

# Climate Change 2013: The Physical Science Basis

Working Group I contribution to the IPCC Fifth Assessment Report

## IPCC: History and process

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 KØBENHAVNS UNIVERSITET

IPCC AR5 Working Group I  
Climate Change 2013: The Physical Science Basis

  
INTERGOVERNMENTAL PANEL ON climate change



# Overview

- What is the IPCC?
- How does IPCC achieve credibility?
- What gives the IPCC its huge impact?
  - The role of climate science in decision making

## ABOUT THE IPCC – *PROCESS*

- IPCC does not carry out research – but assess published peer reviewed. Danish research is part of this.
- The IPCC authors are from around the world. This time Denmark has had three main authors / editors and several contributing authors. A large number of scientific articles by Danish authors have been referenced.
- The Danish Meteorological Institute (DMI) is the Danish IPCC point of contact.

### AR6

WG I: The Physical Science Basis

WG II: Impacts, Adatation snd Vulnerabilities

WG III: Mitigation of Climate Change

### **Process for Summary for Policy Makers**

While the IPCC main reports themselves are a purely scientific piece of work, the wording of the SPM has been negotiated in place between the authors and representatives from all countries of the world. It ensures global ownership of the report, and the scientific authors must always be able to vouch for the text.

# The role of the IPCC is ...

The Intergovernmental Panel on Climate Change (IPCC) **is the United Nations' body** for assessing the science related to climate change.

IPCC was **established in 1988 to provide policymakers** with regular scientific **assessments** on the current state of knowledge about climate change.

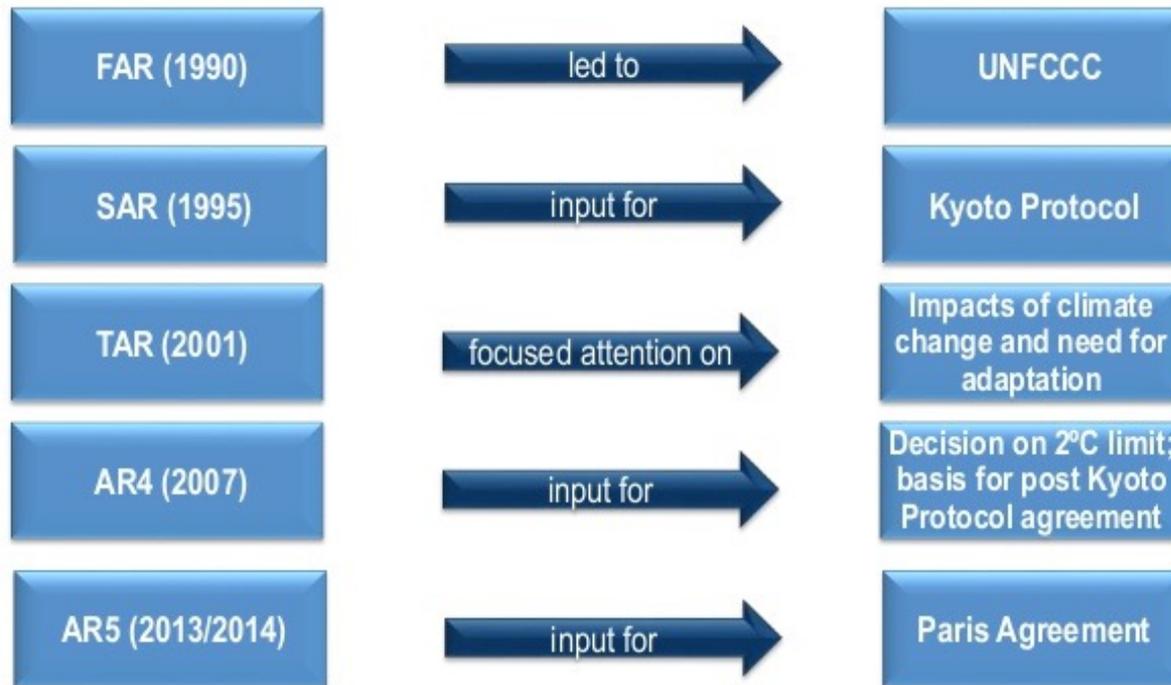
Since the creation of the IPCC, each Assessment Report (AR) has **led directly into international climate policymaking**.

