

## **FAQs on the "Intergovernmental Panel on Climate Change (IPCC) Assessment Report 5 (AR5) from Working Group II (WG2)"**

### **What is it?**

This is the "Fifth Assessment Report" (AR5) of the Intergovernmental Panel on Climate Change (IPCC), from "working group two" (WG2) which covers "impacts, adaptation and vulnerability" to climate change.

The Intergovernmental Panel on Climate Change (IPCC) is a UN body, made up of scientists and experts, tasked with producing updates of knowledge on the scientific, technical, and socio-economic aspects of climate change every five years. It has three scientific working groups each producing and publishing a detailed report. These are synthesised into one document after the completion of all three (to be released the 31<sup>st</sup> of October 2014).

The "Fourth Assessment Report" (AR4), released in 2007, is widely credited with sparking greater global awareness of the challenge of climate change - after its release its authorship team won the Nobel Peace Prize for their efforts.

The "Fifth Assessment Report" is expected to confirm many of the predictions from AR4.

### **What is the process?**

The WG2 report will have 30 chapters produced by 310 authors, consisting of 61 Coordinating Lead Authors, 183 Lead Authors, and 66 Review Editors from 73 countries.

The summary report will be agreed line by line by up to 195 governments in Japan on 25th to 29th March 2014.

Because of the nature of the process the AR5 report is likely to be conservative in its conclusions, and it will not reflect science in papers submitted for publication after the 31st of July 2012.

### **When do the reports from WG1 and WG3 come out?**

**Working Group 1:** focused on the physical science basis of the climate system and climate change was released last September.

**Working Group 3:** Will address mitigation options and its summary will be agreed line-by-line in a meeting of governments from 7-11 April 2014 in Berlin, Germany. The final release of the report will take place with a press conference on the 13th of April.

The final installment of Fifth Assessment Report will be a "synthesis report" which brings together the work of the three working groups into one report. This will be released during a meeting on 27-31 October 2014 in Copenhagen, Denmark.

### **What are the key findings of this report (WG2)?**

The report covers both already experienced impacts from climate change as well as projections in the future.

It covers how climate change has and will impact on different natural systems, human settlements and in different regions.

It also discusses the role of 'adapting' to a changed climate, given that due to historical emissions of greenhouse gases some climate change is unavoidable, and limits to adaptation.

The basic findings are:

- Climate change is happening and that humans are driving it.
- Experienced impacts include:
  - Negative shocks on people living in poverty;
  - Negative impacts on water resources and quality;
  - Negative impacts on crop yields and farming;
  - Extinction of many species;
- Projected impacts include:
  - Death, injury and disruption in low-lying areas due to sea-level rise and coastal flooding;
  - Food insecurity from heat, drought and changed rainfall, particularly for poorer populations;
  - Loss of incomes due to impacts on agriculture, particularly in rural areas;

- Reduction in renewable water resources' quality and quantity;
- Loss of ecosystems and their contributions to human lives (e.g., many fish stocks )

The report also warns that 'tipping points' that could drive further and more extreme climate disruption may occur sooner than previously projected, with forests more sensitive to climate change than was realized.

## What are our key messages?

Our focus is on showing that:

- ➔ Climate change is real and is driven by human emissions
- ➔ The impacts of climate change, even at low levels of warming, will be catastrophic, particularly for food production
  - a. The risks to food security are manifold including the impact of heat, drought, changed rainfall patterns and the reduction in income of the poor — compounded by other weather disasters
  - b. The risk to food security is also exacerbated by climate change's impact on oceans — changing the distribution of fish stocks and devastating coral reefs.
- ➔ These risks require dramatic, scaled-up, and supported community-based adaptation measures which will require hundreds of billions of dollars a year;
- ➔ There are limits to adaptation, particularly as temperatures rise, and so the drastic reduction of emissions is required with leadership coming from those with the greatest historical responsibility and capability to take action.

## What does this report say about how much warming will cause the most serious impacts?

The report reinforces the demand of many social movements and Southern Governments for an international goal of limiting warming to 1.5°C above pre-industrial levels (as opposed to the 2°C advocated by the European Union).

For example, each degree of warming will decrease water resources by 20% for an additional 7% of the population, indicating that a world of 2°C of warming would see another half-billion people with reduced water access.

Similarly, at just 1°C, warming is to negatively impact yields for the major crops (wheat, rice, and maize) in tropical and temperate regions, representing a serious threat to global food security.

Most concerning is that some global systems — such as forests, arctic ice and coral reefs could substantially deteriorate before the 2°C threshold, creating tipping points that lead to 'runaway climate change.'

*[Note: The report occasionally uses "recent" as opposed to "preindustrial" levels as the baseline temperatures for reflecting temperature increase. This means that some impacts described in the report with reference to 2°C are actually speaking of impacts at 3°C].*

## Won't climate change help food production?

No. The report recognizes that there have been some 'positive impacts' in 'high latitude regions' (i.e. northern Russia and Canada) but that negative impacts are 'more common.'

It also highlights that recent price-spikes for foods and cereals indicates the sensitivity of *global* food production to climate extremes.

A singular or regional benefit of a small scale has to be considered within the global and broader impact on food production and food prices — which are significantly threatened by climate change.

Any potential 'positive impacts' will become even less significant as temperatures rise further. The report notes that with or without adaptation, negative impacts on global average yields become likely from the 2030s – just 16 years from now.

## Will reducing poverty and related vulnerability prevent climate impacts?

No. The poor are the most vulnerable to climate change impacts and those living in poverty have already suffered disproportionately from effects such as food price spikes - but reducing poverty will not prevent impacts.

Some policies and measures can be applied to reduce the negative consequences of climate impacts but these have limits (and can be extremely disruptive to peoples' lives in addition to being very costly).

Developed countries also like to focus on the possibilities of "transformational adaptation." This is usually just a euphemism to make forced changes in livelihoods and migration sound positive. Indeed, when fisherfolk or farmers can no longer support themselves with those natural-resource-based livelihoods, they have the possibility to "transform" themselves into slum-dwellers.

The only way to reduce the severity and frequency of future climate impacts is to reduce greenhouse gas emissions.