



WMO

INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



UNEP

REPORT OF THE 21ST SESSION OF THE IPCC (Vienna, Austria, 3 and 6-7 November 2003)

1. OPENING OF THE SESSION

1.1 Call to order

1.1.1 The Chair, Mr Rajendra K. Pachauri called the session to order at 10.30 hrs on Monday, 3 November 2003.

1.1.2 The Session was attended by over 440 persons (Attachment A).

1.2 Opening Addresses

1.2.1 The Chair gave his opening address, outlining the issues faced by the Panel in preparing for the Fourth Assessment Report and highlighted the rigorous efforts undertaken thus far in scoping the structure and contents of the report.

1.2.2 Mr Josef Pröll, the Austrian Federal Minister of Environment welcomed the IPCC to Vienna and delivered a keynote address outlining key climate change issues, their relevance for Austria and measures taken in Austria in response to climate change.

1.2.3 The Executive-Director of the United Nations Environment Programme (UNEP), Mr Klaus Töpfer addressed the Session on key climate and environmental change issues and links among them.

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

1.2.5 Ms Joke Waller-Hunter Executive Secretary of the United Nation Framework Convention on Climate Change (UNFCCC) spoke on the key scientific and technical issues for the Convention process.

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 15.00 to 18.00 hours for the afternoon sessions.

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.

1.4.2 One delegation expressed concern about the arrangements for Working Groups meeting in parallel sessions, which could limit the ability of specific delegations to participate fully in the sessions of the three Working Groups. However, the Chairman and the acting Secretary explained the past precedent for holding such parallel sessions, and noted that advice on that matter was circulated well in advance and the IPCC Trust Fund allowed for funding of one developing country/EIT delegate per Working Group.

2. APPROVAL OF THE DRAFT REPORT OF THE 20TH SESSION

- 2.1 The draft report of the 20th session was approved with an editorial change in paragraph 5.4.5 which reads as follows: “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.”

3. IPCC PROGRAMME AND BUDGET FOR 2004 TO 2007

- 3.1 When introducing this item the Chair reminded the Panel that an open-ended Financial Task Team (FiTT) was established at the Twentieth Session of the IPCC under the Co-Chairs Mr Marc Gillet and Mr Zhenlin Chen for the duration of the Fourth Assessment.
- 3.2 The Financial Task Team met several times during the session to discuss items related to past expenditures, the IPCC Trust Fund management and addressed future budgetary requirements based on the respective work programmes, developed by the three Working Groups and the Task Force, for the duration of the Fourth Assessment period. The FiTT finalized the draft decision of the IPCC work programme and budget for 2004 and preliminary budgets for 2005-2007 and presented these to the Plenary.
- 3.3 The IPCC adopted the programme and budget for 2004, and took note of the forecast budget for 2005 and of the indicative budgets for 2006 and 2007, as contained in ANNEX 1.
- 3.4 The Panel recalled the decision on the IPCC work programme for the four-year period of the Fourth Assessment and encouraged the Chair and the Secretary to ask governments that may be in a position to respond positively, to contribute to the IPCC Trust Fund.

4. ACCEPTANCE AND ADOPTION OF METHODOLOGY REPORTS PREPARED BY THE NATIONAL GREENHOUSE GAS INVENTORIES PROGRAMME ON LAND USE, LAND-USE CHANGE AND FORESTRY (LULUCF) TASKS 1 AND 2

- 4.1 Ms Thelma Krug, co-chair of the Task Force Bureau (TFB), Mr. Jim Penman (UK) and Mr. Gary Richardson (Australia) presented the draft reports on good practice guidance for land use, land-use change and forestry (Task 1) and on definitions and methodological options related to inventory emissions from direct human-induced ‘degradation’ of forests and ‘devegetation’ of other vegetation types (Task 2).
- 4.2 The Panel adopted the overview chapter and accepted the report on good practice guidance for land use, land-use change and forestry with a few corrections.
- 4.3 One country put on record that the use of certain tier 2 and tier 3 methods to estimate carbon emissions and removals from soils as described in sections 3.2.1.3 and 3.2.2.3 are not feasible in the temperate zone.
- 4.4 The Panel adopted the overview chapter and accepted the report on definitions and methodological options in inventory emissions from ‘degradation’ of forests and ‘devegetation’ of other vegetation types without any amendments.
- 4.5 The Panel thanked the Co-chairs of the Task Force Bureau, all authors and Review Editors, governments that hosted authors meetings and the Technical Support Unit of the National Greenhouse Gas Inventories Programme for their efforts in delivering these two reports.

5. ACTIONS TAKEN AT THE NINTH SESSION OF WORKING GROUP I, THE SEVENTH SESSION OF WORKING GROUP II AND THE SEVENTH SESSION OF WORKING GROUP III

- 5.1 The Co-chairs of Working Groups I, II and III introduced the outlines of their respective contributions to the IPCC AR4 as approved by the Working Groups Sessions on 4 and 5 November 2003. The Co-chairs expressed their appreciation for the work of the experts who participated in the

two scoping meetings, and for interactions with the World Climate Research Programme and International Geosphere-Biosphere Programme. They also thanked the delegations for their helpful and constructive comments during the WG sessions.

- 5.2 In the following discussion a number of detailed comments were made and it was agreed that suggestions made in the working groups sessions and in the IPCC plenary would be included in the notes to the authors. These notes will be made available on the IPCC website in time to be taken into consideration by governments in the course of the nominations process for lead authors and expert reviewers.
- 5.3 The Panel accepted the outlines presented by the working group Co-chairs as contained in ANNEX 2, 3 and 4. In this context it was noted that with this acceptance the chapter titles of the Working Group contributions are fixed, but that flexibility remains concerning the content of bulleted headings within the chapters.
- 5.4 Regarding nominations and selection of lead authors and expert reviewers the Panel noted that the need for openness and transparency, the need to aim for geographical balance, involvement of new authors and for expanding the range of disciplines involved in preparing the AR4.
- 5.5 Following the decision by the Panel at its 20th Session, which requested the chair to prepare as part of the scoping meetings a process to ensure the consistent use of scenarios in the AR4, the IPCC Chairman presented a note on emissions scenarios and proposal for handling emissions scenarios related issues in the AR4.
- 5.6 In the discussion delegations commented favourably on the report and proposal by the chairman and made some specific suggestions, which the chairman agreed to take note of in implementing his plan. One delegation put on record the view that until now the criticism of the SRES has not been adequately treated.
- 5.7 The Panel agreed with the proposed approach as contained in ANNEX 5 and asked the Chairman to present a progress report at the 22nd session of the Panel.

6. AR4 SYNTHESIS REPORT

- 6.1 The Panel welcomed the proposal for a Synthesis Report (SYR) for the AR4 submitted by the Chairman. It noted the decisions taken at its 18th, 19th and 20th sessions, as summarised in the Chairman's document, and the substantial work that had already been undertaken by the Marrakech and Potsdam Scoping Meetings and by the Bureau in identifying the lessons learnt from the TAR SYR, the needs for an AR4 SYR and the possible foci and topics to be covered as well as matters of process and timing.
- 6.2 Many delegations stressed the importance of producing a SYR and expressed a range of views on its purpose, target audience, format, scope, content, length, timing and approval process. The Panel noted that the preparation of an AR4 SYR that would meet the expectations of most delegations would require extensive consultation and the early and full commitment of many of those who would also be involved in the preparation of the individual Working Group (WG) reports. It noted that the AR4 SYR could:
 - Bring together the main messages from the individual WG reports;
 - Synthesise cross-cutting information from the individual WG reports, including the AR4 cross-cutting themes;
 - Provide a top-down perspective for decision makers on issues covered by the AR4;
 - Produce an overview of the key conclusions of AR4 in non-technical and readily translatable language;
 - Re-assess the policy relevant questions addressed in the TAR SYR.
- 6.3 Recalling Section 4.4.1 (The Synthesis Report) of its "Procedures for the preparation, review, acceptance, adoption, approval and publication of IPCC Reports" (approved at IPCC-XV, Costa

Rica, 15-18 April 1999), the Panel agreed that the main purpose of an AR4 SYR would be to provide governments, industry, business, and intergovernmental and non-governmental organisations with a comprehensive but concise policy-relevant synthesis of the AR4 Working Group reports.

