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INTERGOVERNMENTAL PANEL ON climate change

IPCC WORKING GROUP I – ELEVENTH SESSION
Bali, 26-29 October 2009

WG-I :11th /Doc.2
(28.IX.2009)
Agenda Item: 2
ENGLISH ONLY

PROPOSED CHAPTER OUTLINES OF THE WORKING GROUP I CONTRIBUTION TO THE IPCC FIFTH ASSESSMENT REPORT (AR5)

(Submitted by the Co-Chairs of Working Group I)

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Working Group I Contribution to the IPCC Fifth Assessment Report

Please refer to the Background Document WGI-11/Inf.1 for information on the broad structure and rationale of the Working Group I Contribution to the IPCC Fifth Assessment Report

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Chapter 6: Carbon and Other Biogeochemical Cycles

Executive Summary

- Past changes in CO_2, CH_4, N_2O and biogeochemical cycles
- Recent trends in global and regional sources, sinks and inventories, including land use change
- Processes and understanding of changes, including ocean acidification
- Interactions between the carbon and other biogeochemical cycles, including the nitrogen cycle
- Projections of changes in carbon and other biogeochemical cycles
- Greenhouse gas stabilisation
- Carbon cycle – climate feedbacks and irreversibility
- Geoengineering involving the carbon cycle

Frequently Asked Questions

Chapter 7: Clouds and Aerosols

Executive Summary

- Observations of clouds and their representation in models
- Coupling of clouds, water vapour, precipitation and the large-scale circulation
- Cloud and water vapour feedbacks and their effects on climate sensitivity
- Observations of aerosols and their representation in models
- Aerosol types including black carbon: chemistry, sources, sinks and distribution
- Direct and indirect aerosol forcing and effects
- Aerosol-cloud-precipitation interactions
- Geoengineering involving clouds and aerosols

Frequently Asked Questions

Chapter 8: Anthropogenic and Natural Radiative Forcing

Executive Summary

- Radiative forcing changes: solar and volcanic
- Anthropogenic radiative forcing, including effects from land surface changes
- Effects of atmospheric chemistry and composition
- Spatial and temporal expression of radiative forcing
- Greenhouse gas and other metrics, including Global Warming Potential (GWP) and Global Temperature Change Potential (GTP)

Frequently Asked Questions

Chapter 9: Evaluation of Climate Models

Executive Summary

- The hierarchy of climate models from global to regional, including downscaling methods
- Performance metrics and their use
- New model components and coupling
- Representation of processes and feedbacks in climate models
- Simulation of recent and longer term records
- Simulation of regional patterns, variability and extremes

Frequently Asked Questions

Chapter 10: Detection and Attribution of Climate Change: from Global to Regional

Executive Summary

- Evaluation of methodologies
- Atmospheric and surface changes
- Changes in ocean properties
- Cryosphere changes
- Extreme events
- Pre-instrumental perspective
- Implications of attribution for projections

Frequently Asked Questions