



SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE

Second session

Geneva, 27 February - 4 March 1996

Item 4 (a) of the provisional agenda

SCIENTIFIC ASSESSMENTS

**CONSIDERATION OF THE SECOND ASSESSMENT REPORT OF THE
INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE**

Addendum

**SCIENTIFIC-TECHNICAL ANALYSES OF IMPACTS, ADAPTATIONS,
AND MITIGATION OF CLIMATE CHANGE: CONTRIBUTION OF
WORKING GROUP II OF THE INTERGOVERNMENTAL PANEL ON
CLIMATE CHANGE**

Note by the secretariat

CONTENTS

	<u>Paragraphs</u>	<u>Page</u>
I. INTRODUCTION	1 - 4	2
II. HIGHLIGHTS OF THE REPORT	5 - 11	3
III. RELATIONSHIP BETWEEN THE WORKING GROUP II REPORT AND THE UNFCCC PROCESS	12	5

Annex

IPCC Working Group II: Tables of contents of the Technical Summary and supporting chapters	6
---	---

I. INTRODUCTION

1. Working Group II (WG II) on Impacts, Adaptations, and Mitigation of Climate Change of the Intergovernmental Panel on Climate Change (IPCC) was established to assess the current state of knowledge concerning the impacts of climate change on physical and ecological systems, human health, and socio-economic sectors. Working Group II was also asked to review available information on the technical and economic feasibility of a range of potential adaptation and mitigation strategies.

2. The Second Assessment Report of WG II builds on the prior efforts of the IPCC as reported in the IPCC First Assessment Report (1990) and in Climate Change 1992, the Supplementary Report to the IPCC Scientific Assessment. It is a comprehensive assessment of the impacts of climate change as well as mitigation and adaptation strategies. It is one of four volumes that make up the IPCC Second Assessment Report and comprises thirty-two papers, as follows:

- Summary for Policymakers
- Technical Summary
- Two primers on energy and ecosystems
- Eighteen chapters on impacts and adaptation measures
- Seven chapters on mitigation options
- Technical guidelines for assessing climate change impacts and adaptations
- Methods for assessment of mitigation options
- Inventory of technologies, methods, and practices for reducing emissions of greenhouse gases

The annex to this addendum contains a table of contents for each chapter and a brief description of the contents.

3. The report was prepared by teams of scientific experts, including a convening lead author and contributing authors. Executive summaries, representing the views of the convening and other authors, also form part of the chapters on impacts, adaptation, and mitigation options. It was thoroughly reviewed by scientific and technical experts and Governments.

4. The purpose of this addendum is to describe the contents of the WG II report and to indicate some of the links to the United Nations Framework Convention on Climate Change (UNFCCC). As noted in paragraph 19 of the main note by the secretariat (see document FCCC/SBSTA/1996/7), this addendum is not intended to provide an interpretation of the findings or to serve as a replacement for the IPCC text.

II. HIGHLIGHTS OF THE REPORT

5. As the WG II report contains over 800 pages excluding appendices, a complete review of the material is a formidable task. Consequently, Parties may wish to consider the report in several different ways, depending on their interests and the time available, as suggested below:

(a) Summary for Policymakers. This is the only material that was approved by Governments at the eleventh plenary session of the IPCC held at Rome from 11 to 15 December 1995;

(b) Technical Summary. This document provides additional technical information not found in the Summary for Policymakers. It was prepared by the Bureau of WG II and the convening lead authors;

(c) Energy and ecosystem primers. These two volumes are intended to provide a general overview of the current science for new readers. For example, the ecosystem volume (chapter A) provides an introduction to key concepts, including soil and ecological processes and how they are affected by different climatic factors, while the energy volume (chapter B) introduces terms and units and provides an overview of the global energy system and consumption patterns;

(d) Chapters with executive summaries. These summaries, representing the views of the convening and contributing lead authors, identify what is known about different subject areas and indicate whether the authors have a high, medium, and/or low level of confidence in the information provided. Parties interested in a particular subject, but lacking sufficient time to read the entire chapter, may wish to read these executive summaries;