- 6.4 After extensive discussions, in plenary and in a contact group, on the way ahead the Session agreed that its most urgent task was to establish a process that would enable decisions to be taken, at its 22nd Session, on matters relevant to the preparation of the AR4 SYR.
- 6.5 The Panel, therefore, requested its Chairman, to initiate the follow-up work toward preparation of the AR4 SYR and, in particular, to arrange for the following key steps in advance of its 22nd session:
- (a) Development of a draft scoping document, in consultation with the Working Group Co-chairs, based on the proposal submitted to this session and taking into account the discussions during the session, for circulation to all IPCC governments for their comments and suggestions;
 - (b) Organisation of an AR4 SYR Scoping Meeting to develop specific detailed recommendations on the scope, content and process for preparation of the AR4 SYR based on the draft scoping document and the government comments received;
 - (c) Invitation to governments to comment on the output from the Scoping Meeting as a basis for preparation of a revised scoping document by the Chairman in consultation with the Working Group Co-chairs;
 - (d) Submission of the revised scoping document to IPCC-XXII in a form that would facilitate decision and prompt follow-up action on matters relevant to the preparation of the AR4 SYR.
- 6.6 In order to ensure the preparation of a widely acceptable proposal and a high quality AR4 SYR that builds on the experience of the TAR and takes account of the full range of views, including those canvassed during the session, the Panel encouraged its members, its Working Group Co-Chairs and their Lead Authors, when appointed, to contribute as fully as possible to the scoping process. The Panel noted that it could be desirable to involve representatives of the user community in the scoping process.
- 6.7 In the discussion some delegations, while supporting the proposed next steps expressed some disappointment that it was not possible to reach an agreement on preparing a synthesis report its scope and nature at the present session and urged the Panel to take a decision at its 22nd session. One delegation put on record that agreement to the process does not mean a decision in principle to prepare a Synthesis Report.
- 7. PROPOSALS FOR TECHNICAL PAPERS**
- 7.1 Mr Martin Parry, Co-chair of Working Group II introduced the scoping paper for a technical paper on climate change and water as requested by the Panel at its 20th session.
- 7.2 Delegations welcomed the proposal, urged to involve a broad range of expertise and made a few suggestions on substantive matters.
- 7.3 The Panel agreed to prepare a technical paper on climate change and water to be finalised in the 3rd quarter 2007 and it agreed with the process and possible areas to be covered by the technical paper, as presented in the proposal submitted by the Co-chairs of Working Group II.
- 7.4 During consideration of a proposal by the Secretariat concerning the AR4 product set a number of views were expressed in the Plenary. The Chairman formed a contact group to establish the terms of reference for a document on the AR4 product set that the Bureau should prepare for the next Plenary.
- 7.5 In the contact group many delegations stressed a need to ensure that the AR4 product set provides regionally relevant information and that the Bureau and Working Group Co-chairs take into account the need for integration of regional information when appointing the AR4 Writing Teams.

However, the group agreed that a decision on specific regionally focused products from the AR4 can only be taken after further scoping of needs and priorities and in view of the full range of proposed AR4 products.

- 7.6 It was recognized that the needs and priorities for AR4 information products may vary from country to country and region to region and are closely connected with outreach issues. It was noted that the suite of possible IPCC products cannot themselves reach all audiences but can provide a basis on which to enable further outreach by governments and other organizations and information providers.
- 7.7 The contact group agreed that it was still too early to rule out any options and that inviting governments' views on information products related to the AR4 would be an important step to facilitate the Bureau's work to develop a more concise list of options and their implications.
- 7.8 The contact group therefore recommended that the Panel:
- Request the IPCC secretariat to invite governments to provide their views on needs, priorities and key audiences for communicating information contained in the AR4. Governments should also be invited to identify which products related to the AR4 (e.g. annexes to AR4 reports, Technical Papers, seminars, workshops, TGICA materials) would best fulfill these needs, recognizing IPCC resource limitations.
 - Request the Bureau to prepare a revised document taking into account governments' views, the framework and set of criteria for establishing priorities for AR4 (IPCC 20, Decision 2), and the following issues:
 - Past experiences with assessment products and outreach activities that might be relevant for determining a suitable set of products;
 - Products that are appropriate for the IPCC's consideration, within the IPCC mandate and resource base;
 - Resources: time, effort, capacities of authors and the TSUs, and costs;
 - Synergies and trade-offs with other agreed or proposed AR4 products, including outreach;
 - Mechanisms and the process by which these products would be produced and disseminated.

- 7.9 The Panel agreed with the recommendations of the contact group and, with the aim to reach an early decision on all aspects of the AR4 products, requested the Bureau to provide a revised document for decision by IPCC-XXII.

8. PROPOSAL FOR FURTHER ACTION ON THE DEVELOPMENT OF PRACTICABLE METHODOLOGIES TO FACTOR OUT DIRECT HUMAN-INDUCED CHANGES IN CARBON STOCKS AND GREENHOUSE GAS EMISSIONS BY SOURCES AND REMOVALS BY SINKS (LULUCF Task 3)

- 8.1 The IPCC Chairman introduced the report of the IPCC expert meeting on current scientific understanding of the processes affecting terrestrial carbon stocks and human influences upon them which was held in Geneva 21-23 July 2003 following the decision by the 20th Session of the Panel on that matter. He also informed the Panel on the consultations in the IPCC-UNFCCC Joint working Group which took place on 5 November 2003 in Vienna which suggested that the report of the expert meeting will be sent to SBSTA for consideration.
- 8.2 Delegations took note of the outcome of the science meeting. One delegation explicitly noted lack of transparency in conducting the expert meeting and expressed regret that no experts familiar with the UNFCCC process were involved. All delegations that took the floor expressed the view that even if the development of practicable methodologies is not possible at this time that the IPCC should remain open to the requirements of SBSTA. One delegation noted that an indication about research needs to be able to develop factoring out methodologies would be useful, and that the report of the IPCC expert meeting contains already a list of such research needs.

8.3 The Panel agreed to submit the report of the expert meeting to SBSTA. It asked the Chairman to consider in the cover note the views expressed at this session and to explain the nature of the document.

9. REVISION OF THE ‘REVISED 1996 IPCC GUIDELINES FOR NATIONAL GREENHOUSE GAS INVENTORIES’

9.1 Mr Taka Hiraishi, co-chair of the TFB, introduced the scoping paper for the revision of the “Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories”.

9.2 Different views were expressed on the inclusion of an appendix on aerosols. Some delegations highlighted that such an appendix by no means should prejudge the inclusion of aerosols in national greenhouse gas inventories reported to the UNFCCC. Several delegations expressed support for keeping the appendix while others highlighted the need to improve the understanding of aerosols and other forcing agents and noted the work carried out under other relevant bodies such as the UNECE LRTAP should be taken into consideration.

