

Background: The IPCC AR5 Synthesis Report

Accompanying Greenpeace IPCC SYR Media Advisory, 20 October 2014

From October 27th – 31st 2014, the Intergovernmental Panel on Climate Change (IPCC) will meet in Copenhagen, Denmark to consider the Synthesis Report of the Fifth Assessment Report (AR5) on global climate change. This is an authoritative study on the status of climate change and its implications for political action, ordered by world governments as members of the IPCC.

The IPCC plenary will approve the Summary for Policymakers and adopt the Synthesis Report, which will be published at a press conference on **Sunday the 2nd of November at 11 am Danish time.**

What is the IPCC Synthesis Report?

Over the last year, the three Working Groups of the IPCC have published reports that cover the scientific basis of global warming (Working Group I), its consequences (Working Group II), and options for slowing the trend (Working Group III). The IPCC does not produce new science but analyses and assesses scientific literature in the field of climate change - particularly work published since the last IPCC Assessment Report in 2007 - for an objective, comprehensive, and balanced scientific review of the subject matter.

The Synthesis Report integrates and compacts the wealth of information contained in the three Working Group reports into a readable and concise document - explicitly targeted at policymakers. This is the core factual document drawing together the assessment of past changes in climate as well as projections for the future and looking at adaptation, mitigation and an overview of possible risks and solutions.

A synthesis approach allows authors to highlight contrasts and make comparisons between findings from different working groups. These comparisons provide critically important information for policymakers and will guide governments in deciding their climate policy in the near future.

What are the Findings of the Fifth Assessment Report (AR5)?

Working Group I

Released in September 2013, the Working Group I report reconfirmed that climate change is happening and it is caused mainly by human activities. The atmosphere and oceans are warming, glaciers are melting, sea-levels are rising, water cycles are changing and extreme weather is increasing.

It also warned of accelerating impacts: In the years 2002-2011, the Greenland ice sheet was losing mass about six times faster on average than the preceding decade. Similarly, the Antarctic ice sheet lost mass five times faster. Since 1993 sea levels have risen twice as fast than they did in the past century on average, and sea ice extent in the Arctic diminished significantly faster than projected.

The report established a carbon budget for the maximum emissions that can be released from now on if the globally agreed goal to limit warming to less than 2C° is to be met. Continuing the emissions trends witnessed in the first decade of this century, the remaining carbon budget would be used up in about two decades. In order not to exceed the budget, emissions would have to peak and start declining very soon, towards eventual net zero.

Working Group II

Released in March 2014, the Working Group II report elaborated on the risks climate change poses to human security and well-being. Climate change can make many existing environmental and social problems much worse. A 2C° already implies severe impacts around the world, particularly for the marine life and the Arctic. The warming levels we would face if recent emissions trends continued would imply fundamentally worse impacts and risks to human security and species' survival. Overall impacts and risks can be reduced substantially with fast emissions cuts and determined, well-planned and resourced adaptation.

Working Group III

The Working Group III report launched in April 2014 found that it is still possible to limit warming to less than 2C°– or even to 1.5C°– which would prevent much of the risks from materialising. Yet, currently we are heading closer to warming of 4C°. Since 2000, fossil fuel emissions growth has accelerated. To keep warming to low levels, a fundamental change of the energy system is needed, where energy efficiency is improved substantially in buildings, industry and transport sectors, and where zero and low-carbon energy replaces conventional fossil fuel technologies. The land-use sector matters too, but the energy and industry sectors' emissions play a dominant role. Costs of action will be moderate, while the costs of inaction would be unthinkable. The longer we delay action the higher the costs will be. Action would come with many co-benefits. Countries have contributed differently to harmful emissions; have varying capacities for action and different levels of vulnerability. Processes and outcomes seen as fair can improve international cooperation.

The Role of Governments in the IPCC process

The Fifth Assessment Report as a whole (containing about 5500 pages in total) and its Synthesis Report provide vital input to the United Nations negotiations on climate change.

At the IPCC approval meeting in Copenhagen, governments will *adopt* the Synthesis Report (which now stands at about 130 pages) and *approve* the shorter summary of it – the Summary for Policymakers (which will be about 30 pages). “Adoption” means that the report will be endorsed section by section, while the “approval” means that the Summary for Policymakers (SPM) will be subjected to detailed line by line discussion and agreement by the governments.

In principle, the role of governments is to make sure the findings summarised in the SPM are understandable and clear for policymakers. In practise, the findings are sometimes inconvenient for certain governments, in one way or another, which creates a desire to influence the wording in ways that support their negotiating positions at the UN climate negotiations. This can sometimes result in the SPM language being muddled rather than clarified and some important messages may be dropped from the summary. This, however, doesn't change the underlying science and all the original findings will remain in the actual reports written by Working Group scientists.

It is important to note that, although governments are involved in the IPCC process and provide financial support, it is science that predominates. The chapters that underpin all the documents are written by scientists and scientists ensure that all the documents are both consistent with the findings of each chapter and scientifically credible in their own right.