



IPCC Second Assessment Climate Change 1995

A REPORT OF THE
INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



IPCC Second Assessment Climate Change 1995

A REPORT OF THE
INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

CONTENTS

	<i>Page</i>
PREFACE	v
FOREWORD	vii
IPCC SECOND ASSESSMENT SYNTHESIS OF SCIENTIFIC-TECHNICAL INFORMATION RELEVANT TO INTERPRETING ARTICLE 2 OF THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE	1
1. Addressing the UNFCCC Article 2	3
2. Anthropogenic interference with the climate system	4
3. Sensitivity and adaptation of systems to climate change	6
4. Analytical approach to stabilization of atmospheric concentrations of greenhouse gases	8
5. Technology and policy options for mitigation	12
6. Equity and social considerations	14
7. Economic development to proceed in a sustainable manner	15
8. The road forward	17
SUMMARY FOR POLICYMAKERS: THE SCIENCE OF CLIMATE CHANGE — IPCC WORKING GROUP I	19
1. Greenhouse gas concentrations have continued to increase	21
2. Anthropogenic aerosols tend to produce negative radiative forcings	21
3. Climate has changed over the past century	22
4. The balance of evidence suggests a discernible human influence on global climate	22
5. Climate is expected to continue to change in the future	22
6. There are still many uncertainties	24
SUMMARY FOR POLICYMAKERS: SCIENTIFIC-TECHNICAL ANALYSES OF IMPACTS, ADAPTATIONS AND MITIGATION OF CLIMATE CHANGE — IPCC WORKING GROUP II	25
1. Scope of the assessment	27
2. Nature of the issue	27
3. Vulnerability to climate change	28
3.1 Terrestrial and aquatic ecosystems	29
3.2 Hydrology and water resources management	32
3.3 Food and fibre	32
3.4 Human infrastructure	34
3.5 Human health	35
4. Options to reduce emissions and enhance sinks of greenhouse gases	36
4.1 Energy, industrial process and human settlement emissions	36
4.1.1 Energy demand	36
4.1.2 Mitigating industrial process and human settlement emissions	38
4.1.3 Energy supply	38
4.1.4 Integration of energy system mitigation options	39
4.2 Agriculture, rangelands and forestry	39
4.3 Cross-sectoral issues	41
4.4 Policy instruments	41
SUMMARY FOR POLICYMAKERS: THE ECONOMIC AND SOCIAL DIMENSIONS OF CLIMATE CHANGE — IPCC WORKING GROUP III	43
1. Introduction	45
2. Scope of the assessment	45
3. Decision-making frameworks for addressing climate change	46
4. Equity and social considerations	47
5. Intertemporal equity and discounting	48
6. Applicability of cost and benefit assessments	49
7. The social costs of anthropogenic climate change: Damages of increased greenhouse gas emissions	50

	<i>Page</i>
8. Generic assessment of response strategies	51
9. Costs of response options	52
10. Integrated assessment	54
11. An economic assessment of policy instruments to combat climate change	55
APPENDIX: HEAD AUTHORS, AUTHORS AND CONTRIBUTORS	57
LIST OF IPCC OUTPUTS	64

PREFACE

The Intergovernmental Panel on Climate Change (IPCC) was jointly established by the World Meteorological Organization and the United Nations Environment Programme in 1988, in order to: (i) assess available scientific information on climate change, (ii) assess the environmental and socio-economic impacts of climate change, and (iii) formulate response strategies. The IPCC First Assessment Report was completed in August 1990 and served as the basis for negotiating the UN Framework Convention on Climate Change. The IPCC also completed its 1992 Supplement and *Climate Change 1994: Radiative Forcing of Climate Change and An Evaluation of the IPCC IS92 Emission Scenarios* to assist the Convention process further.

In 1992, the Panel reorganized its Working Groups II and III to assess, respectively, the impacts and response options, and the social and economic aspects of climate change. It committed itself to completing its Second Assessment in 1995, not only updating the information on the same range of topics as in the First Assessment, but also including the new subject area of technical issues related to the socio-economic aspects of climate change. We applaud the IPCC for producing its Second Assessment Report (SAR) as scheduled. We are convinced that the SAR, as the earlier IPCC reports, would become a standard work of reference, widely used by policymakers, scientists and other experts.