9.3 The Panel took note of the views expressed on the matter of aerosols and agreed to revisit the matter of the appendix at its 22nd Session. It also agreed that a small expert meeting on aerosols should be convened by the Task Force on National Greenhouse Gas Inventories, which would draw on a broad range of relevant expertise, including experts involved in the WG I assessment.

9.4 The Panel approved the terms of reference, with the addition of a sentence referring to the UNFCCC review of national greenhouse gas inventories, and the table of contents and workplan as presented by the TFB Co-chairs, but without the appendix on aerosols.

10. REVIEW OF THE MANDATE OF THE TASK GROUP ON SCENARIOS FOR CLIMATE AND IMPACTS ASSESSMENT (TGCIA)

10.1 Mr Richard Moss, Chair of the TGCIA introduced a proposal for a new mandate, refreshment of membership and activities. A number of comments were made concerning the proposal for a revised mandate for the TGCIA and the appropriate revisions were made.

10.2 The Panel agreed with the proposal to change the name of the group to “Task Group on Data and Scenario Support for Impact and Climate Analysis (TGICA)”. It thanked the TGICA chair, accepted the revised mandate as contained in ANNEX 6 and agreed with the proposed process for refreshment of the TGICA membership and the appointment of a co-chair from a developing country or country with economy in transition.

11. PROCEDURAL MATTERS

11.1 Election procedures

11.1.1 IPCC Vice Chair Mr Richard Odingo introduced a proposal for election procedures for the Bureau of the IPCC and the TFB. Most delegations expressed the view that more work will be required to refine the proposal. A number of specific comments were made.

11.1.2 The Panel agreed that an open-ended group should prepare a revised proposal for submission to IPCC-22. The group will be jointly chaired by Mr Richard Odingo (Kenya) and Mr David Warrilow (UK) and while being open ended it should have a core membership of representatives from Iran, China, Spain, the United States of America, Austria, Georgia and New Zealand. All governments were invited to submit comments on the proposed election procedures to the two co-chairs and the IPCC Secretariat by end of December.

11.2 Review of IPCC Principles

11.2.1 Mr John Stone reported on the review of the “Principles Governing IPCC Work” that was carried out by a small Bureau group, following the request by IPCC-20. The group concluded that the principles are sound and adequate for governing IPCC work and that there is no need for significant revision at this time. A few editorial changes however are necessary to reflect recent Panel decisions concerning the Task Force on National Greenhouse Gas Inventories and methodology reports.

11.2.2 The Panel agreed with the recommendation of the group and approved the Principles Governing IPCC Work as contained in ANNEX 7. In this context it was noted the election procedures for the Bureau of the IPCC and the TFB would become Appendix C of the Principles and therefore a reference to this Appendix needs to be added as paragraph 19 of the Principles as soon as the election procedures have been approved by the Panel.

12. PROGRESS REPORTS

12.1 Special Report on Safeguarding the Ozone Layer and the Global Climate System: Issues Related to Hydrofluorocarbons and Perfluorocarbons

12.1.1 Mr Bert Metz, Co-chair of Working Group III presented the progress report on behalf of the Steering Committee. The Panel expressed its appreciation for the progress achieved.

12.2 Special Report on Carbon Dioxide Capture and Storage

12.2.1 Mr Bert Metz, Co-chair of Working Group III presented the progress report. The Panel expressed its appreciation for the progress achieved.

12.3 GCOS Adequacy Report

12.3.1 The IPCC Chair reported on further action taken and the responses received and drew the attention of the Panel to a progress report provided by the CGOS Secretariat. The Panel noted the progress and requested to be kept informed about further developments.

13. OUTREACH

13.1 Mr John Stone, Co-chair of the Outreach Task Group, presented the following proposal for further activities that was developed by the group at its meeting on 7 November 2003:

- The IPCC Secretariat should develop a list of meeting opportunities for possible IPCC outreach activities
- The IPCC Secretariat should develop and maintain a list of speakers
- Short brochures should be developed on topics such as what is the IPCC, what is climate change or what is SRES, which may later be combined in a ring binder.

14. OTHER BUSINESS

14.1 Germany presented a proposal for a special report on renewable energy sources as major mitigation option. It was agreed that the Bureau will discuss financial and other resource implications of such an activity and then decide whether and how the proposal would be presented at IPCC-22.

15. TIME AND PLACE OF THE NEXT SESSION

15.1 The next session is planned in October/November 2004.

16. CLOSING

16.1 The session closed on 7 November 2003 at 16.40.



LIST OF PARTICIPANTS

**IPCC Working Group I - Ninth Session
IPCC Working Group II - Seventh Session
IPCC Working Group III - Seventh Session**
Vienna, 4-5 November 2003

**Intergovernmental Panel on Climate Change
Twenty-First Session**
Vienna, 3, 6-7 November 2003

N.B.	(H)	- Head of Delegation
	(B)	- IPCC Bureau member
	(TFB)	- Task Force Bureau member
	(LA)	- Lead Author
	(RE)	- Review Editor

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INTERGOVERNMENTAL PANEL
ON CLIMATE CHANGEIPCC-XXI/Doc. 1
(26.VIII.2003)TWENTY-FIRST SESSION
Vienna, 3 and 6-7 November 2003Agenda item: 1
ENGLISH ONLY

PROVISIONAL AGENDA

Participants can register from 08.00 hours on 3 November in the lobby of the main gate to the UN, Wagramer Strasse 5, Checkpoint: 1. [Underground (U-Bahn) Kaisermühlen-Vienna International Center].

The session will start at 10.00 hours in the Austria Center Vienna, level U2, Salle G/H. The meeting venue can only be reached through the main gate to the UN. The session will be adjourned on 4 and 5 November to convene the Ninth Session of Working Group I, the Seventh Session of Working Group II and the Seventh Session of Working Group III

- 1. OPENING OF THE SESSION**
- 2. APPROVAL OF THE DRAFT REPORT OF THE 20TH SESSION (Doc. 3)**
- 3. IPCC PROGRAMME AND BUDGET FOR 2004 TO 2007 (Doc. 4)**
- 4. ACCEPTANCE AND ADOPTION OF METHODOLOGY REPORTS PREPARED BY THE NATIONAL GREENHOUSE GAS INVENTORIES PROGRAMME ON LAND USE, LAND-USE CHANGE AND FORESTRY (LULUCF) TASKS 1 AND 2**
 - 4.1 Acceptance/adoption of the draft report on good practice guidance for land use, land-use change and forestry (Task 1)
 - 4.2 Acceptance/adoption of the draft report on definitions and methodological options to inventory emissions from 'degradation' of forests and 'devegetation' of other vegetation types (Task 2)
- 5. ACTIONS TAKEN AT THE NINTH SESSION OF WORKING GROUP I, THE SEVENTH SESSION OF WORKING GROUP II AND THE SEVENTH SESSION OF WORKING GROUP III**
- 6. AR4 SYNTHESIS REPORT**
- 7. PROPOSALS FOR TECHNICAL PAPERS**
- 8. PROPOSAL FOR FURTHER ACTION ON THE DEVELOPMENT OF PRACTICABLE METHODOLOGIES TO FACTOR OUT DIRECT HUMAN-INDUCED CHANGES IN CARBON STOCKS AND GREENHOUSE GAS EMISSIONS BY SOURCES AND REMOVALS BY SINKS (LULUCF Task 3)**

