



A look back at Regional Climate Projections in (WGI) AR5 -- Recommendations from the 2015 IPCC Workshop

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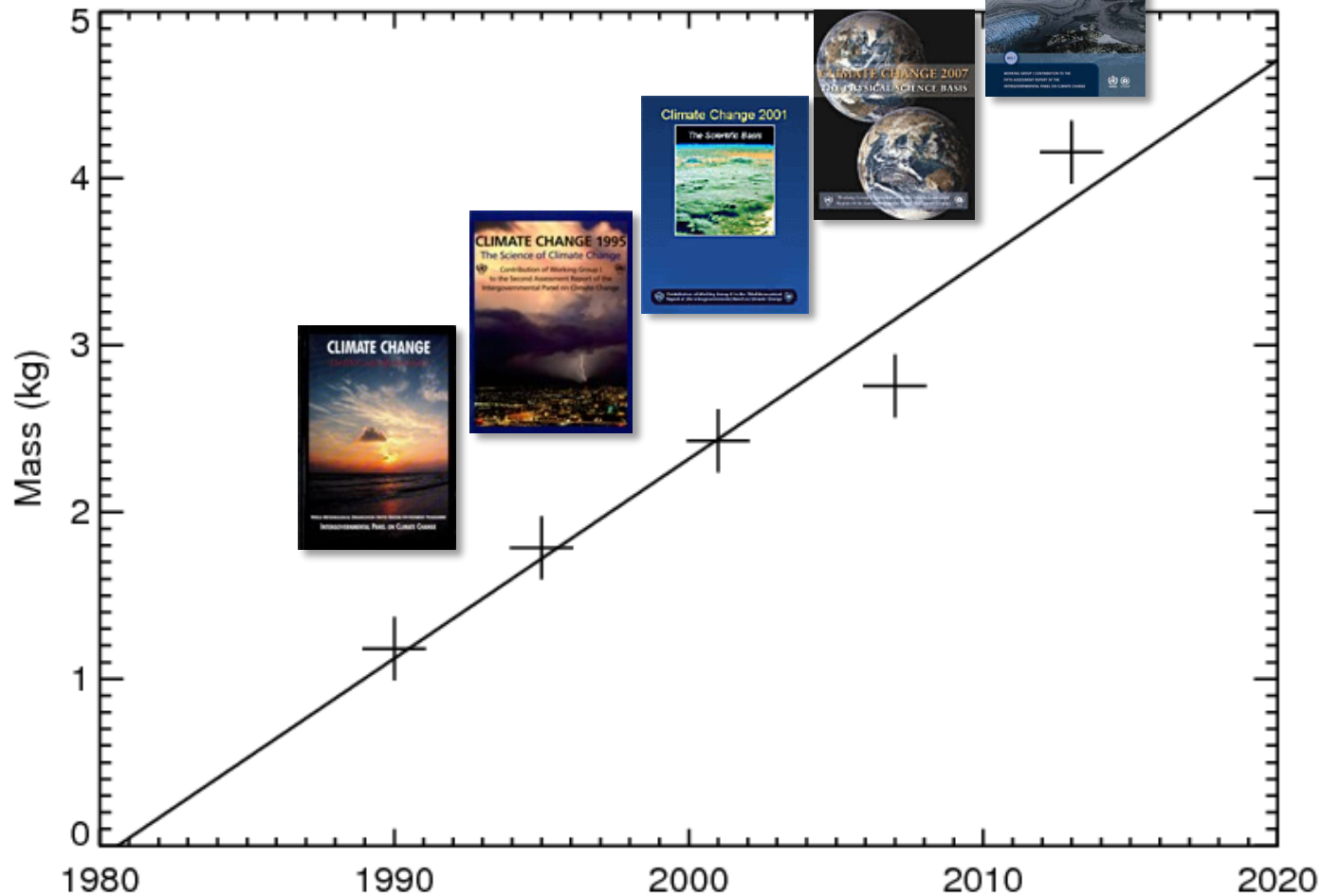
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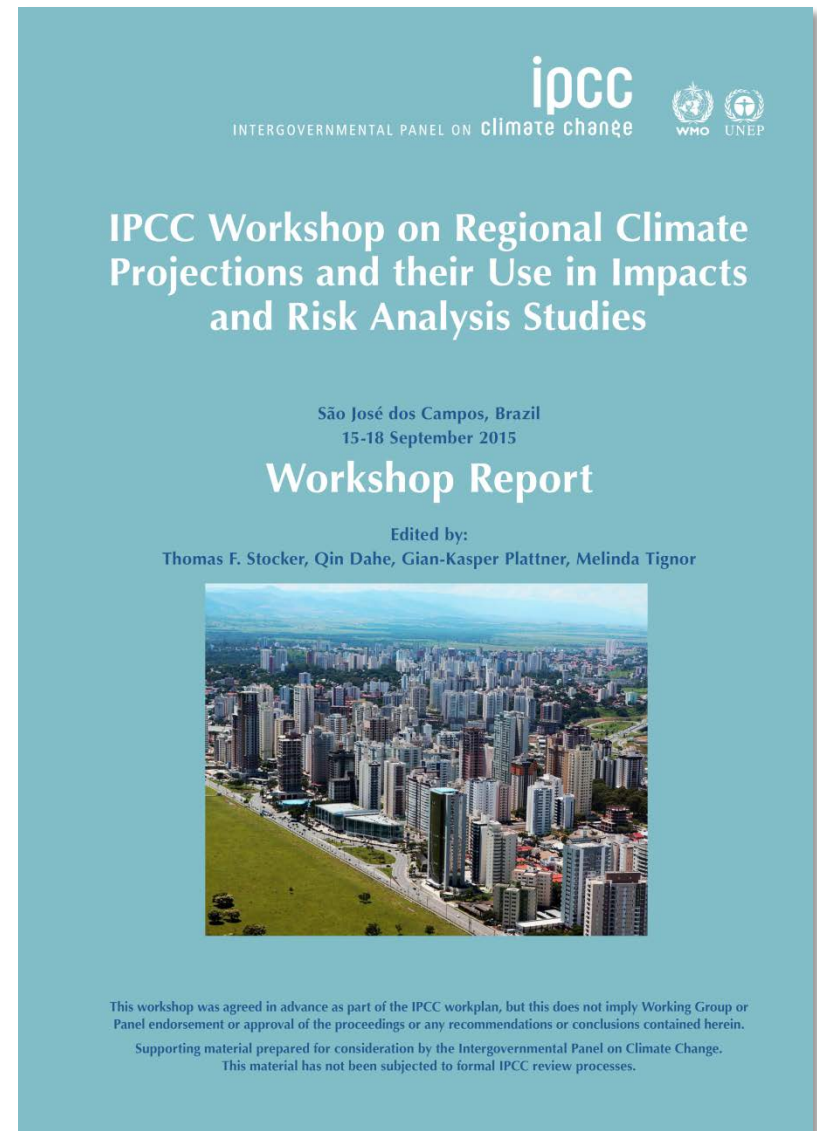
The Growing Mass of Scientific Evidence