As usual in the IPCC, success in producing this report has depended upon the enthusiasm and cooperation of numerous busy scientists and other experts worldwide. We are exceedingly pleased to note here the very special efforts made by the IPCC in ensuring the participation of scientists and other experts from the developing and transitional economy countries in its activities, in particular in the writing, reviewing and revising of its reports. The scientists and experts from the developed, developing and transitional economy countries have given of their time very generously, and governments have supported them, in the enormous intellectual and physical effort required, often going substantially beyond reasonable demands of duty. Without such conscientious and professional involvement, the IPCC would be greatly impoverished. We express to all these scientists and experts, and the governments who supported them, our sincere appreciation for their commitment.

We take this opportunity to express our gratitude to the following individuals for nurturing another IPCC report through to a successful completion:

- Prof. Bolin, the Chairman of the IPCC, for his able leadership and skilful guidance of the IPCC;
- the Vice-Chairmen of the IPCC, Prof. Yu. A. Izrael (Russian Federation) and Dr A. Al-Gain (Saudi Arabia);
- the Co-Chairmen of Working Group I, Dr L.G. Meira Filho (Brazil) and Sir John Houghton (UK); the Vice-Chairmen of the Working Group, Dr Ding Yihui (China), Dr H. Grassl and later Prof. D. Ehhalt (Germany) and Dr A.B. Diop (Senegal);
- the Co-Chairmen of Working Group II, Dr R. T. Watson (USA) and Dr M.C. Zinyowera (Zimbabwe); the Vice-Chairmen of the Working Group, Dr O. Canziani (Argentina), Dr M. Petit (France), Dr S. K. Sharma (India), Mr H. Tsukamoto (Japan), Prof. P. Vellinga (the Netherlands), Dr M. Beniston (Switzerland) Dr A. Hentati and later Dr J. Friaa (Tunisia) and Ing. (Mrs) M. Perdomo (Venezuela);
- the Co-Chairmen of Working Group III, Dr J.P. Bruce (Canada) and Dr Hoesung Lee (Republic of Korea); the Vice-Chairmen of the Working Group, Prof. R. Odingo (Kenya) and Dr T. Hanisch and later Dr L. Lorentsen (Norway);
- the Regional Representatives in the IPCC Bureau, Dr A. Adejokun (Nigeria for Africa), Dr H. Nasrallah (Kuwait for Asia), Dr F. Fajardo Moros (Cuba for North and Central America and the Caribbean), Dr N. Sabogal and later Dr K. Robertson (Colombia for South America), Dr J. Zillman (Australia for Southwest Pacific) and Dr M. Bautista Perez (Spain for Europe);
- Dr B. Callander, the Head of the Technical Support Unit of Working Group I and his staff, Ms K. Maskell, Mrs J.A. Lakeman and Mrs F. Mills, and those who provided additional assistance, namely, Dr N. Harris (European Ozone Research Co-ordinating Unit, Cambridge, UK) and Dr A. Kattenberg (Royal Netherlands Meteorological Institute);
- Dr R. H. Moss, the Head of the Technical Support Unit of Working Group II and his staff, interns or volunteers, namely, Mr S. Agarwala, Mr D.J. Dokken, Mr S. Greco, Ms D. Hagag, Ms S. MacCracken, Ms F. Ormond, Ms M. Taylor, Ms A. Tenney and Ms L. Van Wie;
- Dr E. Haites, the Head of the Technical Support Unit of Working Group III and his staff Ms L. Lawson and Ms V. Dreja;
- and Dr N. Sundararaman, the Secretary of the IPCC and his staff in the IPCC Secretariat, the late Mr S. Tewungwa, Mrs R. Bourgeois, Ms C. Etori and Ms C. Tanikie.

G.O.P. Obasi
Secretary-General
World Meteorological Organization

Ms E. Dowdeswell
Executive Director
United Nations Environment Programme

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_12779