- 9. REVISION OF THE ‘REVISED 1996 IPCC GUIDELINES FOR NATIONAL GREENHOUSE GAS INVENTORIES’**
- 10. REVIEW OF THE MANDATE OF THE TASK GROUP ON SCENARIOS FOR CLIMATE AND IMPACTS ASSESSMENT (TGCIA)**
- 11. PROCEDURAL MATTERS**
 - 11.1 Election procedures
 - 11.2 Review of IPCC Principles
- 12. PROGRESS REPORTS**
 - 12.1 Special Report on Safeguarding the Ozone Layer and the Global Climate System: Issues Related to Hydrofluorocarbons and Perfluorocarbons
 - 12.2 Special Report on Carbon Dioxide Capture and Storage
 - 12.3 GCOS Adequacy Report
- 13. OUTREACH**
- 14. OTHER BUSINESS**
- 15. TIME AND PLACE OF THE NEXT SESSION**
- 16. CLOSING OF THE SESSION**

Decision taken during the IPCC-XXI session on the Programme and Budget for 2004 to 2007

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

1. Thanked the Acting Secretary of the IPCC for the presentation of the IPCC Trust Fund programme and budget for 2004 and preliminary budgets for 2005-2007, contained in documents IPCC-XXI/Doc. 4 and Doc. 4, Rev.1.
2. Noted that in response to Decision 10 of the 19th Plenary, which sought some reform on the reporting of the IPCC Trust Fund, the Acting Secretary of the IPCC provided information in Part A of document IPCC-XXI/Doc. 4, related to timing for budget proposals, budget format and end-of-year financial report.
3. Thanked the WMO Secretariat for the information provided and encouraged the Secretariat to continue providing to the governments annual financial reports at the beginning of each year.
4. Noted that fund raising letters were sent to a number of governments seeking regular contributions to the IPCC Trust Fund, as well as letters to the Executive Secretary of the Convention on Biological Diversity seeking a contribution to the cost of the preparation of the Technical Paper on “Climate Change and Biodiversity”.
5. Took note of the revenues and expenditures for 2001, 2002 and 2003 as presented in IPCC-XXI/Doc. 4 and IPCC-XXI /Doc. 4, Rev.1 and noted that the contribution to the IPCC Trust Fund over the recent years has been around 4M to 5M CHF per annum, but that for the forthcoming four-year period of the Fourth Assessment, the average requirements are expected to be around 6.2 million CHF per annum.
6. Took note of the proposal of the planned expenditure presented in IPCC-XXI/Doc. 4, Rev.1 and thanked the Acting Secretary for presenting a clear integrated forecast of expenses over the 4-year period of the Fourth Assessment.
7. Adopted the revised budget for the year 2004 as attached.
8. Took note of the forecast budget for 2005 and of the indicative budgets for 2006 and 2007 as attached.
9. Requested that for the next IPCC Plenary an indicative budget for the year 2008 be prepared, particularly in the light of anticipated outreach activities.
10. Encouraged the Working Group Bureaux, the Task Force Bureau and the Co-chair of TGCIA to continue providing the IPCC Secretariat with early notice of planned meetings and other activities proposed to be funded by the IPCC Trust Fund.
11. Urged the Secretariat to explore ways of levelling the annual expenditure of the IPCC while accommodating the peaks and troughs of the work programme.
12. Recommended the Secretariat to update and present the annual rate of voluntary cash contributions to the IPCC Trust Fund since its inception and communicate this information to governments when seeking voluntary contributions to the Trust Fund.
13. Expressed its deep gratitude to the WMO, UNEP, UNFCCC and governments, in particular from developing countries, 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 the web-site support.
14. Invited governments that may be in a position to respond positively to contribute to the IPCC Trust Fund taking into account the work programme and financial requirements for the full assessment period.

TABLE 1
2004 BUDGET APPROVED BY IPCC-XXI

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
Governing bodies				
IPCC-22 4 days	Work programme and budget, various	540,000 120 journeys	208,000	748,000
B-31 2 days TBD, March 2004	to select AR4 CLA/LA/RE	81,000 18 journeys	104,000	185,000
B-32 2 days TBD, late 2004	various	81,000 18 journeys	104,000	185,000
WG I Bureau	to select AR4 CLA/LA/RE	18,000 4 journeys	2,340	20,340
WG II Bureau	to select AR4 CLA/LA/RE	18,000 4 journeys		20,340
WG III Bureau	to select AR4 CLA/LA/RE	27,000 6 journeys	3,510	30,510
TFB	2 sessions	63,000 14 journeys	8,190	71,190
SBSTA/COP/JWG		45,000 10 journeys		45,000
SUB-TOTAL				1,305,380
LA meetings				
Carbon storage	2 LA mtgs - 2nd order and final drafts	225,000 50 journeys	29,250	254,250
HFC/PFC	3 LA mtgs -1st order and 2nd order drafts	337,500 75 journeys	43,875	381,375
Guidelines Revision	5 LA mtgs for major sectors 1 joint Expert Meeting	450,000 5x20 journeys 45,000 10 journey	58,500 5,850	508,500 50,850
WG I AR4	1 LA/CLA, chapter mtgs. to prepare 0-order draft	198,000 44 journeys	25,740	223,740
WG II AR4	1 LA/CLA, chapter mtgs. to prepare 0-order draft	378,000 84 journeys	49,140	427,140
WG III AR4	1 LA/CLA, chapter mtgs. to prepare 0-order draft	310,500 69 journeys	40,365	350,865
SUB-TOTAL				2,196,720
Scoping meetings, expert meetings and workshops				
SyR AR4 Scoping Mtg.	To develop scoping document	180,000 40 journeys	23,400	203,400
Uncertainty and Risk WS (WG I lead)	To consider guidelines for treatment of uncertainty	94,500 21 journeys	12,285	106,785
Regional Climate (WG I lead)	Regions coord. treatment across WGs	108,000 24 journeys	14,040	122,040
Exp. Mtg. On Article 2 and KV (WG II Lead)	Issue on Article 2 and KV development	135,000 30 journeys	17,550	152,550
Exp. Mtg. on Adaptation & Mitigation and Sustainable Development	Address inter-linkages in chapters/sections	135,000 30 journeys	17,550	152,550

Climate Sensitivity WS *	Science meeting, assessment and use of climate sensitivity	90,000 20 journeys	11,700	101,700
Exp. Meeting on Long-term Mitigation and Stabilization Scenarios	preparation AR4 (possible input from WG II)	76,500 17 journeys	9,945	86,445
Exp. Meeting on Industrial Technology Dev. & Transfer	preparation AR4	67,500 15 journeys	8,775	76,275
TGCIA	2 meetings	63,000 14 journeys	8,190	71,190
EFDB Board		94,500 21 journeys	12,285	106,785
SUB-TOTAL				1,179,720
Other expenditures				
Publications	EFDB update/management			60,000
	GPGB Training kits			60,000
Outreach				100,000
Secretariat				770,000
Co-Chairs				200,000
TOTAL				5,871,820

