potential and implications)
9. Implications for emission inventories and accounting (greenhouse gas emission inventories; accounting issues)
10. Critical Gaps in knowledge

## **2. Time table for Special Report preparation and provisional budget estimate**

2.1 Delivery is planned for the first half of 2005. Two Lead Author meetings in 2003 and two Lead Author meetings in 2004 are foreseen.

## **3. Lead author selection process**

3.1 Nominations were called for in a letter to governments, dated June 17, 2002. Based on the nominations, the IPCC Bureau will select the Co-ordinating Lead Authors, Lead Authors, and Review Editors.

**DECISION OF PANEL 20 ON THE IPCC TRUST FUND AND BUDGET**

Based on the recommendations of the Financial Task Team, the Panel, in plenary:

1. Thanked the Secretary for the IPCC Trust Fund programme and budget 2003 to 2007, contained in document IPCC-XX/Doc.3, Rev.1:
2. Took note of the revenues and carry over for the year 2002 presented in IPCC-XX/Doc.3, Rev.1., and requested the Secretary to provide IPCC XXI a statement of income and expenditure for the years 2001 and 2002, following the modalities in point 5 (d) of the decision of IPCC XIX on the IPCC Work programme and Budget;
3. Noted that if the total yearly contributions to the Trust Fund are maintained at the level of 5 Million CHF envisaged in IPCC-XX/Doc.3, Rev.1., the carry over at the end of 2004 would be less than 1 Million CHF, in light of the increased cost of the IPCC work programme. One Million CHF is considered as the minimum necessary to have on hand to pursue activities at the beginning of the year, in light of uncertainty regarding the timing of contributions from governments.
4. Noted that the IPCC has historically expended about 5 Million CHF per annum, but that over the cycle of the Fourth Assessment Report are expected to average in excess of 6.5 Million CHF per annum.
5. Took note of the proposal of planned expenditure in document IPCC-XX/Doc.3, Rev.1, and:
  - (a) thanked the Secretary for the integration of the budget tables of the IPCC and those of the TSU of the NGGIP into one document, as was requested by IPCC-XIX; and,
  - (b) thanked the Secretary for presenting a clear forecast of expenses over the 5-year cycle of the Fourth Assessment Report.
6. Adopted the draft revised Budget for the year 2003 presented by the Secretary, with the following revisions:
  - (a) an increase of 52,000 CHF on the IPCC – 21 budget, in order to extend the meeting by one day;
  - (b) a decrease of 242,960 CHF to 189, 420 CHF on the LULUCF Task 3 programme modified according to the decision of the Panel;
  - (c) inclusion of an amount of 126,280 CHF for the Workshop on climate change and sustainable development decided by IPCC XIX;
  - (d) inclusion of an amount of 25,256 CHF for consultation with stakeholders; and,
  - (e) an increase of 189,420 CHF to 317,700 CHF for each of the two scoping meetings decided by IPCC-XX.
7. Took note of the forecast budget for 2004, and of the indicative budgets from 2005 to 2007, with the following revisions:
  - (a) in the 2004 forecast budget, a contingency of 495,000 CHF for LULUCF Task 3, in place of the proposed meeting that amounted to 568,260 CHF; and,
  - (b) in the 2005 indicative budget, in place of the expenses planned for LULUCF Task 3 by contingencies for an amount of 552,560 CHF.
8. Recalled, furthermore, the decision of the IPCC XIX Panel on the IPCC Work Programme and Budget, and encouraged the Secretary to report to IPCC-XXI on actions taken on:
  - (a) to pursue the definition of cost categories, the improvement of procedures for establishing the budget and the presentation of financial information;
  - (b) to request the CBD to provide for coverage of translation costs, printing and shipping costs of the Technical Paper on Climate Change and Biodiversity; and,
  - (c) to prepare drafts of periodic fund raising letters to governments that may be in a position to respond positively in the light of Paragraph 4 (above).

9. Encouraged Working Group Bureaux, the Task Force Bureau and co-chairs of Task Groups and Teams to provide the IPCC Secretary early notice of planned meetings and the number of journeys funded by the IPCC Trust Fund;

10. Expressed its deep gratitude to the WMO, UNEP, UN FCCC and governments for their generous contributions to the IPCC Trust Fund, the financial support of the IPCC secretariat and the TSUs, and numerous in-kind contributions, including that of TERI for web-site support.