(e) Main chapters. These chapters differ somewhat in style and level of detail, and in a few cases cover similar material. For example, the 18 chapters on impacts cover both sectors and regions, thereby treating similar material from different perspectives. Readers interested in obtaining an integrated picture of agriculture may wish to read primarily chapters 13 and 23, while those mainly interested in water supply and use may wish to read chapters 5, 7, 10 and 14, and those interested in forests may consult chapters 1, 5, 15, and 24;

(f) References. The IPCC report is thoroughly referenced. Readers interested in seeking original data and information may wish to consult the source manuscripts.

6. The WG II report provides scientific, technical, and economic information for use in evaluating whether the projected range of plausible impacts constitutes "dangerous anthropogenic interference with the climate system ..." as referred to in Article 2 of the Convention. It contains information on several topics not treated in the 1990 report, such as effects on human health and impacts on the financial service sector (particularly the insurance

industry), more comprehensive material on other topics such as rangelands, deserts, the cryosphere and non-tidal wetlands, and more specific data on forests, agriculture, coastal systems, oceans, and infrastructure.

7. Adaptation is treated in several ways: for example, adaptation assumptions used to estimate impacts are described and broad strategies for adapting to and coping with climate change are identified (see, for example, chapters 11-16 and 18). However, an inventory of specific adaptation technologies and know-how is not provided.

8. Information on mitigation options has been expanded beyond the material dealt with in the 1990 First Assessment Report, particularly regarding the cost of technologies (for example, in chapters 19 (energy), 21 (transport), and 24 (forests)). In addition, a number of policies that can facilitate the penetration of less greenhouse-intensive technologies are listed and described.

9. High priority research and monitoring topics are included in almost every chapter. The material is intended for consideration by the general scientific community, several national Governments and intergovernmental organizations concerned, and interested institutions.

10. Two chapters and several appendices focus on methodologies. Chapter 26, "Technical guidelines for assessing climate change impacts and adaptations", has been previously issued by the IPCC as a separate document. It is reflected in decision 4/CP.1* whereby the Guidelines were adopted for use by Annex I Parties in preparing their national communications and for use by non-Annex I Parties, as appropriate and to the extent possible, in the fulfilment of their commitments under the Convention. Chapter 27, "Methods for assessment of mitigation options", and its four related appendices concerned with technical methods, resources guide, case studies and mitigation assessment handbook, were primarily designed to meet the analytical needs of developing countries and countries with economies in transition, although other countries may also wish to utilize them. Chapter 27 notes that these countries have unique economic, social, and political conditions and that many of their needs are vastly different from those found in industrialized countries. The chapter and related appendices provide an analytical framework and specific methods for analysing the electric power, transport, agriculture, and forestry sectors.

11. Chapter 28 of the WG II report is an inventory of technologies, methods, and practices to limit emissions of greenhouse gases, which contains information on the performance characteristics and applications, costs, environmental characteristics, and infrastructure requirements of 105 technologies. This inventory is reflected in the initial report prepared by the secretariat on an inventory and assessment of technologies to mitigate and adapt to climate change (FCCC/SBSTA/1996/4).

* For decisions adopted by the Conference of the Parties at its first session, see document FCCC/CP/1995/7/Add.1.

III. RELATIONSHIP BETWEEN THE WORKING GROUP II REPORT AND THE UNFCCC PROCESS

12. The relationship between key elements of the WG II report and the Convention are presented in the table below, which attempts to depict complexities of the document in a highly simplified form. It is not designed to reflect every article in the Convention and the decisions by the Conference of the Parties (COP); nevertheless, it may help readers to consider the linkages between the key elements of the report, the current FCCC process, and the future needs of the Parties for information. Issues that Parties may wish to consider relating to the linkages between the WG II report and the UNFCCC process are found in document FCCC/SBSTA/1996/7.