# The IPCC organisation

The IPCC has 3 working groups and a Task Force:

- [Working Group I](#) assesses the scientific aspects of the climate system and climate change.
- [Working Group II](#) assesses the vulnerability of socio-economic and natural systems to climate change, negative and positive consequences of climate change, and options for adapting to it.
- [Working Group III](#) assesses options for limiting greenhouse gas emissions and otherwise mitigating climate change.
- The [Task Force on National Greenhouse Gas Inventories](#) is responsible for the IPCC National Greenhouse Gas Inventories Programme.

# Why is the IPCC important?



**AR6....**



# COP26: WG1 mentioned in the Glasgow Agreement

## I. Science and urgency

1. *Recognizes* the importance of the best available science for effective climate action and policymaking;
2. *Welcomes* the contribution of Working Group I to the Intergovernmental Panel on Climate Change Sixth Assessment Report<sup>2</sup> and the recent global and regional reports on the state of the climate from the World Meteorological Organization, and *invites* the Intergovernmental Panel on Climate Change to present its forthcoming reports to the Subsidiary Body for Scientific and Technological Advice in 2022;
3. *Expresses alarm and utmost concern* that human activities have caused around 1.1 °C of warming to date, that impacts are already being felt in every region, and that carbon budgets consistent with achieving the Paris Agreement temperature goal are now small and being rapidly depleted;
4. *Recalls* Article 2, paragraph 2, of the Paris Agreement, which provides that the Paris Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities in the light of different national circumstances;
5. *Stresses* the urgency of enhancing ambition and action in relation to mitigation, adaptation and finance in this critical decade to address the gaps in the implementation of the goals of the Paris Agreement;

*Recognizes the importance of the...*

*Welcomes contribution from WG1...*

*Expresses alarm and utmost concern...*

## Historical perspectives:

In 1990, **the First IPCC Assessment Report (FAR)** played a decisive role **in the creation of the UNFCCC** (United Nations Framework Convention on Climate Change), the key international treaty to reduce global warming and cope with the consequences of climate change.

The **Second Assessment Report (SAR) (1995)** provided important material for governments to draw from in the run-up to adoption of the **Kyoto Protocol in 1997**.

The **Third Assessment Report (TAR) (2001)** focused attention on the impacts of climate change and the need for adaptation.

The **Fourth Assessment Report (AR4) (2007)** laid the groundwork for a **post-Kyoto agreement, focusing on limiting warming to 2°C. Awarded the Nobel Peace Prize.**

The **Fifth Assessment Report (AR5) (2013/2014)** provided the scientific input into the **Paris Agreement**.