TABLE 3 (V\_1 Mar 03)

## IPCC-XX APPROVED BUDGET FOR THE YEAR 2003

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
<b>Governing bodies</b>				
IPCC-20 3 days Paris, Feb 03	To agree on outlines for ~ LULUCF Task 3 ~ Carbon Storage ~ HFC/PFC and ~ AR4 Scoping approach ~ Revision of Guidelines	688,800  120 Journeys	156,000	844,800
IPCC-21 4 days TBD, Oct 03	Accept/approve LULUCF Tasks 1 and 2 Accept AR4 outline/WP	746,200 130 journeys incl. 10 LA/RE	208,000	954,200
Sessions of 3 WGs 2 days, 2 mtgs., parallel preceding IPCC-21	to approve outlines of WG contributions to AR4 and workprogrammes	1,148,000  200 journeys	104,000	1,252,000
B-29 1day, Paris Paris, Feb 03	to prepare for IPCC-20 various	103,320  18 journeys	52,000	155,320
B-30 1 day TBD, Sept 03	to prepare for IPCC-21 various	103,320  18 journeys	52,000	155,320
TFB	2 mtgs., 14 journeys	80,360		80,360
SBSTA/COP/JWG	10 journeys	57,400		57,400
<b>Lead Authors meetings</b>				
LULUCF Task 1/2 Apr and July 03	2 LA mtgs., to prepare 2nd order and final draft	619,920 108 journeys	61,992	681,912
LULUCF Task 3 May and Sept 03	Steering Group and review meeting	172,200 30 journeys	17,220	189,420
Carbon storage	2 LA mtgs., to prepare 0 and 1st order drafts	287,000 50 journeys	28,700	315,700
HFC/PFC	2 LA mtg., 0, 1st-order drafts	287,000 50 journeys	28,700	315,700
GPG Guidelines revision TBD, Dec 03	1 Scoping meeting	114,800 20 journeys	11,480	126,280
Sub total of LA Meetings =		<b>1,629,012</b>		
<b>Scoping meetings, expert meetings and workshops</b>				
Scenario experts Jan, Apr, Sept TBD	3 mtgs.in conjunction with TG CIA and AR4 scop.mtg.	114,800 20 journeys	11,480	126,280
Dangerous levels Geneva, Jan 03	Prepare options paper for IPCC-20	57,400 10 journeys	5,740	63,140
Sustainable development Colombo, 5-7 Mar		114,800 20 journeys	11,480	126,280
WG I Cross-cutting, etc (Proposed WG I)		229,600 40 journeys	22,960	252,560
WG II Cross-cutting, etc (Proposed WG II)		229,600 40 journeys	22,960	252,560
WG III Cross-cutting, etc (Proposed WG III)		229,600 40 journeys	22,960	252,560
<b>Progressive total</b>				<b>6,201,792</b>

**TABLE 3 Continued:-**

<b>Activity</b>	<b>Purpose</b>	<b>DC/EIT support</b>	<b>Other Expenditure</b>	<b>Sub-total</b>
<b>Scoping meetings, expert meetings and workshops (cont.)</b>				
AR4 Scoping meeting 1 TBD, April 03	develop AR4 outline	287,000 50 journeys	28,700	315,700
AR4 Scoping meeting 2 Berlin, Sept 03	develop AR4 outline	287,000 50 journeys	28,700	315,700
Stakeholder consultation		22960 4 journeys	2,296	25,256
TGCI Jan 03 and TBD	2 regular mtgs.	80,360 14 journeys	8,036	88,396
EFDB board	15 journeys	86,100	86,100	172,200
<b>Other expenditures</b>				
Publications	Volume 4 TAR, etc.			336,941
	EFDB update/distribution			60,000
Outreach				100,000
Secretariat				700,000
Co-Chairs				200,000
<b>TOTAL</b>				<b>8,515,985</b>
Publications*	Good Practice Guidance	Translation		1,000,000
	GPG	Repro'n/public'n		250,000
<b>Budget approved for 2003 by IPCC-XIX</b>				<b>7,427,760</b>