RELATIONSHIP BETWEEN WG II REPORT AND THE UNFCCC PROCESS

IPCC WG II Report	UNFCCC decisions and Articles of the Convention
Chapters 1-18 (impacts and adaptation)	Consideration of Article 2 Decision 13/CP.1
Chapters 19-25 (mitigation options)	Ad Hoc Group on the Berlin Mandate (AGBM) process Decisions 11, 12, 13/CP.1 In-depth review process
Chapters 26 and 27 (guidelines and methodologies)	Guidelines for national communications Decision 4/CP.1
Chapter 28 (inventory of mitigation technologies)	Decision 13/CP.1
Chapters 1-25 (research and monitoring needs)	Consideration of Article 5
All chapters	Consideration of Article 6

Annex

**IPCC WORKING GROUP II: TABLES OF CONTENTS OF THE
TECHNICAL SUMMARY AND SUPPORTING CHAPTERS**

I. SUMMARY FOR POLICYMAKERS

Summary for Policymakers (18 pages)

1. Scope of the assessment
2. Nature of the issue
3. Vulnerability to climate change
4. Options to reduce emissions and enhance sinks of greenhouse gases

II. TECHNICAL SUMMARY

Technical Summary (35 pages)

1. Scope of the assessment
2. The nature of the issue: Projected changes in climate
3. Vulnerability to climate change: impacts and adaptation
4. Options to reduce emissions and enhance sinks of greenhouse gases:
Mitigation
5. Technical guidelines for assessing climate change impacts and adaptation
6. Methods for assessing mitigation options and inventory of mitigation
technologies

The Technical Summary provides additional technical information not found in the Summary for Policymakers. It was assembled by the Bureau of Working Group II and the convening lead authors and others, taking into account comments received from experts and Governments on both the chapters and the Summary for Policymakers.

III. ECOSYSTEM AND ENERGY PRIMERS

Chapter A. Ecophysiological, ecological, and soil processes in terrestrial ecosystems:
Primer on general concepts and relationships (18 pages)

- A.1. Introduction
- A.2. Climatic driving forces
- A.3. Soil processes and properties
- A.4. Ecological processes
- A.5. Conclusions

This ecosystem primer gives an overview of interactions between soils and living organisms with climatic parameters such as temperature, precipitation, soil water availability, and CO₂ concentration.

Chapter B. Energy primer (18 pages)

- B.1. Introduction
- B.2. Energy systems
- B.3. Energy use, CO₂ emissions, and energy resources
- B.4. Energy-related chapters

This energy primer introduces concepts and terms used in the energy-related chapters of the Second Assessment Report. It describes some of the more commonly used energy units and provides an overview of the global energy system and consumption patterns.

IV. IMPACTS AND ADAPTATION

Chapter 1. Climate change impacts on forests (35 pages)

Executive Summary

- 1.1. Introduction
- 1.2. Climate and forests
- 1.3. Forests in a changing climate
- 1.4. Tropical forests
- 1.5. Temperate forests
- 1.6. Boreal forests
- 1.7. Research and monitoring needs

This chapter describes the projected impacts of climate change on tropical, temperate, and boreal forests using observations from the past, experimental studies, and simulation models based on current ecophysiological and ecological information.

Chapter 2. Rangelands in a changing climate: Impacts, adaptation and mitigation (28 pages)

Executive Summary

- 2.1. Introduction: Description of the world's rangeland resources
- 2.2. Climate variables
- 2.3. Ecosystem variables
- 2.4. Issues of scale
- 2.5. Extreme events
- 2.6. Boundary changes
- 2.7. Regional variation
- 2.8. Modeling rangeland ecosystem response

- 2.9. Human adaptation
- 2.10. Mitigation
- 2.11. Research needs

This chapter describes projected impacts of altered climate regimes on rangeland resources such as grassland, shrublands, savannas, hot and cold deserts, and tundra. It also discusses human adaptation, mitigation options, and research needs.