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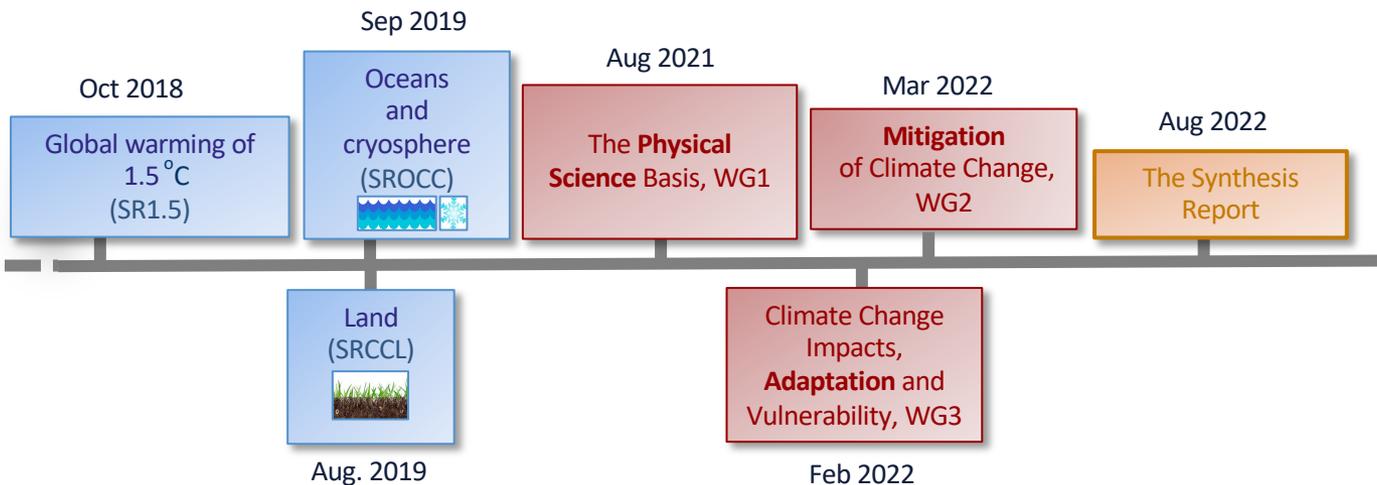
The **Sixth Assessment Report cycle (AR6) (2021/~~2022~~2023)**:

**Three Special Reports.** The first of these Special Reports, **Global Warming of 1.5°C (SR15)**, was requested by world governments under the Paris Agreement and finalized in 2018.

**A Special Report on Climate Change and Land (SRCCL)** was finalized in 2019. A Special Report on **Ocean and Cryosphere in a Changing Climate (SROCC)** was also finalized in 2019.

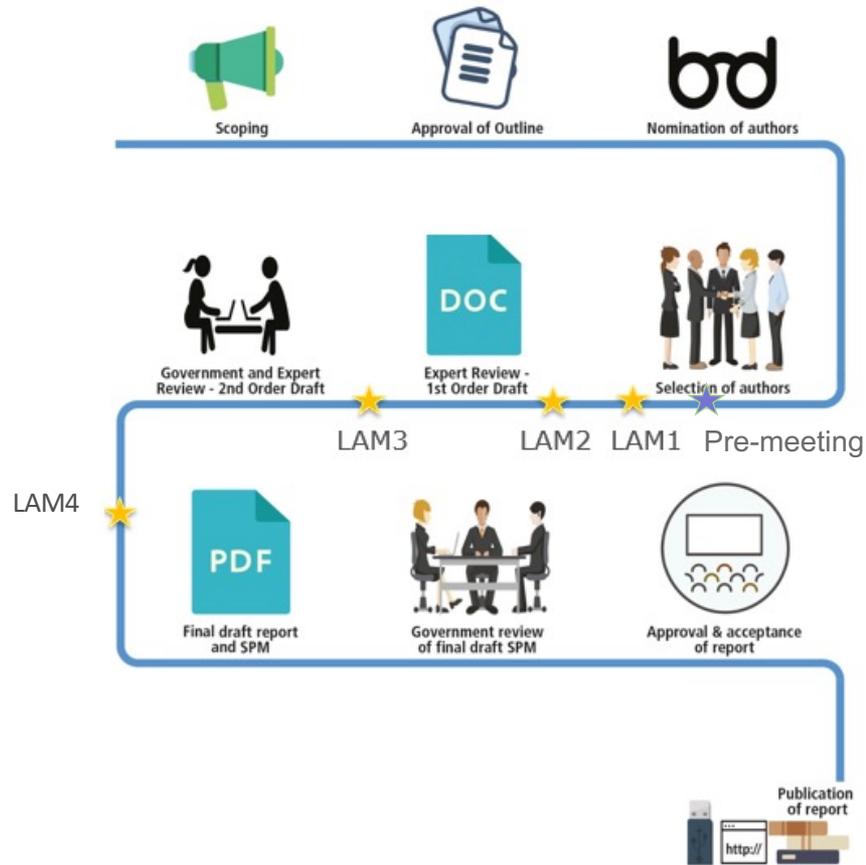
The Sixth Assessment Reports provides the scientific input for e.g., **COP25, COP26, COP27...**