* Approved by IPCC-XX

TABLE 2
FORECAST BUDGET FOR 2005 NOTED BY IPCC-XXI

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
Governing bodies				
IPCC-23 3 days	approve work programme	675,000 150 journeys	156,000	831,000
WG III, WG III+I 6 days before IPCC-23	To approve/accept HFC/PFC and Carbon Storage SR	540,000 120 journeys	312,000	852,000
Bureau	2 sessions	162,000 2x18 journeys	208,000	370,000
TFB	3 sessions	94,500 21 journeys	12,285	106,785
SBSTA/COP/JWG		45,000 10 journeys		45,000
SUB-TOTAL				2,204,785
LA meetings				
Carbon Storage	final LA mtg. before WG III Session	45,000 10 journeys	5,850	50,850
HFC/PFC	final CLA mtg. before WG III+I Session	45,000 10 journeys	5,850	50,850
Guidelines Revision	3 CLA/LA mtgs. for major sectors	450,000 100 journeys	58,500	508,500
WG I AR4	2 CLA/LA meetings and chapter meetings	585,000 130 journeys	76,050	661,050
WG II AR4	2 CLA/LA meetings and chapter meetings	814,500 181 journeys	105,885	920,385
WG III AR4	1 CLA/LA meeting and chapter meetings	427,500 95 journeys	55,575	483,075
SUB-TOTAL				2,674,710
Scoping meetings, expert meetings and workshops				
Exp. Meeting on Simple Climate Models	to review use of SCMs and EMICs	45,000 10 journeys	5,850	50,850
Exp. Meeting on Article 2 and KV	WG II lead	135,000 30 journeys	17,550	152,550
Expert Mtg. on Scenarios	Preparation AR5	90,000 20 journeys	11,700	101,700
TGCIA	2 mtgs.	63,000 14 journeys	8,190	71,190
EFDB Board		94,500 21 journeys	12,285	106,785
SUB-TOTAL				483,075
Other Expenditures				
Publications	HFC/PFC	Pub/transl(SPM)		200,000
	Carbon Storage	Pub/transl(SPM)		200,000
	TFI Supporting Material	Publication		70,000
	EFDB update/manag.			60,000
	Reproduction of GL/GPG	Copying		8,000
Outreach				100,000
Secretariat				770,000
Co-Chairs				200,000
TOTAL				6,970,570

TABLE 3
INDICATIVE BUDGET FOR 2006 NOTED BY IPCC-XXI

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
Governing bodies				
IPCC-24 3 days	adopt/accept revised Guidelines various	675,000 150 journeys incl. 10 LAs	156,000	831,000
Bureau	2 sessions	162,000 2x18 journeys	208,000	370,000
TFB	2 sessions	63,000 14 journeys	8,190	71,190
SBSTA/COP/JWG		45,000 10 journeys		45,000
SUB-TOTAL				1,317,190
LA meetings				
WG I AR4	1 CLA/LA meeting and technical summary meeting	270,000 60 journeys	35,100	305,100
WG II AR4	1 CLA/LA meeting and chapter meetings	270,000 60 journeys incl. 10 RE	35,100	305,100
WG III AR4	2 CLA/LA meetings and technical summary meeting	765,000 170 journeys	99,450	864,450
AR4 SYR	2 writing team meetings.	90,000 20 journeys	11,700	101,700
LA Mtg. Climate Change and Water	Preparation TP	67,500 15 journeys	8,775	76,275
SUB-TOTAL				1,652,625
Scoping meetings, expert meetings and workshops				
TGCIA	2 mtgs.	63,000 14 journeys	8,190	71,190
EFDB Board		94,500 21 journeys	12,285	106,785
SUB-TOTAL				177,975
Other Expenditures				
Publications	EFDB update/management			60,000
	Revised guidelines	Pub/transl(overv)		300,000
Outreach				300,000
Secretariat				770,000
Co-Chairs				200,000
TOTAL				4,777,790

TABLE 4
INDICATIVE BUDGET FOR 2007 NOTED BY IPCC-XXI

Activity	Purpose	DC/EIT support	Other Expenditure	Sub-total
Governing bodies				
IPCC-25 3 days	accept WG contributions to AR4 various	540,000 120 journeys	156,000	696,000
IPCC-26 5 days	adopt AR4 SYR various	540,000 120 journeys	260,000	800,000
WG I Session 3 days	approve WG I contribution to AR4	540,000 120 journeys	156,000	696,000
WG II Session 3 days	approve WG II contribution to AR4	540,000 120 journeys	156,000	696,000
WG III Session 3 days	approve WG III contribution to AR4	540,000 120 journeys	156,000	696,000
Bureau	2 sessions	162,000 2x18 journeys	208,000	370,000
TFB	1 sessions	31,500 7 journeys	4,095	35,595
SBSTA/COP/JWG		45,000 10 journeys		45,000
SUB-TOTAL				4,034,595
LA meetings				
WG I AR4	final CLA/LA mtg. before WG session	45,000 10 journeys	5,850	50,850
WG II AR4	final CLA/LA mtg. before WG session	45,000 10 journeys	5,850	50,850
WG III AR4	final CLA/LA mtg. before WG session	45,000 10 journeys	5,850	50,850
AR4 SYR	2 writing team mtgs. incl. REs	135,000 30 journeys	17,550	152,550
LA Mtg. Climate Change and Water	Preparation TP	67,500 15 journeys	8,775	76,275
SUB-TOTAL				381,375
Scoping meetings, expert meetings and workshops				
TGCIA	2 mtgs.	63,000 14 journeys	8,190	71,190
EFDB Board		94,500 21 journeys	12,285	106,785
SUB-TOTAL				177,975
Other Expenditures				
Publications	EFDB update/management			60,000
	Publication AR4			1,000,000
	Publication AR4 SYR			250,000
Outreach				300,000
Secretariat				770,000
Co-Chairs				200,000
TOTAL				7,173,945

**OUTLINE FOR THE IPCC WORKING GROUP I CONTRIBUTION TO
THE FOURTH ASSESSMENT REPORT
CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS**

Summary for Policymakers
Technical Summary

1. Historical Overview of Climate Change Science

Executive Summary

- Introduction
- Progress in Observations
- Progress in Understanding of Radiative Forcing, Processes, and Coupling
- Progress in Climate Modelling
- Advances in Understanding Uncertainties

Appendix: Glossary of Terms

2. Changes in Atmospheric Constituents and in Radiative Forcing

Executive Summary

- Introduction
- Definition and Utility of Radiative Forcing
- Recent Changes in Greenhouse Gases
- Aerosols – Direct and Indirect Radiative Forcing
- Radiative Forcing due to Land Use Changes
- Contrails and Aircraft-Induced Cirrus
- Variability in Solar and Volcanic Radiative Forcing
- Synthesis of Radiative Forcing Factors
- GWPs and Other Metrics for Comparing Different Emissions

Appendix: Techniques, Error Estimation, and Measurement Systems

3. Observations: Surface and Atmospheric Climate Change

Executive Summary

- Introduction
- Changes in Surface Climate
- Changes in the Free Atmosphere
- Changes in Atmospheric Circulation
- Patterns of Variability
- Changes in the Tropics and Sub-Tropics
- Extra-Tropical Changes
- Changes in Extreme Events
- Synthesis: Consistency across Observations

Appendix: Techniques, Error Estimation, and Measurement Systems

4. Observations: Changes in Snow, Ice and Frozen Ground

Executive Summary

- Introduction
- Changes in Snow Cover and Albedo
- Sea Ice Extent and Thickness Changes
- Changes in Glaciers and Small Ice Caps
- Changes and Stability of Ice Shelves
- Changes and Stability of Ice Sheets
- Changes in Frozen Ground

5. Observations: Oceanic Climate Change and Sea Level

Executive Summary

- Introduction
- Changes in Ocean Salinity, Temperature, Heat Uptake, and Heat Content
- Biogeochemical Tracers
- Changes in Ocean Circulation and Water Mass Formation
- Sea Level: Global and Regional Changes

Appendix: Techniques, Error Estimation, and Measurement Systems

6. Paleoclimate

Executive Summary

- Introduction
- Proxy Methods and their Uncertainty
- Inferred Past Climate System Change
- Abrupt Climate Change
- Paleo-Environmental Model Evaluation and Sensitivity
- Synthesis: Insights into Climate System Behavior

Appendix: Guide to the Use of Paleoclimatic Information.