\* Earmarked contribution from the US

**TABLE 4 (V 1 Mar 03)**
**FORECAST BUDGET FOR 2004 NOTED BY IPCC-XX**

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
<b>Governing bodies</b>				
IPCC-22 2 days	Workprogramme and budget, various	688,800 120 journeys	104,000	792,800
B-31 2 days TBD, March 2004	to select AR4 CLA/LA/RE	103,320 18 journeys	104,000	207,320
B-32 2 days TBD, late 2004	various	103,320 18 journeys	104,000	207,320
WG I Bureau (4)	immediately before B-31	22,960		22,960
WG II Bureau (4)	to select AR4 CLA/LA/RE	22,960		22,960
WG III Bureau (6)		34,440		34,440
TFB	14 journeys	80,360		80,360
SBSTA/COP/JWG	10 journeys	57,400		57,400
<b>LA meetings</b>				
LULUCF Task 3	contingency	450,000	45,000	495,000
Carbon storage	2 LA mtgs - 2nd order and final drafts	287,000 50 journeys	28,700	315,700
HFC/PFC	2 LA mtgs - 1st order and 2nd order drafts	287,000 50 journeys	28,700	315,700
Guidelines Revision	3 LA mtgs for major sectors	344,400 3*20 journeys	34,440	378,840
WG I AR4	1 LA/CLA, chapter mtgs. to prepare 0-order draft	287,000 50 journeys	28,700	315,700
WG II AR4	1 LA/CLA, chapter mtgs. to prepare 0-order draft	287,000 50 journeys	28,700	315,700
WG III AR4	1 LA/CLA, chapter mtgs. to prepare 0-order draft	287,000 50 journeys	28,700	315,700
<b>Scoping meetings, expert meetings and workshops</b>				
WGI Cross-cutting, etc		172,200 30 journeys	17,220	189,420
WGII Cross-cutting, etc		172,200 30 Journeys	17,220	189,420
WGIII Cross-cutting, etc		172,200 30 Journeys	17,220	189,420
TG CIA	2 mtg, 14 journeys	80,360	8,036	88,396
EFDB Board	21 journeys	120,540	12,054	132,594
<b>Other expenditures</b>				
Publications	EFDB update/manag.			60,000
	GPG Training kits			60,000
Outreach				100,000
Secretariat				700,000
Co-Chairs				200,000
<b>TOTAL</b>				<b>5,787,150</b>
<b>Forecast Budget noted by IPCC-19</b>				<b>6,619,140</b>

<b>TABLE 5 (V 1 Mar 03)</b>				
<b>INDICATIVE BUDGET FOR 2005 NOTED BY IPCC-XX</b>				
<b>Activity</b>	<b>Purpose</b>	<b>DC/EIT support</b>	<b>Other Expenditure</b>	<b>Sub-total</b>
<b>Governing bodies</b>				
IPCC-23 2 days	approve/accept Task 3 SR accept WG III action	287,000 50 add journeys	104,000	391,000
IPCC-24 3 days	adopt Task 3 MR approve workprogramme	861,000 150 journeys	156,000	1,017,000
WG III, WG III+I 3 days before IPCC-23	To approve/accept HFC/PFC and Carbon Storage SR	688,800 120 journeys	156,000	844,800
Bureau	3 sessions (3x18 journeys)	309,960	312,000	621,960
TFB	2 sessions, 14 journeys	80,360		80,360
SBSTA/COP/JWG	10 journeys	57,400		57,400
<b>LA meetings</b>				
LULUCF Task 3 contingency		229,600 40 journeys	22,960	252,560
Carbon Storage	final LA mtg. before WG III Session	57,400 10 journeys	5,740	63,140
HFC/PFC	final CLA mtg. before WG III+I Session	57,400 10 journeys	5,740	63,140
Guidelines Revision	4 CLA/LA mtgs. for major sectors	459,200 80 journeys	45,920	505,120
WG I AR4	2 CLA/LA meetings and chapter meetings	574,000 100 journeys	57,400	631,400
WG II AR4	2 CLA/LA meetings and chapter meetings	574,000 100 journeys	57,400	631,400
WG III AR4	2 CLA/LA meetings and chapter meetings	574,000 100 journeys	57,400	631,400
<b>Scoping meetings, expert meetings and workshops</b>				
WG I, II and III requirements		172,200 30 journeys	17,220	189,420
TG CIA	2 mtg. (14 journeys)	80,360	8,036	88,396
EFDB Board	21 journeys	120,540	12,054	132,594
<b>Other Expenditures</b>				
Publications	HFC/PFC	Pub/transl(SPM)		200,000
	Carbon Storage	Pub/transl(SPM)		200,000
	Task 3 SR contingency	Pub/transl(SPM)		300,000
	TFI Supporting Material	publication		70,000
	EFDB update/manag.			60,000
	Reproduction of GL/GPG	copying		8,000
Outreach				100,000
Secretariat				700,000
Co-Chairs				200,000
<b>TOTAL</b>				<b>8,039,090</b>
<b>Indicative budget noted by IPCC-19</b>				<b>6,373,340</b>