# Reports in the IPCC sixth cycle



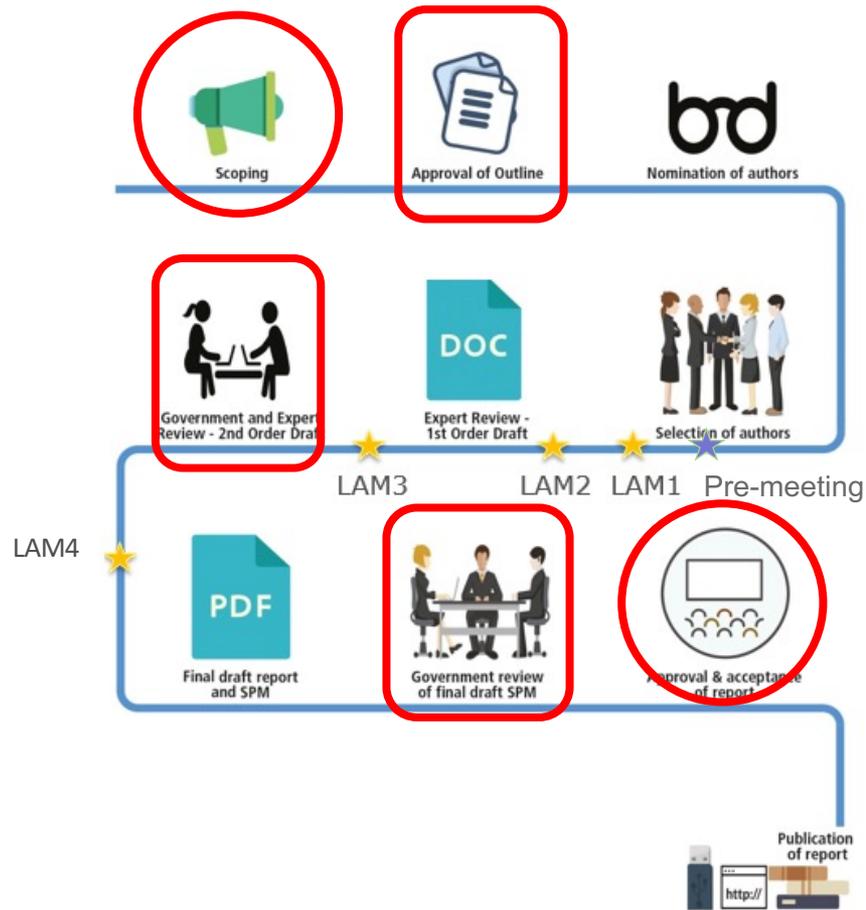
How is an IPCC report produced?

How was the WG1 report produced?



★ = Lead Author Meetings (LAMs)

# Where can policymakers influence the process?



★ = Lead Author Meetings (LAMs)

**IPCC does not carry out research – but assesses published *peer reviewed* scientific papers**



# How the IPCC work

- The Panel meets in plenary about once a year. It accepts/approves/adopts IPCC reports, decides on mandates and work plans of the WG's and the TF, the structure and outlines of its reports, the IPCC Principles and Procedures, and the budget.
- The Panel also elects the IPCC Chair, the IPCC Bureau and the Bureau of the TF on National Greenhouse Gas Inventories. The IPCC Bureau assists the IPCC Chair in planning, co-ordinating and monitoring progress in the work of the IPCC.
- The IPCC is managed by the IPCC Secretariat by WMO in Geneva. In addition each Working Group and the Task Force has a Technical Support Unit.

# Approval of SPM 'line by line'