7. Couplings Between Changes in the Climate System and Biogeochemistry

Executive Summary

- Introduction to Biogeochemical Cycles
- The Carbon Cycle and the Climate System
- Global Atmospheric Chemistry and Climate Change
- Air Quality and Climate Change
- Aerosols and Climate Change
- The Changing Land Surface and Climate
- Synthesis: Interactions Among Cycles and Processes

8. Climate Models and their Evaluation

Executive Summary

- Advances in Modeling
- Evaluation of Contemporary Climate as Simulated by Coupled Global Models
- Evaluation of Large Scale Climate Variability as Simulated by Coupled Global Models
- Evaluation of the Key Relevant Processes as Simulated by Coupled Global Models
- Model Simulations of Extremes
- Climate Sensitivity
- Evaluation of Model Simulations of Thresholds and Abrupt Events
- Representing the Global System With Simpler Models

9. Understanding and Attributing Climate Change

Executive Summary

- Introduction
- Radiative Forcing and Climate Response
- Seasonal-to-Interannual Predictions of Climate Change and their Reliability
- Understanding Pre-Industrial Climate Change
- Understanding Climate Change During the Instrumental Era

Appendix: Methods used to assess predictability

Appendix: Methods used to detect externally forced signals (detection/attribution)

Appendix: Methods used to assess uncertainty

10. Global Climate Projections

Executive Summary

- Introduction
- Projected Radiative Forcing
- Timescales of Response
- Climate Change to 2100 and Beyond
- Sea Level Projections
- Scenarios and Simple Models
- Uncertainties in Global Model Projections

11. Regional Climate Projections

Executive Summary

- Introduction
- Evaluation of Regionalization Methods
- Alternative Simple Methods
- Projections of Regional Climate Changes
- Small Islands
- Uncertainties in Regional Projections

List of Authors and Reviewers

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**OUTLINE FOR THE IPCC WORKING GROUP II CONTRIBUTION TO
THE FOURTH ASSESSMENT REPORT
CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY**

Summary for Policymakers
Technical Summary

Introduction

- Scope of this Assessment
- Relation to other reports and studies

A. ASSESSMENT OF OBSERVED CHANGES

1. Assessment of Observed Changes and Responses in Natural and Managed Systems

- Methods in detection and attribution of observed changes
 - Data and methods in observation of current and recent changes, including extremes
 - Climate and non-climate drivers of change
 - Exploring confidence in methods and results
- Systems and sectors under investigation: observed changes including vulnerability and adaptation
 - Cryosphere
 - Hydrology and water resources
 - Coastal processes and zones
 - Terrestrial biological systems
 - Freshwater and marine biological systems
 - Agriculture and forestry
 - Human health
 - Aspects of socio-economic systems
 - Disasters and hazards
- Larger scale aggregation and attribution
 - Regional aspects and dimensions of the issue
 - Relative sensitivity, resilience and adaptive capacity of different systems
 - Assessing the relation of observed changes in systems to regional climate trends
 - Assessing the relation of observed regional climate trends to anthropogenic climate change
 - Uncertainties and confidence levels
 - Learning from current and recent observed adaptation

B. ASSESSMENT OF FUTURE IMPACTS AND ADAPTATION: SYSTEMS AND SECTORS

2. New Assessment Methodologies and the Characterisation of Future Conditions

- New developments in methods
 - Resulting uncertainties and confidence levels
 - Characterising the future: climate/other environmental/socio-economic assumptions
 - Data requirements for assessment
 - Sensitivity analysis
 - The development and application of scenarios including extreme events
 - Stabilisation scenarios
 - Future requirements; caveats and uncertainties

Content guide for subsequent chapters in section B:

1. Scope, key issues, summary of TAR conclusions, specific methods
2. Current sensitivity/vulnerability: to weather and climate (including extreme events); and to other stresses; recent and current trends; current adaptation
3. Assumptions about future trends: climate, development, technology, etc.
4. Key future impacts and vulnerabilities
5. Costs and other socio-economic aspects
6. Adaptation: practices, options and constraints
7. Implications for sustainable development
8. Key uncertainties, confidence levels, unknowns, research gaps and priorities

3. Fresh Water Resources and their Management

- Water cycle: precipitation, evapotranspiration, soil moisture, snow cover
- Surface water: rivers, lakes, ice cover; quantity and quality
- Groundwater: extraction, salinisation; quantity and quality
- Water demand and use: agriculture, industry, energy, domestic
- Extreme events: floods, droughts and other precipitation events

4. Ecosystems, their Properties, Goods and Services

- Grasslands and savannahs
- Forests and woodlands
- Deserts
- Tundra
- Mediterranean ecosystems
- Wetlands
- Freshwater lakes and rivers
- Mountains
- Oceans, shallow seas and their ecosystems
- Overall implications for biodiversity

5. Food, Fibre and Forest Products

- Food-crop farming
- Livestock production
- Industrial crops and biofuels
- Forestry
- Fisheries: marine and fresh water; aquaculture and marine farming
- Global food trade and food security
- Subsistence systems, local food supply, regional employment and rural livelihood
- Further environmental consequences with respect to: water use, run-off, land use

6. Coastal Systems and Low-lying Areas

- Natural systems, including their services
 - Wetlands, mangroves, mudflats and coral reefs
 - Deltas, estuaries and lagoons
 - Beaches and clifffed coasts
 - Atoll island systems

- Human society
 - Water supply (including aquifers)
 - Agriculture, forestry and fisheries (including aquaculture)
 - Human settlement, built infrastructure, industrial development; migration
 - Health
 - Tourism/recreation
- Extra-coastal effects on coastal environments
 - Inland effects: freshwater input and quality, sediment input
 - Oceanic effects

7. Industry, Settlement, and Society

- Industry: manufacturing, construction, energy
- Services: retailing and trade, transport, tourism, insurance and finance
- Utilities: water supply, energy, waste disposal
- Human settlement: urbanisation, urban design, planning, rural settlement
- Social issues: demography, migration, employment, livelihood and culture

8. Human Health

- Thermal stress
- Physical effects of extreme weather and climate events
- Synergies and interactions with environmental quality e.g. air and water quality and aeroallergens
- Infectious diseases (including water- and vector-borne) and changing distributions; emerging diseases
- Changes in food quality, food supply and nutrition
- Demographic, economic and social aspects of health
- Cumulative effects; multiple stresses

C. ASSESSMENT OF FUTURE IMPACTS AND ADAPTATION: REGIONS

Content guide for chapters in section C:

1. Summary of knowledge assessed in the TAR
2. Current sensitivity/vulnerability: to weather and climate (including extreme events); and to other stresses; recent and current trends; current adaptation
3. Assumptions about future trends: climate, development, technology, etc.
4. Summary of expected key future impacts and vulnerabilities and their spatial variation
5. Adaptation: practices, options and constraints and their spatial variation
6. Case studies
7. Implications for sustainable development
8. Key uncertainties, confidence levels, unknowns, research gaps and priorities

Chapter 9: Africa

Chapter 10: Asia

Chapter 11: Australia and New Zealand

Chapter 12: Europe

Chapter 13: Latin America

Chapter 14: North America

Chapter 15: Polar Regions (Arctic and Antarctic)

