

# For the sixth damn time: act NOW!

## Q&A on the upcoming IPCC report on Physical Science Basis (WG1/AR6)

July/August 2021

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### What's this about?

The IPCC report on The Physical Science Basis, to be released on August 9, is the most authoritative climate report to be published this year. Issued directly from world's top climate scientists to world governments, it provides the latest scientific understanding on what's happening to our climate system, what's driving it, how unprecedented and irreversible the changes are, what possible abrupt changes we should be aware of, and where we are heading from here, depending on the pathways we choose from now on.

This will be a key input from the scientific community to world leaders, ahead of their crucial meeting in November this year, the UN climate talks (COP26) in Glasgow, where countries should bring their new and revised climate targets, sufficient collectively to halve global emissions by 2030.

Officially the report is called The Working Group I contribution to the IPCC Sixth Assessment Report: The Physical Science Basis. It forms the first part of the Sixth Assessment Report (AR6), which altogether consists of three working group reports and a Synthesis Report. The remaining three parts will be published next year.

### What's the IPCC?

The IPCC stands for the Intergovernmental Panel on Climate Change. It is a scientific organisation, with 195 countries as its members, established to provide scientific basis for policymaking for governments at all levels.

It doesn't do its own research, but conducts scientific assessments of existing, published science. Scientists contribute to its work on a voluntary basis, and each report will have its own team of coordinating authors, lead authors and editors, selected through a rigorous process. A broader set of scientists and experts - including government experts - engage in the process through expert review rounds.

Read more here: <https://www.ipcc.ch/about/>

### What's the 6th Assessment Report?

The IPCC publishes comprehensive scientific assessment reports every 6 to 7 years; the latest, the Fifth Assessment Report, was completed in 2014 and provided the main scientific input to the Paris Agreement. The current one, finalised in 2021-2022, will provide the main scientific input to the global stocktake process under the Paris Agreement (2022-2023) that should lead to new climate commitments by countries, in line with the Paris Agreement 1.5°C temperature limit.

The release dates of the reports forming the Sixth Assessment Report (AR6) are:

- Working Group 1: Physical Science Basis, release **9 August 2021**

- Working Group 2: Impacts, Adaptation and Vulnerability, release **21 February 2022 (tbc)**
- Working Group 3: Mitigation of Climate Change, release **28 March 2022 (tbc)**
- Synthesis Report, release **3 October 2022 (tbc)**

Read more from the [IPCC Fact Sheet on the 6th Assessment Report](#)

## How's this different from other climate reports released this year?

The IPCC reports are commissioned by governments and received by governments. They participate in the process by agreeing on the outline, commenting on drafts through government and expert review periods, and by approving the Summary For Policymakers line-by-line, making sure they understand what they're been told by scientists, and that the summaries reflect information that is relevant for policymakers. So this means that the world's top climate scientists and government experts are working together, with scientists ensuring science isn't compromised and policymakers ensuring they're getting the information they need, in a format that they understand.

This makes the IPCC reports particularly authoritative and 'government-owned'. And hence, different from reports issued by individual research institutes or consortiums.

For more information, see the [IPCC fact sheet](#) on the process of preparing IPCC reports

## What can be expected from the report?

The report is expected to show **how and why** climate has changed to date, and how it could change in the future under different possible futures (scenarios). There will be, for example, updated estimates for **sea-level rise** through to 2100 and beyond (2300).

It will provide an update on **how sensitive** the climate is to increasing amounts of greenhouse gases, and address the improved understanding of changes in **extreme events** and attributing these events to **human influence**.

Furthermore, there will be greater emphasis on **regional climate change** and information relevant for regional risk assessment, amplified by an **interactive online regional atlas**.

For the first time in an Assessment Report, a dedicated emission scenario is explored that intends to limit warming to 1.5°C, namely the SSP1-1.9, which was added in the aftermath of the Paris Agreement that adopted the goal.

**What the report will NOT contain** is elaborations on what we're facing in terms of impacts and risks for humans and how those could be avoided. Nor will it discuss *how* the Paris Agreement 1.5°C goal can be met. These will be elaborated on in the remaining three parts of the 6th Assessment report, due to be published next year.

## Do you expect big news?

The IPCC assesses scientific literature that's already out there. So for those who have been following developments in climate science, there shouldn't be big surprises. This is, after all, their 6th Assessment report, and the three Special Reports released in recent years on [1.5°C warming](#), [Ocean and Cryosphere](#) and Climate [Change and Land](#), have already contributed to the 6th Assessment Cycle

with very important key findings and messages that the WG1 report now builds on.

### **What will the report look like, on a practical level?**

The Working Group 1 report, in full, will consist of more than thousand pages covering many aspects of physical science basis. It will have 12 Chapters, [the outlines of which](#) give a picture of the expected content. The part that will be finalised and approved line-by-line, in a virtual meeting (26 July - 6 Aug), is the Summary For Policymakers, about a 40 summary of the report. This is the part of the report that usually gets the most attention.

### **So once the report is out, then what?**

The report, as the latest authoritative message from the climate research community, will build momentum towards [the COP26 climate conference](#) taking place 31 October – 12 November in Scotland, where countries are expected to show up with their new or revised 2030 climate plans in line with 1.5°C.

So all in all, on a national level, scientists, civil society, progressive businesses, mayors, financial leaders and others must study the report carefully and make sure their governments act on it accordingly, and come to COP26 with their homework done.

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