Chapter 3. Deserts in a changing climate: Impacts (11 pages)

Executive Summary

- 3.1. Introduction
- 3.2. Climate and biology
- 3.3. Ecosystem variables
- 3.4. Impacts of climate change
- 3.5. Biogeographical shifts
- 3.6. Mitigation
- 3.7. Future needs

This chapter describes deserts and the main processes that dominate extreme desert environments. It also discusses how these processes might be affected by climate change and describes variability in different deserts, as well as exploring the likely impacts on specific areas. The chapter concentrates on the hottest and driest land types and excludes extreme-cold deserts of polar regions.

Chapter 4. Land degradation and desertification (19 pages)

Executive Summary

- 4.1. Introduction
- 4.2. Soil erosion: Causes, processes, and predictions
- 4.3. Salt-affected soils
- 4.4. Desertification
- 4.5. Other forms of soil degradation
- 4.6. Monitoring and research needs

This chapter emphasizes the effects of climatic change on soil erosion, salinization, and desertification and also reviews impacts on other degradation processes capable of being accelerated by climate change.

Chapter 5. Impacts of climate change on mountain regions (23 pages)

Executive Summary

- 5.1. Mountain characteristics
- 5.2. Impacts of climate change
- 5.3. Future research and monitoring needs

This chapter focuses on the impact of climate change on physical, ecological, and socio-economic systems in mountain regions. It describes potential impacts on snow pack and water systems, the mountain ecosystem, and vegetation.

Chapter 6. Non-tidal wetlands (25 pages)

Executive Summary

- 6.1. Introduction
- 6.2. Global importance of wetlands
- 6.3. Sensitivities and impacts
- 6.4. Response options - Adaptation, conservation, and restoration
- 6.5. Examples and case studies
- 6.6. Future research needs

This chapter emphasizes the possible impacts of climate change on the extent, distribution, and function of non-tidal wetlands in the context of natural or anthropogenic stressors. It also describes the importance of different climate variables and the range of factors that determine the sensitivity of individual wetlands. The chapter uses four case studies to illustrate the effects of climate change: the Sahel, northern boreal wetlands, Kalimantan (Indonesia), and the Florida Everglades.

Chapter 7. The cryosphere: Changes and their impacts (25 pages)

Executive Summary

- 7.1. Introduction
- 7.2. Is the cryosphere changing?
- 7.3. How sensitive is the cryosphere to climate change?
- 7.4. What will be the impact of future climate change on the cryosphere?
- 7.5. What will be the impact of these cryospheric changes?
- 7.6. What do we still need to know?

The cryosphere represents all the global snow, ice, and permafrost regions. This chapter assesses the sensitivity of these regions to climate change, the development of each component, and the impact of climate change on the cryosphere. It also describes the changes in the cryosphere that may affect other physical and human systems and identifies critical information needs.

Chapter 8. Oceans (22 pages)

Executive Summary

- 8.1. Introduction
- 8.2. Functions of oceans
- 8.3. Characteristics of oceans and their responses to climate change
- 8.4. Impacts of climate change on resources and products

- 8.5. Evaluation of the impacts of climate change
- 8.6. Multistress factors
- 8.7. Research and monitoring needs and strategies

This chapter describes the functions and characteristics of oceans in relation to their human uses, their responses to large-scale global climate change, the range of available mitigation and adaptation response options, and research and monitoring needs.

Chapter 9. Coastal zones and small islands (36 pages)

Executive Summary

- 9.1. Introduction
- 9.2. Functions and values of coastal zones and small islands
- 9.3. Aspects of climate change of concern to coastal zones and small islands
- 9.4. Biogeophysical effects
- 9.5. Socio-economic impacts
- 9.6. Response strategies
- 9.7. Research and monitoring needs

This chapter presents an assessment of the latest scientific information on the impacts of climate change on coastal zones and small islands and on strategies that countries may wish to apply in response to these impacts.