Chapter 16: Small Islands

D. ASSESSMENT OF RESPONSES TO IMPACTS

17. Assessment of Adaptation Practices, Options, Constraints and Capacity

- Methods and concepts: vulnerability, resilience, adaptive capacity
- Assessment of current adaptation practices: current vulnerability, risk management, local knowledge; adapting to current climate and other stresses; policies and institutions
- Assessment of adaptation capacity, options and constraints: criteria for decision making; effectiveness; benefits and costs; limitations/barriers; role of technology; links to development; equity issues
- Enhancing adaptation: opportunities; development and transfer of technologies and know-how; constraints; adaptive learning

18. Inter-relationships between Adaptation and Mitigation

- Elements for effective implementation: determinants, capacities
- Objectives and decision processes: reducing sensitivity vs. exposure; dealing with risk
- Scale issues: global, national, sectoral, local and project levels
- Timing issues: timing of outcomes, including rates of change; time discounting
- Differing roles of stakeholders: governments, private, civil society
- Consideration of costs and damages avoided and/or benefits gained
- Synthesis of complementarities and differences between adaptation and mitigation; mixes of strategies
- Uncertainties, unknowns, priorities for research

19. Assessing Key Vulnerabilities and the Risk from Climate Change

- Methods and concepts: issues relating to Article 2 of the UNFCCC; reasons for concern; measuring damage; identifying key impacts and vulnerabilities, and their risk of occurrence
- Approaches to determining levels of climate change for key impacts
- Assessing key global risks
- Assessing key risks for regions and sectors
- Assessment of response strategies to avoid occurrence: stabilisation scenarios; mitigation/adaptation strategies; avoiding irreversibilities; role of sustainable development; treatment of uncertainty
- Uncertainties, unknowns, priorities for research

20. Perspectives on Climate Change and Sustainability

- Summary of new knowledge relating to impacts and adaptation
- Impacts and adaptation in the context of multiple stresses
- Implications for environmental quality
- Implications for risk, hazard and disaster management
- Global and aggregate impacts
- Implications for regional and sectoral development; access to resources and technology; equity
- Sub-regional and local issues
- Opportunities, co-benefits and challenges for adaptation (including over long term)
- Uncertainties, unknowns, priorities for research

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**OUTLINE FOR THE IPCC WORKING GROUP III CONTRIBUTION TO
THE FOURTH ASSESSMENT REPORT
CLIMATE CHANGE 2007: MITIGATION OF CLIMATE CHANGE**

Summary for Policy Makers
Technical Summary

A. INTRODUCTION AND FRAMING ISSUES

1. Introduction

- Article 2 of the Convention and mitigation
- Past, present, future, including previous IPCC reports
- Time scales
- Structure of the report, the rationale behind it, the role of Cross Cutting Themes and framing issues

2. Framing issues

- The scope of the global climate change problem
- Climate change mitigation and sustainable development
- Mitigation, vulnerability and adaptation relationships
- Regional dimensions
- Technology research, development, deployment, diffusion and transfer
- Risk and uncertainty
- Distributional and equity aspects
- Cost and benefits concepts
- Decision making and implementation

Regional differentiation will be emphasized in all chapters in parts A, B, C and D as far as literature is available. However, this regional disaggregation may differ by sector and could be along different characteristics, such as level of development, national circumstances or geographical location.

B. ISSUES RELATED TO MITIGATION IN THE LONG-TERM CONTEXT

3. Issues related to mitigation in the long-term context

Executive summary

- Emission scenarios: assessment of new literature since SRES
- Mitigation and stabilization scenarios and strategies, and costs and socio-economic implications (with appropriate uncertainties) including multiple gases
- Development pathways, trends and goals
- Role of technologies in long-term mitigation and stabilization: research, development, deployment, diffusion and transfer
- Interaction of mitigation and adaptation, in the light of climate change impacts and decision making under long-term uncertainties
- Linkages between short and medium term mitigation and long-term stabilization, including the implications of inertia, risk and uncertainty for decision making

C. SPECIFIC MITIGATION OPTIONS IN THE SHORT AND MEDIUM TERM

Chapters 4-10 will follow the following template. Template issues will only be incorporated when relevant and when literature is available.

Executive summary

- Introduction
- Status of the sector, development trends including production and consumption, and implications
- Emission trends (global and regional)
- Description and assessment of mitigation technologies and practices, options and potentials (technical, economic, market and social), costs and sustainability
- Interactions of mitigation options with vulnerability and adaptation
- Effectiveness of and experience with climate policies, potentials, barriers and opportunities / implementation issues
- Integrated and non-climate policies affecting emissions of greenhouse gases
- Co-benefits of greenhouse gas mitigation policies
- Technology research, development, deployment, diffusion and transfer
- Long-term outlook / systems transitions, decision making; inertia and its relation with long-term/short-term choices, decision tools

4. Energy supply

5. Transport and its infrastructure (road, rail, aviation, shipping, including transport fuels)

6. Residential/commercial (including services)

7. Industry

8. Agriculture (including land use and biological carbon sequestration)

9. Forestry (including land use and biological carbon sequestration)

10. Waste management¹

D. CROSS SECTORAL, NATIONAL AND INTERNATIONAL DIMENSIONS

11. Mitigation from a cross-sectoral perspective

Executive summary

- Introduction, including system perspective, relationship with chapter 3, key issues across sectors and use of models/analysis
- Cross-sectoral mitigation options: description, characterization and costs
- Technology research, development, deployment, diffusion and transfer
- Synergies and trade-offs with other policies
- Overall mitigation potential and costs, including portfolio analysis and cross-sectoral modeling
- Macroeconomic effects
- Spill-over effects
- Assessment of bottom-up and top-down analysis
- Mitigation and adaptation - synergies and trade-offs

¹ Recycling of industrial waste would be covered in chapter 7 as was done in TAR.

12. Sustainable development and mitigation

Executive summary

- Introduction
- Impact of mitigation policies on sustainable development goals
- Impact of sustainable development policies on climate change mitigation
- Determinants of mitigative capacity (link to adaptive capacity in Working Group II)
- Sustainable development and climate change mitigation - issues and opportunities

13. Policies, instruments and co-operative arrangements

Executive summary

- Economic and other generic policy instruments (including taxes, emissions trading)
- Implementation of and interaction between policies
- Climate change agreements and other arrangements (including international co-operation and insights from and interactions with other inter-governmental arrangements)
- Insights from and interactions with private, local and non-governmental initiatives

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Proposals for handling emissions scenarios related issues in AR4

The recommendations of the Chair on the basis of the foregoing discussions are as follows:

1. It would not be desirable for the IPCC as a body to respond to any criticism on SRES. As an organisation that rests on the work and contributions substantially of leading experts from all over the world, it is best left to the experts to respond to any such criticism. The response of experts that have been involved in IPCC work should be in the nature of papers to be published in established peer reviewed journals.
2. The IPCC can and should at least provide timely responses on the process that led to SRES. The validity of the assessment work carried out by the IPCC rests on the strength of the procedures and processes followed in the production of any report, which were faithfully observed in the case of the SRES. The IPCC could make efforts to interest reputable scientific publications to write on the subject in an objective manner by consulting if necessary the Chair, the Co-Chairs and, most importantly, experts who have worked on the SRES.
3. As part of the preparation of the AR4, a thorough assessment will be done of all new scenarios literature, including publications that criticise the SRES. In support of that, an IPCC expert meeting will be organised in 2004, bringing together a wide variety of experts in the field, including experts from the fields of development economics and statistics. This expert meeting could also begin to look into the question of new scenarios for the AR5. It may also be necessary to hold in 2005 a follow up IPCC expert meeting, especially on the AR5 scenarios question.
4. The IPCC may also encourage other institutions to organise focused meetings and workshops in this field, and consider IPCC co-sponsorship for such meetings. The Chair is in contact with relevant groups, such as the Australian Bureau of Agricultural and Resource Economics (ABARE) and with the Earth Institute at Columbia University in New York concerning possible meetings on that subject that are likely to be held in 2004.
5. The Panel should be kept fully informed in subsequent sessions of the IPCC of the progress achieved in implementing the actions outlined above, should this session approve of the proposals put forward in this document.

