

## AN INDUSTRY BRIEFING

# AVIATION IN THE IPCC AR5: WORKING GROUP II RELEASE

## BACKGROUND

The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 to consolidate knowledge from the world's scientific community on the issue of climate change. The IPCC does not carry out primary research, but it pulls together the peer-reviewed literature on various elements of the climate change issue into consolidated reports.

Approximately every five to seven years, it produces an *Assessment Report* (AR) which is actually a series of three sub-reports, split by working group, each accompanied by a *Summary for Policymakers*. Once all three reports have been released, an overall *Synthesis Report* is also published.

The three working groups:

- **WG I** Assesses scientific aspects of the climate system and climate change.
- **WG II** Assesses vulnerability of socio-economic and natural systems to climate change, consequences, and adaptation options.
- **WG III** Assesses options for limiting greenhouse gas emissions and otherwise mitigating climate change.

Once they have spent several years drafting their reports, they are submitted, with a draft of a *Summary for Policymakers*, for review by governments, who request edits to bring the drafts in line with policy. The final drafting session for each of the working groups takes place at a week-long meeting.

The *Fifth Assessment Report's* (AR5) WG II report was deliberated in Yokohama over a week and was finalised on 29 March.

## THE AR5 WGII REPORT

Whilst this memo will focus on the aviation-related sections of the WG II report,

arguably the headline message from the report is that continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system and that Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions.

- *Summary for Policymakers:* <http://tinyurl.com/lju5jo6>
- Full AR5 Working Group II Report: <http://tinyurl.com/loqm2tw>
- Headline summary of the report: <http://tinyurl.com/pud32a5>
- WG I press release: <http://tinyurl.com/n7r9bon>
- Plain-language summary of key findings from *The Guardian*: <http://tinyurl.com/puty8fg>

## ANALYSIS OF THE AR5 WG II REPORT FOR AVIATION

This report looks at the impacts of climate change and therefore does not mention aviation as a source of climate change. The commentary from us appears in black, the text from the IPCC appears in **dark blue** and links to the relevant chapters appear as **light blue**.

### *Summary for Policymakers*

There are no direct mentions of aviation in the Summary » <http://tinyurl.com/lju5jo6>, but there are a few mentions of climate change having impacts on transportation infrastructure and tourism.

### *AR5 WGII full report*

In the full report, aviation does get a specific, albeit small, mention in chapter 10: key economic sectors and services: » <http://tinyurl.com/mlnpp9v>, where Chapter 10-4 deals with transport by sector:

### 10.4.5. Air

Hotter air is less dense. In summer months, especially at airports located at high altitudes, this may result in limitations for freight capacity, safety, and weather-related delays, unless runways are lengthened (*Pejovic et al., 2009; TRB, 2008*). (*Chapman, 2007*) suggests that technological innovations will negate the challenges posed by extreme temperatures.

Increased storminess at airports, particularly those located in coastal regions, may increase the number of weather-related delays and cancellations (*Lemmen and Warren, 2010; Pejovic et al., 2009*) and increase maintenance and repair costs (*Gusmao, 2010*). Clear-air turbulence will increase in the Atlantic corridor leading to longer and bumpier trips (*Williams and Joshi, 2013*). The impact of climate change on airport pavement is very similar to paved roads (*DOT, 2002; Fortier et al., 2007*). The effect of temperature and increase precipitation intensity on airports imposes a risk to the entire facility if pavements are not adapted to these increases (*Pejovic et al., 2009*).

And there is a whole chapter (10-6) on recreation and tourism.

## NEXT STEPS

Working Group III will meet in Berlin between 7-11 April 2014 and the final Synthesis Report will be released from Copenhagen in October 2014.