Chapter 10. Hydrology and freshwater ecology (39 pages)

Executive Summary

- 10.1. Introduction
- 10.2. The hydrological cycle
- 10.3. Effects of climate change on the hydrological cycle
- 10.4. Extreme hydrological events
- 10.5. Physical and chemical changes in freshwater ecosystems
- 10.6. Lake and stream biology
- 10.7. Research needs

The chapter covers four main issues: the potential effects of global warming on components of the hydrological cycle; possible changes in the frequency and magnitude of extreme high and low flows; implications for thermal, chemical, and morphological changes; and consequences for stream and lake ecosystems.

Chapter 11. Industry, energy, and transportation: Impacts and adaptation (34 pages)

Executive Summary

- 11.1. Introduction
- 11.2. Characteristics and sensitivities of the sectors
- 11.3. Overview of the literature

- 11.4. Economic activity with climate-sensitive markets
- 11.5. Economic activity sensitive to climate
- 11.6. Economic activity dependent on climate-sensitive resources
- 11.7. Need for future assessments

Industrial activities directly sensitive to climate change are described. These include, for example, construction, transportation, offshore oil production, manufacturing depending on water, tourism, and agro-industries.

Chapter 12. Human settlements in a changing climate: Impacts and adaptation (28 pages)

Executive Summary

- 12.1. Introduction
- 12.2. Non-climate factors
- 12.3. Impacts and ranges of sensitivities to climate change
- 12.4. Extreme events
- 12.5. Adaptation options
- 12.6. Needs for future research

This chapter focuses on how climate change and sealevel rise will affect human settlements.

Chapter 13. Agriculture in a changing climate: Impacts and adaptation (41 pages)

Executive Summary

- 13.1. Introduction
- 13.2. Climatic effects on crop plants
- 13.3. Soil changes and agricultural practices
- 13.4. Weeds, insects, and diseases
- 13.5. Animal agriculture
- 13.6. Regional climate impacts: Studies and issues
- 13.7. Regional summary: Relative vulnerability
- 13.8. Global agricultural issues and assessments
- 13.9. Adaptation
- 13.10. Research needs

The chapter assesses four areas: direct and indirect effects of climate change on crop yields, agricultural pests and livestock; estimates of yield and production changes for specific regions and the world; areas and populations that are relatively more vulnerable; and adaptation potential.

Chapter 14. Water resources management (18 pages)

Executive Summary

- 14.1. Introduction
- 14.2. Impact of climate on water supply

- 14.3. Impact of climate on water demand
- 14.4. Management implications and adaptation options
- 14.5. Research needs

This chapter describes the sensitivity of the components of water resource systems to potential climate change. It also indicates how water management strategies may be put into effect to adapt to climate change.

Chapter 15. Wood production under changing climate and land use (24 pages)

Executive Summary

- 15.1. Introduction
- 15.2. Present and future global forests
- 15.3. Evaluation of tropical wood availability and consumption
- 15.4. Evaluation of temperate wood availability and consumption
- 15.5. Evaluation of boreal wood availability and consumption
- 15.6. Adaptation and coping options
- 15.7. Research needs

The chapter describes the availability of forest resources and the possible changes induced in wood and wood products. It includes estimates of the demand for wood and wood products and describes potential shifts in the productivity and geographic distribution of tree species in boreal, temperate and tropical regions that may alter supplies.

Chapter 16. Fisheries (27 pages)

Executive Summary

- 16.1. Current status of fisheries
- 16.2. Climate change impacts
- 16.3. Adaptation options
- 16.4. Research and monitoring needs

Potential impacts of climate change on freshwater and saltwater fisheries, aquaculture, health and infrastructural issues, and recreational fisheries are discussed in this chapter.

Chapter 17. Financial services (22 pages)

Executive Summary

- 17.1. Introduction
- 17.2. Financial services
- 17.3. The property insurance market
- 17.4. Extreme events and property insurance
- 17.5. Impact of extreme events on property insurance
- 17.6. Adaptation to climate change by property insurers

- 17.7. Impacts and adaptation in other financial services
- 17.8. Implications for Policymakers
- 17.9. Requirements for future assessments

This chapter provides a brief overview of financial services with particular emphasis on the property insurance sector. It describes the important impact that extreme climatic events can have on this sector and the techniques used by property insurers to adapt to changes in risk.