<b>TABLE 6 (V 1 Mar 03)</b>				
<b>INDICATIVE BUDGET FOR 2006 NOTED BY IPCC-XX</b>				
<b>Activity</b>	<b>Purpose</b>	<b>DC/EIT support</b>	<b>Other Expenditure</b>	<b>Sub-total</b>
<b>Governing bodies</b>				
IPCC-25 3 days	adopt/accept revised Guidelines various	861,000 150 journeys incl. 10 LAs	156,000	1,017,000
Bureau	3 sessions (3x18 journeys)	309,960	312,000	621,960
WG I Bureau (4)		22,960		22,960
WG II Bureau (4)		22,960		22,960
WG III Bureau (6)		34,440		34,440
TFB	2 sessions, 14 journeys	80,360		80,360
SBSTA/COP/JWG	10 journeys	57,400		57,400
<b>LA meetings</b>				
WG I AR4	1 CLA/LA meeting and chapter meetings	344,400 60 journeys incl. 10 RE	34,440	378,840
WG II AR4	1 CLA/LA meeting and chapter meetings	344,400 60 journeys incl. 10 RE	34,440	378,840
WG III AR4	1 CLA/LA meeting and chapter meetings	344,400 60 journeys incl. 10 RE	34,440	378,840
AR4 SYR	2 writing team mtgs.	114,800 20 journeys	11,480	126,280
<b>Scoping meetings, expert meetings and workshops</b>				
TGCIA	2 mtg. (14 journeys)	80,360	8,036	88,396
EFDB Board	21 journeys	120,540	12,054	132,594
<b>Other Expenditures</b>				
Publications	EFDB update/manag.			60,000
	Revised guidelines	Pub/transl(overv)		300,000
Outreach				300,000
Secretariat				700,000
Co-Chairs				200,000
<b>TOTAL</b>				<b>4,900,870</b>

**TABLE 7 (V 1 Mar 03)****INDICATIVE BUDGET FOR 2007 NOTED BY IPCC-XX**

<b>Activity</b>	<b>Purpose</b>	<b>DC/EIT support</b>	<b>Other Expenditure</b>	<b>Sub-total</b>
<b>Governing bodies</b>				
IPCC-26 3 days	accept WG contributions to AR4 various	688,800 120 journeys	156,000	844,800
IPCC-27 5 days	adopt AR4 SYR various	688,800 120 journeys	260,000	948,800
WG I Session 3 days	approve WG I contribution to AR4	688,800 120 journeys	156,000	844,800
WG II Session 3 days	approve WG II contribution to AR4	688,800 120 journeys	156,000	844,800
WG III Session 3 days	approve WG III contribution to AR4	688,800 120 journeys	156,000	844,800
Bureau	3 sessions (3x18 journeys)	309,960	312,000	621,960
TFB	2 sessions, 14 journeys	80,360		80,360
SBSTA/COP/JWG	10 journeys	57,400		57,400
<b>LA meetings</b>				
WG I AR4	final CLA/LA mtg. before WG session	57,400 10 journeys	5,740	63,140
WG II AR4	final CLA/LA mtg. before WG session	57,400 10 journeys	5,740	63,140
WG III AR4	final CLA/LA mtg. before WG session	57,400 10 journeys	5,740	63,140
AR4 SYR	2 writing team mtgs. incl. REs	172,200 30 journeys	17,220	189,420
<b>Scoping meetings, expert meetings and workshops</b>				
TGCIA	2 mtg. (14 journeys)	80,360	8,036	88,396
EFDB Board	21 journeys	120,540	12,054	132,594
<b>Other Expenditures</b>				
Publications	EFDB update/manag.			60,000
	Publication AR4			1,000,000
	Publication AR4 SYR			250,000
Outreach				300,000
Secretariat				700,000
Co-Chairs				200,000
<b>TOTAL</b>				<b>8,197,550</b>