IPCC Workshop on Regional Climate Projections and their Use in Impacts and Risk Analysis Studies

- ❖ Workshop approved by the IPCC Panel at the 41st Session of the IPCC, Nairobi Kenya, February 2015
- ❖ Organized by IPCC WG I, but joint WGI-WGII expertise and topics
- ❖ Location: Instituto Nacional de Pesquisas Espaciais (INPE), São José dos Campos, Brazil, 15–18 September 2015
- ❖ 110 expert participants from all regions and 52 countries
- ❖ ***More information available from <http://www.ipcc.ch/> (Publications → Supporting Material)***





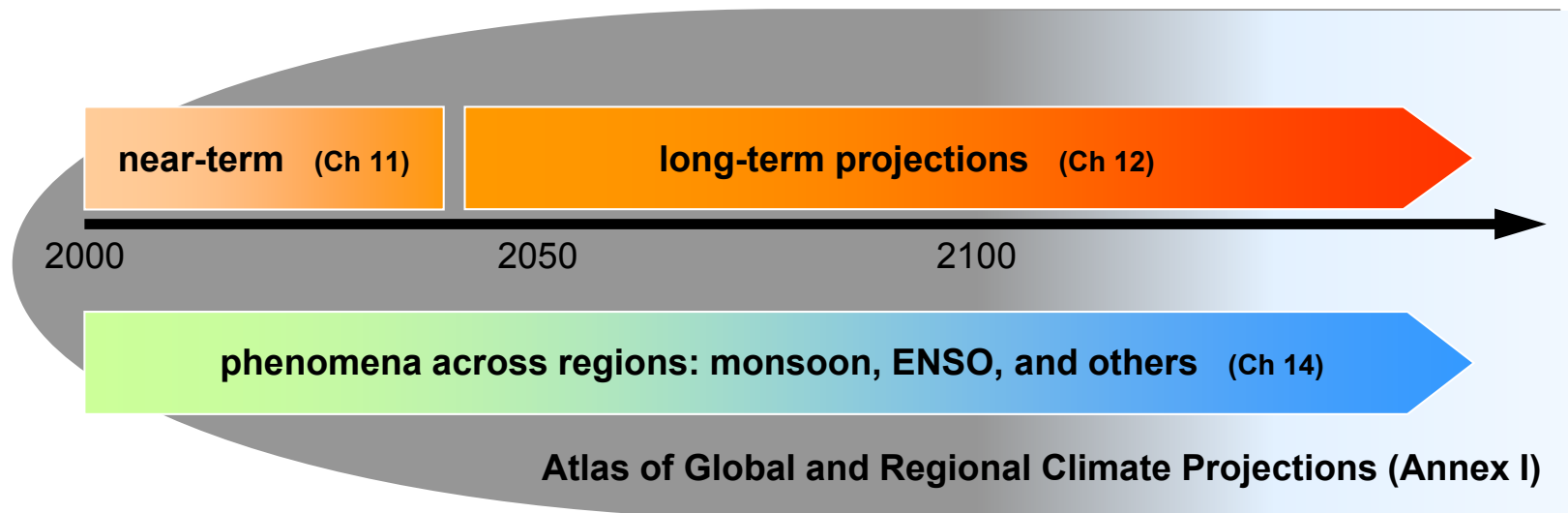
AR5 Regional Climate Projections: From the Scoping to the Report

The original plan:

- ❖ two chapters on future climate change (near-Term & long-Term)
- ❖ no regional projections chapter, but a climate phenomena chapter
- ❖ each of these three chapters to cover regional projections

An important addition:

- ❖ concerns about hand-off and availability of regional information from WGI to users (incl. IPCC WGs II and III) → Atlas





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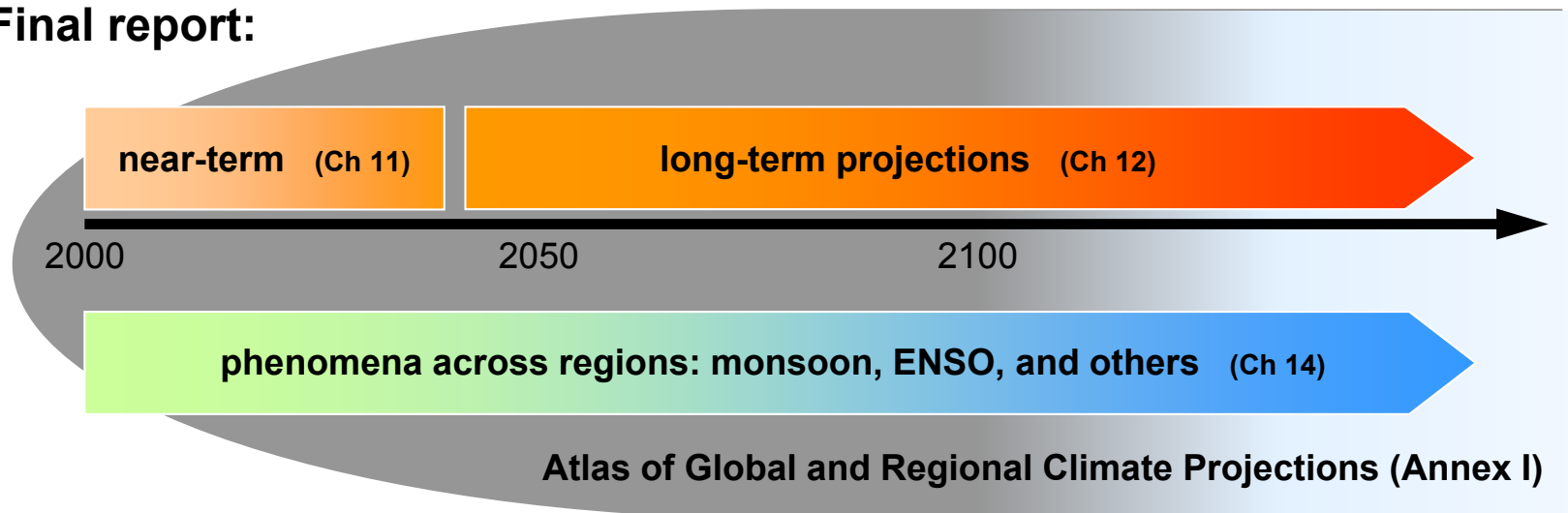
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Final report:





Regional Climate Projections Workshop: Objectives

- ❖ **Critically reflect** on the assessment of regional climate change projections and of regional projections of climate change impacts and risks, and their limitations, in the IPCC AR5;
- ❖ **Collect views and perspectives** on how IPCC assessment of regional projections of climate, impacts and risks could be better supported/improved;
- ❖ **Discuss the latest, post IPCC AR5 results** from regional climate modelling and downscaling efforts and **obtain an overview of the status of information currently available or foreseen** on a time scale relevant for the next assessment cycle for all regions of the world;

Regional Climate Projections Workshop: Objectives (cont.)