Chapter 18. Human population health (24 pages)

Executive Summary

- 18.1. Introduction
- 18.2. Potential direct health impacts of climate change
- 18.3. Potential indirect health impacts of climate change
- 18.4. Stratospheric ozone depletion and ultraviolet radiation: Impacts on health
- 18.5. Options for adaptation
- 18.6. Research needs
- 18.7. Concluding remarks

An assessment is provided of the potential direct health effects due to high temperature events and indirect effects from changes in air pollutants and food production. It also describes potential shifts in vector-borne diseases, such as malaria, and non-vector-borne diseases, such as cholera. Adaptation options and monitoring strategies are also provided.

V. MITIGATION OPTIONS

Chapter 19. Energy supply mitigation options (61 pages)

Executive Summary

- 19.1. Introduction
- 19.2. Options to reduce greenhouse gas emissions
- 19.3. Low CO₂-emitting energy supply systems for the world
- 19.4. Implementation issues

This chapter focuses on emerging energy technologies that can reduce greenhouse gas emissions and identifies advances in technologies such as gas turbines, coal and biomass gasification, use of biomass for transportation, wind, photovoltaics, fuel cells, nuclear, carbon sequestration, and hydrogen. It provides a series of "thought experiments" or "low CO₂-emitting energy supply systems" (LESS) scenarios, which outline how the global energy system could change at low cost.

Chapter 20. Industry (29 pages)

Executive Summary

- 20.1. Introduction
- 20.2. Industrial-sector emissions of greenhouse gases
- 20.3. Specific industry emissions
- 20.4. Technical abatement options
- 20.5. Policy options
- 20.6. Conclusions

This chapter outlines the major sources and trends of greenhouse gas emissions from industrial activity. It indicates possible abatement strategies including technologies, processes, and product designs to lower CO₂ emissions in the future.

Chapter 21. Mitigation options in the transportation sector (34 pages)

Executive Summary

- 21.1. Introduction
- 21.2. Transport and greenhouse gas emissions
- 21.3. Reducing transport greenhouse gas emissions
- 21.4. Transport-policy perspective on greenhouse gas emissions

This chapter addresses options for mitigation of greenhouse gas emissions in the transport sector, including travel and freight movements by road, rail, air, and water. Current emissions from transport and their trends, the contribution of non-CO₂ greenhouse gases and the patterns of different countries and regions are analysed. The potential for emission reductions through changes in vehicle maintenance and new vehicle design, changes in vehicle operating practice, and introduction of alternative fuels are reviewed. Effects of fiscal, regulatory, planning, and other measures in the transport sector are discussed.

Chapter 22. Mitigation options for human settlements (31 pages)

Executive Summary

- 22.1. Introduction
- 22.2. Historic trends in greenhouse gas (GHG) emissions from human settlements
- 22.3. Factors affecting future growth of GHG emissions from human settlements
- 22.4. Potential for reducing GHG emissions
- 22.5. Policy options
- 22.6. Scenarios

The chapter reviews estimates of greenhouse gas emissions and trends from human settlements, describes key factors that affect the growth of these emissions, and assesses technical and economic potentials for reducing the emissions. Policy measures at the local, national, and international levels are also reviewed.

Chapter 23. Agricultural options for mitigation of greenhouse gas emissions (27 pages)

Executive Summary

- 23.1. Introduction
- 23.2. Carbon dioxide
- 23.3. Methane and nitrous oxide
- 23.4. Economic feasibility of mitigation options
- 23.5. Uncertainties and future research needs

This chapter provides information on greenhouse gas emissions and trends in the agriculture sector. It describes how emissions could be reduced through better management practices relating, for example, to fertilizer usage, better nutrition of ruminant animals, water management in rice paddies, and waste treatment systems.