Task Group on Data and Scenario Support for Impacts and Climate Analysis (TGICA)

Mandate

1. *Background*

1.1 The Task Group on Scenarios for Climate and Impact Assessment (TGCIA) was established following a recommendation made at the IPCC Workshop on Regional Climate Change Projections for Impact Assessment (London, 24-26 September 1996), and further considered by the IPCC Bureau at its Eleventh Session (7-8 November 1996). A draft mandate statement for the Task Group was developed in a contact group at IPCC XX. At TGCIA VIII (Boulder, CO, USA, 30 June – 2 July 2003), the TGCIA discussed the mandate, suggested several changes, and proposed a change in the group's name to "Task Group on Data and Scenario Support for Climate and Impact Assessment". At its XXXth session, the IPCC Bureau reviewed and further refined the mandate and recommended an additional change in the name of the group to "Task Group on Data and Scenario Support for Impacts and Climate Analysis" (TGICA).

2. *Mandate*

2.1 The mandate of the TGICA is to facilitate wide availability of climate change related data and scenarios to enable research and sharing of information across the three IPCC working groups. The TGICA disseminates information in support of IPCC work, as well as IPCC "approved," "adopted," "accepted," and "supporting" material (as defined in Appendix A to the Principles Governing IPCC Work). This includes, for example, information on:

- anthropogenic influences on climate
- climatological baselines and observations
- projected future climate
- other environmental, technological, and socio-economic factors and data relevant to impacts, adaptation, vulnerability, and mitigation research

2.2 The TGICA does not develop emission, climate, or other types of scenarios for the IPCC, make decisions regarding the choice of such scenarios for use in IPCC assessments, nor undertake modeling or research.

2.3 The TGICA is accountable to the Panel through the Bureau and reports to Sessions of the Bureau and Panel.

3. *Activities*

3.1 The TGICA coordinates a Data Distribution Centre (DDC) which provides data sets, climate and other scenarios, and other materials (e.g., technical guidelines on use of scenarios).

3.2 The TGICA identifies information needs in support of IPCC work, facilitates research on climate impacts, adaptation, and mitigation, and makes related recommendations on cross-cutting issues. These activities will be carried out in consultation with the three Working Group Co-Chairs. The TGICA will also solicit feedback from user communities.

3.3 The TGICA contributes to building capacity in the use of data and scenarios for climate-related research in developing and transition-economy regions and countries. TGICA works with organizations and activities that have training as their core mandate but does not develop training programs on its own.

3.4 The TGICA may convene expert meetings on an as needed basis.

4. *Membership*

4.1 The task group will be co-chaired by two experts, one from a developing/ transition economy country and one from a developed country.

4.2 The TGICA will be composed of approximately 20 members known through their peer reviewed publications and works. Membership should include the following areas of research: climatology; climate modeling (both global and regional); physical, social, and economic impacts; adaptation; emissions modeling; and integrated assessment. The membership of the TGICA should 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), with due consideration for the above-mentioned scientific and technical requirements. The term of membership on the TGICA will be linked to the assessment cycle of the IPCC and be refreshed near the start of a new comprehensive assessment.

4.3 Members will be selected through a process based on the lead author selection process of the IPCC. The Secretary of the IPCC will solicit nominations of experts from governments and organizations. The Co-Chairs of the TGICA and of the three Working Groups will develop a slate of approximately 20 members that will be selected by the IPCC Bureau, under general guidance and review provided by the Panel.

4.4 The TGICA may enlist other experts as contributors to assist with its work on an as needed basis.

PRINCIPLES GOVERNING IPCC WORK

Approved at the Fourteenth Session (Vienna, 1-3 October 1998) on 1 October 1998
and amended at the 21st Session (Vienna, 3 and 6-7 November 2003)

INTRODUCTION

1. The Intergovernmental Panel on Climate Change (hereinafter referred to as the IPCC or, synonymously, the Panel) shall concentrate its activities on the tasks allotted to it by the relevant WMO Executive Council and UNEP Governing Council resolutions and decisions as well as on actions in support of the UN Framework Convention on Climate Change process.

ROLE

2. The role of the IPCC is to assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation. IPCC reports should be neutral with respect to policy, although they may need to deal objectively with scientific, technical and socio-economic factors relevant to the application of particular policies.

3. Review is an essential part of the IPCC process. Since the IPCC is an intergovernmental body, review of IPCC documents should involve both peer review by experts and review by governments.

ORGANIZATION

4. Major decisions of the IPCC will be taken by the Panel in plenary meetings.

5. The IPCC Bureau, the IPCC Working Group Bureaux and the Bureaux of any Task Forces of the IPCC shall reflect balanced geographic representation with due consideration for scientific and technical requirements.

6. IPCC Working Groups and any Task Forces constituted by the IPCC shall have clearly defined and approved mandates and work plans as established by the Panel, and shall be open-ended.

PARTICIPATION

7. Participation in the work of the IPCC is open to all UNEP and WMO Member countries.

8. Invitations to participate in the sessions of the Panel and its Working Groups, Task Forces and IPCC workshops shall be extended to Governments and other bodies by the Chairman of the IPCC.

9. Experts from WMO/UNEP Member countries or international, intergovernmental or non-governmental organisations may be invited in their own right to contribute to the work of the IPCC Working Groups and Task Forces. Governments should be informed in advance of invitations extended to experts from their countries and they may nominate additional experts.

PROCEDURES

10. In taking decisions, and approving, adopting and accepting reports, the Panel, its Working Groups and any Task Forces shall use all best endeavours to reach consensus. If consensus is judged by the relevant body not possible: (a) for decisions on procedural issues, these shall be decided according to the General Regulations of the WMO; (b) for approval, adoption and acceptance of reports, differing views shall be explained and, upon request, recorded. Differing views on matters of a scientific, technical or socio-economic nature shall, as appropriate in the context, be represented in the scientific, technical or socio-economic document concerned. Differences of views on matters of policy or procedure shall, as appropriate in the context, be recorded in the Report of the Session.

11. Conclusions drawn by IPCC Working Groups and any Task Forces are not official IPCC views until they have been accepted by the Panel in a plenary meeting.

12. Invitations to participate in the sessions of the Panel and its Working Groups, Task Forces and IPCC workshops should be extended at least six weeks in advance of the opening of the session.

13. Major reports, including Assessment Reports, Special Reports and Methodology Reports, basic documentation and other available reports for consideration at the sessions of the Panel and its Working Groups shall normally be made available by the IPCC Secretariat at least four weeks in advance of the session and, to the extent possible, in all official UN languages.

14. Interpretation into all official UN languages shall be provided for all sessions of the IPCC meeting in plenary, of its Bureau and its Working Groups.

15. The scheduling of the sessions of the Panel and its Working Groups and Task Forces shall be co-ordinated, to the extent possible, with other related international meetings.

16. These Principles shall be reviewed at least every five years and amended as appropriate.

17. Procedures for the preparation, review, acceptance, approval, adoption and publication of IPCC reports are given in Appendix A.

18. Financial procedures for the IPCC are given in Appendix B.