- ❖ **Explore ways how the IPCC could facilitate the collaboration and exchange** between the climate modelling and impact and risk communities, including ensuring an effective flow and quality control of information and data;
- ❖ **Identify numerical data requirements** (climate variables, derived quantities, proxies, and statistics) by the impacts and risk communities from the climate modelling community that could **help facilitate the assessment process** in future IPCC assessment cycles.

Regional Climate Projections Workshop: Outcomes

Report and Information paper with

- ❖ General recommendations **to the IPCC**
- ❖ General recommendations **for the IPCC AR6 Cycle**
- ❖ Specific recommendations **for the IPCC AR6 Scoping Process**
- ❖ Further **specific recommendations** on:
 - linking coordinated climate model projection efforts with impacts and risk modelling efforts
 - how to optimize climate information for use by decision makers at regional scales
 - dealing with high risk–low probability events: what climate scientists can provide and what decision makers need to deal with climate/weather extremes and natural disasters

Regional Climate Projections Workshop: Key Recommendations

- ❖ **Enhance regionalization of the assessment** throughout. Initiate **close collaboration with WCRP, CMIP-6 and CORDEX, and PROVIA** early on in AR6. Foster research on distilling across multi-model multi-method ensemble data.
- ❖ Prepare **a pair of AR6 WGI and WGII Atlases** covering global and regional **climate projections & climate impacts and risks**: (i) based on **coordinated, multi-model** initiatives and (ii) complementary and **closely coordinated** across WG.
- ❖ Support cross-WG integration by **dealing with topics of high-regional relevance** (e.g., water cycle, sea level, extremes) **in a coordinated manner** through, e.g., ~~joint chapters~~, joint meetings of authors, dedicated contributing authors.
- ❖ Make use of cross-WG **IPCC Expert Meetings and Workshops** to **activate research communities** for the assessment and to **foster coordination** across WGs.

Well, we do have a plan or a set of plans .

Development of the Working Group II Outline of AR6

Summary for Policy Makers & Technical Summary		Approval October 2021
❖ Ch1: Point of departure and key concepts	Section 1: Risks, adaptation and sustainability for systems impacted by climate change	
❖ Ch2: Terrestrial and freshwater ecosystems and their services		
❖ Ch3: Ocean and coastal ecosystems and their services		
❖ Ch4: Water		
❖ Ch5: Food, fibre, and other ecosystem products		
❖ Ch6: Cities, settlements and key infrastructure		
❖ Ch7: Health, wellbeing and the changing structure of communities		
❖ Ch8: Poverty, livelihoods and sustainable development		
❖ Chs9-15: Africa; Asia; Australasia; Central and South America; Europe; North America; Small Islands	Section 2: Regions	
❖ Ch16: Key risks across sectors and regions	Section 3: Sustainable development pathways: integrating adaptation and mitigation	
❖ Ch17: Decision-making options for managing risk		
❖ Ch18: Climate resilient development pathways		
Annexes		

**Approval
April 2021**

ar6

AR6

**Approval
July 2021**

mid-term

Sectoral Chs 6-11
(some common elements)

- ❖ Ch11: Weather
 - ❖ Ch12: Climate
- Annexes (incl. opt

- ❖ Ch13: National and sub-national policies and institutions
 - ❖ Ch14: International cooperation
 - ❖ Ch15: Investment and finance
 - ❖ Ch16: Innovation, technology development and transfer
 - ❖ Ch17: Accelerating the transition in the context of sustainable development
- Annexes

A Personal Note

- ❖ This is the time to **coordinate across WGs** and to **activate the research communities**;
 - ❖ This is the time to set up the **process for effective and efficient collaboration** across WGs (author teams);
 - ❖ Soon (in fact, very soon for WGI) we **will all be fully engaged and absorbed** with preparing the best possible, most comprehensive, robust, and traceable WG assessments.
- this Expert Meeting is crucial to discuss issues like, e.g., the
- **distillation of climate model outputs and information** (scales mismatch, relevance,)
 - **propagation of uncertainties** across the process chain