Chapter 24. Management of forests for mitigation of greenhouse gas emissions (25 pages)

Executive Summary

- 24.1. Introduction
- 24.2. Role of forests in the global carbon cycle
- 24.3. Carbon mitigation options
- 24.4. Assessment of carbon mitigation options
- 24.5. Projected costs and benefits of carbon conservation and sequestration
- 24.6. Impacts of future climate, atmospheric CO₂, land use, and human population on carbon conservation and sequestration
- 24.7. Research and data needs

The chapter reviews forest management practices, including information on their cost, that can be used to conserve and sequester carbon. These practices include, for example, protection, afforestation, intermediate silvicultural treatments, harvesting, and agroforestry.

Chapter 25. Mitigation: Cross-sectoral and other issues (21 pages)

Executive Summary

- 25.1. Introduction
- 25.2. Energy implications for low-emissions greenhouse gas scenarios
- 25.3. Issues related to land use and land cover
- 25.4. Concepts for counterbalancing climatic change
- 25.5. Integrated assessment of mitigation potential

This chapter describes some of the cross-cutting issues likely to affect the adaptation and mitigation options presented in the previous chapters. The focus is on land use issues, geo-engineering and energy efficiency.

VI. GUIDELINES

Chapter 26. Technical guidelines for assessing climate change impacts and adaptations (11 pages)

Executive Summary

- 26.1. Objectives
- 26.2. Approaches
- 26.3. Step One - Definition of the problem
- 26.4. Step Two - Selection of the method
- 26.5. Step Three - Testing the method
- 26.6. Step Four - Selecting of the scenarios
- 26.7. Step Five - Assessment of impacts
- 26.8. Steps Six and Seven - Assessment of autonomous adjustments and evaluation of adaptation strategies
- 26.9. Obtaining a copy of the guidelines

This chapter was published as a part of the IPCC Special Report (1994). It provides a review of the methods to assess climate change impacts and adaptation options and is intended for the technical analyst responsible for organizing and undertaking impact assessments.

Chapter 27. Methods for assessment of mitigation options (9 pages)

- 27.1. Introduction
- 27.2. Challenges in a mitigation options assessment
- 27.3. Analytical framework and levels of decision-making
- 27.4. Organizing a mitigation options assessment
- 27.5. Key methodological issues
- 27.6. Analytical methods
- 27.7. Conclusions
- 27.8. Obtaining a copy of the guidelines

This chapter and the four related appendices provide a review of methods for assessing mitigation options in the energy, transport, forestry, and agriculture sectors. The documents provide a framework for analysis, a resources guide, information on specific models, case studies, and a handbook for analysts. The methods were reviewed at four workshops in Denmark, Poland, Thailand, and the United States of America.

Appendix I: Technical methods

This volume is a catalogue of analytical methods, describing in detail their purpose, appropriate application, potential drawbacks, and references for further information. The methodology includes cross-sectoral, sectoral and programme analyses.

Appendix II: Resources guide

This volume is a reference guide for readers interested in databases and analytical models, sources, institutional contacts, and programme information.

Appendix III: Case studies

This volume contains a set of case studies of methods and approaches used by a small set of developing countries and countries with economies in transition.

Appendix IV: Mitigation assessment handbook

This handbook provides a description of how to use a limited set of basic models.

Chapter 28. Inventory of technologies, methods and practices (7 pages)

- 28.1. Introduction
- 28.2. Emission reduction technologies
- 28.3. Other technology inventories
- 28.4. Obtaining a copy of the inventory

This chapter is an introduction to the "Inventory of technologies, methods and practices for reducing emissions of greenhouse gases" which is being issued as an appendix.

Appendix I. Inventory of technologies, methods and practices for reducing emissions of greenhouse gases (232 pages)

The inventory is a database containing information on technologies, methods and practices to limit emissions of greenhouse gases in the energy, transportation, building, industry and agriculture sectors. The inventory contains information on performance characteristics and applications, capital and operating costs, environmental characteristics (including emissions of greenhouse gases), and infrastructural requirements.

- - - - -