

# CLIMATE CHANGE 2013

## *The Physical Science Basis*

### Working Group I Fact Sheet

The Working Group I contribution to the IPCC Fifth Assessment Report (WGI AR5) provides a comprehensive assessment of the physical science basis of climate change. The report was developed by an international team of scientists who were selected in May 2010. It went through a multi-stage review process involving expert reviewers and governments. It was presented to the IPCC member governments for approval and acceptance in September 2013.

#### The Report

- **1** Scoping Meeting to outline **14** Chapters ▪ Over **1000** nominations from **63** countries ▪ **209** Lead Authors and **50** Review Editors from **39** countries ▪ Over **600** Contributing Authors from **32** countries ▪ Over **2 million** gigabytes of numerical data from climate model simulations ▪ Over **9200** scientific publications cited ▪

#### The First Order Draft Expert Review

- Nearly **1500** individuals registered ▪ **21,400** comments from **659** Expert Reviewers from **47** countries ▪

#### The Second Order Draft Expert and Government Review

- Over **1500** individuals registered ▪ **31,422** comments from **800** Expert Reviewers from **46** countries and **26** Governments ▪

#### The Final Government Distribution

- **1855** comments from **32** Governments on the Final Draft Summary for Policymakers ▪

#### Total Reviews

- **54,677** comments ▪ **1089** Expert Reviewers from **55** countries ▪ **38** Governments ▪

#### The WGI Approval Session

- 23-27 September 2013, Stockholm, Sweden ▪ The Summary for Policymakers was approved line-by-line and accepted by the Panel, which has **195** member Governments ▪

The IPCC's Fifth Assessment Report (AR5) contains contributions from three Working Groups. Working Group I assesses the physical science basis of climate change. Working Group II assesses impacts, adaptation and vulnerability while Working Group III assesses the mitigation of climate change. The Synthesis Report draws on the assessments made by all three Working Groups.

The Working Group I contribution to the AR5 (WGI AR5) has 14 chapters, a Technical Summary and a Summary for Policymakers. The report includes an assessment of observations of the climate system, with separate chapters covering changes in the atmosphere and surface, the ocean and the cryosphere, as well as information from paleoclimate archives. There are chapters covering the carbon cycle, the science of clouds and aerosols, radiative forcing and sea level change. Coverage of climate change projections is extended by assessing both near-term and long-term projections. Climate phenomena such as monsoon and El Niño and their relevance for future regional climate change are assessed. An innovative feature of the WGI AR5 is the Atlas of Global and Regional Climate Projections (Annex I), which is intended to enhance accessibility for users and stakeholders.

The WGI AR5 involved experts from around the world with expertise in the many different disciplines necessary to produce a comprehensive assessment of the physical science of climate change according to the approved chapter outlines. There were 209 Lead Authors and 50 Review Editors. More than 600 additional experts were invited by the Lead Authors of the report to be Contributing Authors and to provide additional specific knowledge or expertise in a given area.

Lead Authors and Review Editors were selected for their scientific and technical expertise in relation to the approved chapter outlines for the WGI AR5 from lists of experts nominated by governments and IPCC observer organisations. Regional and gender balance were also considered, as well as ensuring the involvement of experts who had not worked on IPCC assessments before.

The author teams assessed thousands of sources of scientific and technical information in the course of their work on WGI AR5. Priority is given to peer-reviewed literature if available and over 9,200 publications are cited in the WGI report.

Multiple stages of review are an essential part of the IPCC process. Both expert reviewers and governments are invited at different stages to comment on the scientific and technical assessment and the overall balance of the drafts. The review process includes worldwide participation, with hundreds of experts reviewing the accuracy and completeness of the scientific assessment contained in the drafts.

The WGI AR5 was presented to the IPCC member governments for approval and acceptance in September 2013.