GUIDANCE NOTES FOR AUTHORS OF THE IPCC WORKING GROUP III CONTRIBUTION TO THE FOURTH ASSESSMENT REPORT

CLIMATE CHANGE 2007: MITIGATION OF CLIMATE CHANGE

Introduction

At the Seventh Session of IPCC Working Group III, 4-5 November 2003 in Vienna, the outline of the IPCC Working Group III contribution to the Fourth Assessment Report (IPCC-XXI/Doc.23) was approved and subsequently accepted by the 21st Session of the IPCC. It was decided that a number of comments of a more detailed nature, made by Governments from the floor, would be noted and would be made available by the co-chairs to the authors as additional guidance t in the preparation of the Fourth Assessment Report. These comments are listed here below in ***blue italic*** text.

General comments

- ***Care should be taken not to formulate the assessment texts in policy prescriptive terms. This is particularly important in those chapters and sections that are close to political decision making and negotiations, and in assessing social science literature with a normative character.***
- ***Gaps in knowledge should be identified in all chapters and will be presented in the Technical Summary and Summary for Policy Makers.***
- ***In assessing greenhouse gas sources and sinks mitigation potentials, authors should take account of the distinction between natural and human induced changes and implications for mitigation options and scenarios, where information is available.***
- ***Sustainable development and sustainability issues should be addressed in a broad sense, including social, economic, equity and environmental aspects; particular attention should be paid to cover relevant social science literature in light of the fact that this literature was under-represented in the TAR.***
- ***New and additional literature to be assessed should capture the diversity of disciplines and cultures/languages.***

Chapter by chapter comments

Summary for Policy Makers

Technical Summary

Part 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 ***(Climate change and sustainable development should be assessed as being part of one system.)***
- Mitigation, vulnerability and adaptation relationships
- Regional dimensions
- Technology research, development, deployment, diffusion and transfer
- Risk and uncertainty ***(This topic should be based on a comprehensive approach, including both risk analysis/assessment and risk management. In addition, the relations between 'Risk and uncertainty' and 'Decision making and implementation' should be taken into account.)***
- Distributional and equity aspects
- Cost and benefits concepts ***(Cost and benefit concepts should be presented as part of a broader set of decision frameworks and should also include costs and benefits that are not directly related to climate change mitigation. Caution is requested with economic cost-benefit literature in view of limitations of this approach.)***
- Decision making and implementation

Regional differentiation will be emphasized in all chapters in part 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.

Part 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 ***(The assessment should cover literature on emission scenarios that include climate feedbacks.)***
- 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 ***(Not only present costs of mitigation but also avoided climate change damages and costs of adaptation should be included.)***
- Linkages between short and medium term mitigation and long-term stabilization, including the implications of inertia, risk and uncertainty for decision making

Part 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** ***(All energy supply options will be covered in this section as well as the whole supply chain, including exploration, winning, conversion, transport and distribution of energy carriers. Distributed energy supply (e.g. combined heat and power) should be addressed in this chapter (and not in the energy demand sectors). This chapter should include CO_2 capture and storage.)***
5. **Transport and its infrastructure (road, rail, aviation, shipping, including transport fuels)** ***(Relevant aspects of tourism should be covered in this chapter.)***
6. **Residential/commercial (including services)** ***(Relevant aspects of tourism should be covered in this chapter.)***
7. **Industry**
8. **Agriculture (including land use and biological carbon sequestration)** ***(Authors should treat land use and agro-forestry issues in an integrated approach with the chapter on forestry. This sector should include fisheries.)***
9. **Forestry (including land use and biological carbon sequestration)** ***(Authors should treat land use and agro-forestry issues in an integrated approach with the chapter on agriculture.)***
10. **Waste management**[1] ***(Waste generation and options to limit or reduce waste generation should be covered here (as was done in TAR). Recycling of industrial waste would be covered in chapter 7 ('Industry') (as was done in TAR). This sector should include municipal waste water management.)***

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

Part 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 ***(This chapter should cover the interdependencies of energy supply and demand and any cross-sectoral relations that could not be addressed in the sector chapters 4-10.)***
- Cross-sectoral mitigation options: description, characterization and costs ***(This topic should include assessment of literature regarding ocean fertilization and other geo-engineering options.)***
- Technology research, development, deployment, diffusion and transfer
- Synergies and trade-offs with other policies ***(This topic should include air quality, water management and non-environmental policies such as security of energy supply.)***
- 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

12. Sustainable development and mitigation

Executive summary

- Introduction
- Impact of mitigation policies on sustainable development goals ***(This topic should include the assessment of literature on diversification of economies.)***
- Impact of sustainable development policies on climate change mitigation ***(This should focus on policies aimed at specific development goals and the implications for greenhouse gas sources and sinks. This topic should include the assessment of literature on diversification of economies.)***
- Determinants of mitigative capacity (link to adaptive capacity in Working Group II)
- Sustainable development and climate change mitigation - issues and opportunities ***(This should include the assessment of literature on constraints and barriers.)***

13. Policies, instruments and co-operative arrangements

(This chapter should address policies, instruments and co-operative arrangements designed at, and affecting all dimensions of decision making.)

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) ***(The other arrangements include: development, environment and trade. This topic should include the assessment of literature on effectiveness and other aspects of these agreements and arrangements. Where appropriate, authors are encouraged to use case studies that would contribute to improve the regional components.)***
- Insights from and interactions with private, local and non-governmental initiatives

List of authors and reviewers

Glossary

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